MainView
Alarm Management User Guide

Supporting
Version 6.1 of MainView Infrastructure
MainView products

September 2012
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  - product name
  - product version (release number)
  - license number and password (trial or permanent)
- operating system and environment information
  - machine type
  - operating system type, version, and service pack or other maintenance level such as PUT or PTF
  - system hardware configuration
  - serial numbers
  - related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the issue
- commands and options that you used
- messages received (and the time and date that you received them)
  - product error messages
  - messages from the operating system, such as file system full
  - messages from related software
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About this book

This book explains how to use MainView Alarm Management, which works in conjunction with other MainView products. This book is intended for data center operators, managers, and system programmers who monitor system performance and need to know when jobs, workloads, devices, or resources exceed certain levels.

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Conventions

This book uses the following special conventions:

- All syntax, operating system terms, and literal examples are presented in this typeface.

- Variable text in path names, system messages, or syntax is displayed in italic text:

  \texttt{testsys/instance/fileName}

- The symbol => connects items in a menu sequence. For example, \texttt{Actions => Create Test} instructs you to choose the Create Test command from the Actions menu.
Overview and concepts

This chapter introduces you to the major components and features of MainView Alarm Management.

Overview of Alarm Management

MainView Alarm Management provides the MainView product family with the ability to perform true management by exception. MainView Alarm Management creates alarm reports based on performance goals that are continuously monitored. When a performance goal is not within acceptable parameters, an alarm report is created. An alert can be created based on the report to trigger an automated action.

MainView Alarm Management monitors multiple targets on multiple systems simultaneously. You can display a single view that shows alerts for all MainView performance monitors within your MVS enterprise. Using alarm definitions, any data element from any MainView product can be used to generate alarm reports based on user-defined thresholds that trigger the following actions:

- Create MVS console messages
- Create an alarm report that can be processed by MainView AutoOPERATOR
- Call MainView AutoOPERATOR
- Call CONTROL-O
MainView Alarm Management provides the following features and benefits:

- Alarm conditions monitored using default or custom thresholds
- Critical, major, minor, warning, or informational alarm reports based on thresholds
- Color-coded messages that indicate alarm report severity
- Views that display alarm reports according to severity and chronology
- Alarm-report messages that hyperlink to the view where the exception occurred
- Alarm definitions customized to display messages that apply to your site
- Monitoring scheduled by time, days, and frequency for each alarm definition
- Custom help panels for creating site-specific instructions for alarm reports
- Alarm reports forwarded to MainView AutoOPERATOR for automatic actions

While many of the MainView products have monitors that can be set up for reporting on exceptions, Alarm Management can be used to monitor exceptions that are not covered by product monitors.

**Alarm Management terms and concepts**

When you are working with MainView Alarm Management, you should have a clear understanding of the terms and concepts in this section.

**Alarm definitions**

MainView Alarm Management alarm reports are triggered by thresholds associated with one or more data elements. Data elements are the data components of a data collector record, displayed as fields in a view. Alarm information is stored in MainView Alarm Management as alarm definitions.

Each alarm definition describes alarm reports for a single combination of view, product, and context. You can specify the following alarm definition attributes:

- Threshold conditions (MainView data elements) and persistence of the conditions to be met before an alert is issued

Threshold conditions for an alarm definition include the element name, an operator, and the threshold values for Informational, Warning, Minor, Major, and Critical severities. Each condition is for a particular element in the view that you are monitoring. An alarm definition requires at least one condition, but you can set as many conditions as you like, up to the number of elements in the view that you are monitoring.
alarm definition groups

- How multiple threshold conditions are combined when determining whether an alarm report is issued

  By default, if multiple conditions exist, the conditions are separated by AND, which means that both conditions must be present for MainView Alarm Management to issue an alarm report.

- Message ID and the message text contained in the alarm report

- Actions (such as hyperlinks to specific MainView product views)

- Frequency that MainView Alarm Management checks to see if an alert should be generated (evaluation schedule)

- Time period during which an alarm definition is active

- Distribution of the alarm reports

- Hyperlinks to views, extended help, data passed to MainView AutoOPERATOR, and data passed to BMC Event Manager and BMC Service Impact Manager

Alarm definitions are always contained in an alarm group and stored in a parameter library member that is read by MainView Alarm Management during initialization and whenever administrative functions are performed.

Alarm definition groups

MainView Alarm Management uses groups to arrange alarm definitions into logical and functional groups. You can use groups to define which alarm definitions are automatically started when MainView Alarm Management is started. By default, alarm definitions that are in the DEFAULT group and the ACTIVE library are started automatically when MainView Alarm Management starts.

Any number of alarm definition groups may be active at the same time, and alarm definition groups may contain one or more alarm definitions. You can choose to keep all of your alarm definitions in a single group, or you can create multiple groups to separate your alarm definitions according to user, product, or any other criteria that you need.

Groups are created automatically if you specify a new group name when you copy, move, or rename an alarm definition. Groups are deleted automatically if all of the alarm definitions in the group are removed from the group.
**Alarm definition groups**

---

**TIP**

Avoid using alarm group names that are greater than 8 characters in length. While alarm group names can be up to 16 characters, because of space constraints, the alarm views display only the first 8 characters of the names. You will not see the complete name if it is longer than 8 characters.

If you want to use group names that are longer than 8 characters, you might want to create customized views that display up to the full 16-character names.

---

**Product specific alarm groups (version 2.1)**

In MainView Alarm Manager 2.1, a default group and groups containing several product-specific alarm definitions were supplied with the MainView products. The 2.1 alarm definition groups are located in `hilevel.UBBPARM(BBHTMNNxx)`, where `xx` corresponds to the two-character group ID. Every group has a two-character ID, consisting of any alphanumeric characters. Table 1 shows the naming convention used for the suffix of distributed product-specific alarm definition groups.

---

### Table 1  Default product group suffixes

<table>
<thead>
<tr>
<th>Product</th>
<th>Suffix&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>MainView for CICS&lt;sup&gt;®&lt;/sup&gt;</td>
<td>Cx</td>
</tr>
<tr>
<td>MainView for DB2&lt;sup&gt;®&lt;/sup&gt;</td>
<td>Dx</td>
</tr>
<tr>
<td>MainView for IMS Online and MainView for DBCTL</td>
<td>Ly</td>
</tr>
<tr>
<td>MainView for IP</td>
<td>Px</td>
</tr>
<tr>
<td>MainView for Linux – Servers</td>
<td>Lx</td>
</tr>
<tr>
<td>MainView for z/OS</td>
<td>Zx</td>
</tr>
<tr>
<td>MainView for UNIX System Services</td>
<td>Ux</td>
</tr>
<tr>
<td>MainView for VTAM</td>
<td>Tx</td>
</tr>
<tr>
<td>MainView for WebSphere&lt;sup&gt;®&lt;/sup&gt; Application Server</td>
<td>Wx</td>
</tr>
<tr>
<td>MainView for WebSphere MQ</td>
<td>Qx</td>
</tr>
<tr>
<td>MainView VistaPoint</td>
<td>Vx</td>
</tr>
</tbody>
</table>

<sup>a</sup> The `x` in the suffix is alphanumeric.

The MainView Alarm Management default group is shown in Table 2.

---

### Table 2  MainView Alarm Management default group suffix

<table>
<thead>
<tr>
<th>Group ID</th>
<th>Works with</th>
<th>Contains alarm definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>All Products</td>
<td>TGTCHK</td>
</tr>
</tbody>
</table>
If you want to use the groups that are provided for a specific MainView product, you can use the alarm definition migration utility to migrate these alarm definitions from MainView Alarm Manager 2.1 to the current version of MainView Alarm Management.

For detailed information about migrating alarm definitions, see Chapter 2, “Migrating alarm definitions.”

Alarm definition libraries

MainView Alarm Management uses libraries to arrange alarm definitions into logical and functional groups. There are several special library names that MainView Alarm Management uses in addition to the user-defined libraries. Table 3 describes the special alarm definition libraries:

<table>
<thead>
<tr>
<th>Special library</th>
<th>Description</th>
</tr>
</thead>
</table>
| ACTIVE          | The ACTIVE library contains the active alarm definitions. When an alarm definition is made active, it is moved to the ACTIVE library.  
                  See “Activating an alarm definition” on page 74 for information on activating alarm definitions. |
| INACTIVE        | The INACTIVE library contains the inactive alarm definitions that were in the active directory and made inactive. When an alarm definition is made inactive, it is moved to the INACTIVE library.  
                  See “Inactivating an alarm definition” on page 75 for information on inactivating alarm definitions. |
| DELETED         | The DELETED library contains alarm definitions that were deleted from one of the alarm definition views. When an alarm definition is deleted from one of the views, it is moved to the DELETED library. If you delete it when it is in the DELETED library, it is deleted permanently.  
                  See “Deleting an alarm definition” on page 78 for information on deleting alarm definitions. |
| MIGRATE         | The MIGRATE library contains migrated alarm definitions. When you migrate alarm definitions, they are automatically put into the MIGRATE library.  
                  See Chapter 2, “Migrating alarm definitions” for information on migrating alarm definitions. |
Alarm definition evaluation sets

To operate and evaluate alarm definitions more efficiently, MainView Alarm Management arranges alarm definitions that are evaluated from the same data into evaluation sets.

Each evaluation set can contain up to sixteen alarm definitions. You do not control which alarm definitions are put into which evaluation sets. MainView Alarm Management does that automatically based on the data that the alarm definitions are accessing and evaluating.

Since data collection is the most resource intensive activity performed by MainView Alarm Management, this enhancement provides a marked increase in performance.

Alarm persistence

Alarm persistence provides the ability to handle or ignore short-lived data anomalies or data spikes. For example, if a data element like CPU usage spikes up temporarily and exceeds an alarm threshold, you may not want to generate an alarm report immediately. Persistence give you the ability to wait and see if the condition persists for multiple evaluation periods.

During alarm definition evaluation, Alarm Management not only compares the MainView product data to your threshold values, it also evaluates the results against a desired persistence level. For example, you can elect to generate an alarm report only when the value exceeds a threshold for a specified number of times out of a specified sample size. You may only want to generate an alarm report when an evaluation exceeds a threshold 3 out of 5 times.
Alarm report (exception)

Alarm reports are commonly called exception reports or exception reporting. The alarm report is generated when the result of the evaluation of an alarm definition is true. Alarm Management distributes the alarm report as defined in the alarm definition.

Alarm reports include a severity, message ID, message text, and other information that is specified in the alarm definition. An alarm report is just the presentation of information. It does not trigger any actions. Alerts are used to trigger actions based on the information in the reports. Alarm report types indicate trend or movement of the exception. Alarm reports are generated with the alarm types described in Table 4.

<table>
<thead>
<tr>
<th>Report type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>START</td>
<td>The previous evaluation, if any, did not indicate an alarm report condition, but the current evaluation did generate an alarm report.</td>
</tr>
<tr>
<td>UPGRADE</td>
<td>The previous evaluation generated an alarm report at a lower severity level than the current alarm report evaluation.</td>
</tr>
<tr>
<td>DOWNGRADE</td>
<td>The previous evaluation generated an alarm report at a higher severity level than the current alarm definition evaluation.</td>
</tr>
<tr>
<td>CONTINUE</td>
<td>The previous evaluation generated an alarm report at the same severity level as the current alarm definition evaluation.</td>
</tr>
<tr>
<td>END</td>
<td>The previous evaluation generated an alarm report, but the current alarm definition evaluation did not produce an alarm report.</td>
</tr>
</tbody>
</table>

Alarm report distribution

When an alarm report is generated, it is distributed to default and optional destinations as specified in the alarm definition. Table 5 on page 22 lists the destinations.
Table 5  Alarm report destinations

<table>
<thead>
<tr>
<th>Destination</th>
<th>Destination type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AO IEFSSREQ</td>
<td>default</td>
<td>A z/OS subsystem event that can be detected by the local MainView AutoOPERATOR Rules Processor when the AutoOPERATOR rules are started. When the required AutoOPERATOR rules are started, AutoOPERATOR creates and deletes AutoOPERATOR alerts based on alarm report START and END types. <em>The AutoOPERATOR rules are not enabled by default.</em></td>
</tr>
<tr>
<td>CONTROL-O IEFSSREQ</td>
<td>default</td>
<td>A z/OS subsystem event that can be detected by CONTROL-O.</td>
</tr>
<tr>
<td>MV LOGGER</td>
<td>default</td>
<td>The alarm report is written to the local MainView LOGGER, if possible. If the attempt to write to MainView LOGGER fails, another attempt it not made for ten minutes. The Alarm History views (ALHIST and ALHISTR) display alarm reports written to MainView LOGGER.</td>
</tr>
<tr>
<td>ALARMS view</td>
<td>optional</td>
<td>Current alarm reports (Reports with a START type and no corresponding END type alarm report.) are displayed by the ALARMS view. The VIEW=YES</td>
</tr>
<tr>
<td>AOAnywhere</td>
<td>optional</td>
<td>Alerts are created and deleted (only in alert repositories that have ALRTRCVE=YES specified in their BBISSP00 parmlib members) by using the AOAnywhere interface. Because this results in alerts in the ALERTS view, the VIEW=YES</td>
</tr>
<tr>
<td>WTO (Write to Operator)</td>
<td>optional</td>
<td>When the WTO attribute of an alarm definition is YES, a WTO message is written that contains the following information: ■ severity ■ alarm message ID ■ alarm report message text If the WTO attribute is SET, WTO messages are written without the severity indicator. <em>Note:</em> CONTINUE type alarm reports are not WTO unless you set the Repeat Info option to YES.</td>
</tr>
</tbody>
</table>
Alerts

An alert is an automation concept that differs from an alarm report. While they have some features in common, such as a severity and message text, alerts are created and deleted as a consequence of alarm reports. They are separate entities with unique capabilities.

An alarm report is the presentation of information. It does not trigger any actions. Alerts are used to trigger actions based on the information in the reports.

Components

MainView Alarm Management consists of the following components:

- Alarm Administration
- Alert Management

Alarm Administration

Alarm Administration enables other MainView products to define and generate messages that are displayed in the Alert Management component. Alarm Administration is used to set alarm definition thresholds and generate alarm reports when threshold conditions are met.

Alarm Administration is included in MainView Alarm Management version 5.0 and later and in MainView Alarm Manager version 2.1.

MainView Alarm Management version 5.0 and later runs in the CAS. MainView Alarm Manager version 2.1 runs in its own PAS.

You can run instances of both versions to facilitate migration of alarm definitions from MainView Alarm Manager version 2.1 to the current version of MainView Alarm Management.
Alert Management

Alert Management is used to display and manage all MainView alerts, regardless of their source. Alert Management displays alerts generated by the following components:

- Alarm Administration
- MainView AutoOPERATOR
- MainView Storage Resource Manager (SRM)
- MainView SYSPROG Services

Alert Management runs in the PAS for MainView Alarm Manager version 2.1 only. If you want to use Alert Management, you must set up the PAS. Alarm Administration, however, can be disabled in the PAS. For information about how to set up the PAS, see the MainView Customization Reference, especially the step about defining the MainView Alarm Manager initialization parameters.

Interaction of components and MainView products

MainView Alarm Management is always used in conjunction with another MainView product. You must have one or more of the MainView products connected to a CAS within the same plex as MainView Alarm Management.

BMC Software recommends that you run one MainView Alarm Management instance for each MVS image in the sysplex. When exceptions are detected in a z/OS, BBI-SS, or product-specific PAS on a specific MVS image, the local MainView Alarm Management generates the alarm message on that image and automatically routes it to the local MainView AutoOPERATOR system.

Figure 1 on page 25 shows the MainView Alarm Management structure.
Requirements

The following sections discuss the basic requirements and considerations for using MainView Alarm Management. In addition to these requirements, ensure you have reviewed the MainView Customization Reference.

Security

MainView Alarm Management requires security authorization for the following functions:

- Displaying MainView product alerts
- Processing alarm definitions that launch MainView AutoOPERATOR EXECs
Address spaces

The required authorization is granted when MainView Alarm Management is set up to run at your site. For information about the required security updates, see the discussion of MainView Alarm Management security in the *MainView Customization Reference*.

In addition, you can use the MainView security interface to control access to MainView Alarm Management resources by means of your external security manager (ESM). By default, security is enabled for all MainView Alarm Management views. You can enable or disable security for MainView Alarm Management actions either collectively or individually. Refer to the *MainView Security Guide* for instructions on how to authorize users for MainView Alarm Management.

### Address spaces

MainView Alarm Management requires the following address spaces:

- MainView Alarm Management requires the MainView coordinating address space (CAS). The CAS supports cross-system communication functions and contains the Alarm Administration and Alert Management components of Alarm Management.

- The user address space (UAS) must be running on the system. The UAS is required to support a terminal session for each user.

- In addition to the CAS and the UAS, one or more of the following product address spaces should be running on your system:
  - z/OS PAS, which supports CMF MONITOR, MainView for z/OS, MainView for UNIX System Services, and MainView VistaPoint
  - BBI-SS PAS, which supports MainView for CICS, MainView for DB2, MainView for DBCTL, MainView for IMS Online, MainView for WebSphere MQ, and MainView VistaPoint
  - MVALARM 2.1 PAS for Alert Management and alarm definition migration
  - Product-specific PASs that support MainView for IP, MainView for Linux – Servers, MainView for VTAM, MainView for WebSphere Application Server, and MainView SRM

For more information about the MainView address spaces, see the *MainView Customization Reference*. 
MainView Alarm Management uses the MainView Infrastructure (MVI) common registry to store alarm definitions. The file system allocated for the MVI common registry requires an HFS or zFS hierarchical file system, and the file system must be mounted and allocated to grow as needed to accommodate additional alarm definitions.

See “Alarm definition file system structure” on page 29 for information on the directory structure of the file system.

**Limitations**

MainView Alarm Management has the following limitations:

- All MainView systems must migrate to MainView Infrastructure 5.0 before you can stop using Alarm Manager 2.1 for alarm definitions and Alarm Administration.

- You must use the MVALARM 2.1 PAS to run Alert Management. Alarm Manager 2.1 can be disabled in the MVALARM 2.1 PAS.

- You must use Alarm Manager 2.1 to migrate your alarm definitions to the current version of Alarm Management.

- The following aspects of alarm definitions will not migrate from Alarm Manager 2.1 to the current version of Alarm Management:
  - Alarm definitions that use no default expressions
  - Alarm definitions that only report on the first $n$ exceptions
**MainView Alarm Management initialization**

When Alarm Management starts, it makes a defined list of alarm groups active. If you want to ensure that an alarm definition is made active when Alarm Management starts, the alarm definition must be in a group that is made active at startup.

The following steps define how Alarm Management determines what alarm groups to make active during initialization:

1. Alarm Management looks for an alarm parameter file that contains a list of groups to start. Alarm Management searches for the alarm parameter file by name in the following order:
   1. A file with the same name as the value of the &BBMALPRM system symbol.
   2. A file with the same name as the CAS name.
   3. A file named DEFAULT.

   If the alarm parameter file is found, only the alarm definitions in the groups that are listed in the alarm parameter file are started.

2. If Alarm Management does not find the alarm parameter file, Alarm Management tries to start the following groups:
   1. An alarm group with the same name as the CAS name.
   2. An alarm group named DEFAULT.

   **NOTE**

   If you create an alarm definition and put it in a group that is running, it will start to run, but if that group is not listed in the alarm parameter file, that alarm definition and group will not start when MainView Alarm Management is restarted.

For more information on creating and editing alarm parameter files, see “Creating and editing Alarm Management parameter files” on page 88.
Alarm definition file system structure

MainView Alarm Management uses the MainView Infrastructure (MVI) common registry to store alarm definitions. The MVI common registry is a UNIX System Services (USS) HFS or zFS file system.

The HFS and zFS file systems provide the ability to use directory structures to organize the alarm definitions. You provide an initial directory, and MVI common registry creates the directory structure for your alarm definitions. Your alarm definitions and libraries can be shared within a sysplex.

In previous MainView Alarm Management versions, the PDS file system storage limited the group name to two characters, but with the new alarm definition directory structure alarm, group, and the new library names are expanded to eight characters.

In the new HFS and zFS file systems, alarm definitions are stored one to a file, and they are stored in the file system as follows:

```
FILESYSTEM/Library001/Group001/alarmDefinition
/Library002/Group001/alarmDefinition
```

Inside the file system each library is represented by a directory, each group within a library is represented by a directory, and the alarm definitions are files within the group directory. The same group name may be in several libraries.

Allocating and mounting the file system

The HFS or zFS file system must be mounted and allocated to grow as needed to accommodate additional alarm definitions.

The file system is allocated during customization by using MainView Customization or manually using the information in the MainView Customization Reference.

To identify the file system to a CAS, use the PLEXMGR view HFSPATH. See the MainView Administration Guide for more information.
Alarm reports (exception reporting)

Alarm reports are reported in the following ways:

■ As a list of alarm report messages displayed in Alert Management

■ As write-to-operator (WTO) messages on the MVS image where MainView Alarm Management is running (You enable the WTO option when you define your alarm.)

■ As messages to the MainView AutoOPERATOR Rules Processor interface directly, if MainView AutoOPERATOR is running on the same MVS image as MainView Alarm Management

■ As a list of alert messages displayed in the Active Alarms view (ALARMS), for diagnostic purposes

MainView Alarm Management also issues END messages when alarm definition conditions are resolved. END messages can be reported in any of the alarm report destinations.

MainView Alarm Management access

Before you begin, check with your product administrator to make sure that the CAS and at least one PAS (such as the z/OS PAS) are up and running.

You can access MainView Alarm Management through a MainView Explorer session or a MainView TSO session.
To access MainView Alarm Management through MainView Explorer

1. Launch MainView Explorer (either in a web browser or from a local directory), and log on to start your MainView Explorer session.

2. To access the MainView Alarm Management views in MainView Explorer, expand the **ALARM** folder under the **PLEXMGR** product icon in the navigation frame (Figure 2).

Figure 2 Alarming Management views in MainView Explorer systems tree
To access the Alarm Management EZALARMS menu in MainView Explorer, double click the EZALARMS icon in the navigation frame to open the EZALARMS menu in the view frame (Figure 3).

**Figure 3**  Alarm Management EZALARMS menu MainView Explorer view frame

For more information on using MainView Explorer, see the *MainView User Guide*, or the MainView Explorer online Help system.

**To access MainView Alarm Management through TSO**

1. Execute the MainView CLIST to display the MainView Selection Menu (Figure 4 on page 33).

   **NOTE**
   You can use a CLIST to invoke MainView products under ISPF. This CLIST allocates all required libraries and connects to them through the ISPF LIBDEF. See the *MainView Customization Reference* for more information on setting up the MainView CLIST.
Chapter 1  Overview and concepts

2 Select option E, Alerts and Alarms, from the MainView Selection menu, and press Enter.

The Alerts and Alarms menu is displayed (Figure 5).

3 Select option 3, ALARMS, and press Enter.

Depending on how you specified the session parameters (using option 0 on the MainView Selection menu), MainView displays either the ISPF Session Control Parameters panel (Figure 6 on page 34) or the EZALARMS menu (Figure 7 on page 34).
If your subsystem ID is correctly specified in the Subsystem ID field, press Enter. (You might have to contact your product administrator to verify that the ID is correct.)

After you press Enter on the Session Control Parameters panel, you see the message Connecting... at the top right corner of your screen. When you are connected, the EZALARMS menu appears (Figure 7).

Easy Menu (EZALARMS)

The EZALARMS menu (Figure 7) is the starting point for using MainView Alarm Management. You can access EZALARMS from within Plex Manager.

Figure 6  Session Control Parameters panel

If your subsystem ID is correctly specified in the Subsystem ID field, press Enter. (You might have to contact your product administrator to verify that the ID is correct.)

After you press Enter on the Session Control Parameters panel, you see the message Connecting... at the top right corner of your screen. When you are connected, the EZALARMS menu appears (Figure 7).
From the EZALARMS menu, you can hyperlink to MainView Alarm Management views directly, and perform the following tasks:

- Display alarm definitions sorted by properties
- Display alarm definition reports
- Display alarm definition parameters
- Display alarm definition performance
- Display alarm evaluator status
- Display alarm definition modification history
- Display alarm definition parameter history
- Review current messages issued by MainView Alarm Management
- Access MainView Alarm Manager 2.1 to migrate your alarm definitions to the current version of MainView Alarm Management

_TIP_

You can access the MainView Alarm Management views from the EZALARMS menu or by typing the view name on the COMMAND line and pressing Enter.

MainView Alarm Management views

The EZALARMS menu provides easy access to many different views in MainView Alarm Management. The views are grouped into the following types of views:

- Alarm Definition Lists views
- Alarm Reports views
- Modification Log views
- Status and Performance views
- Other views

_NOTE_

You must be in Plex Manager to access the Alarm Management views.
Alarm definition actions

When you are working with alarm definitions in the alarm definition list views, you can perform the following actions:

- Move alarm definitions from one library to another
- Copy alarm definitions from one library to another
- Change alarm definitions
- Delete alarm definitions
- Browse alarm definitions
- Activate alarm definitions
- Inactivate alarm definitions
- Enable alarm definitions
- Disable alarm definitions

See Chapter 4, “Working with alarm definitions” for more information on working with alarm definitions.

Alarm definition list views

MainView Alarm Management provides several different list views that show the the alarm definitions listed and sorted by different values. Table 6 describes the alarm definition list views.

<table>
<thead>
<tr>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm Definitions (AMD)</td>
<td>Alarm definitions sorted by name</td>
</tr>
<tr>
<td>Alarm Definitions Library (AMDLIB)</td>
<td>Alarm definitions sorted by library</td>
</tr>
<tr>
<td>Alarm Definitions Group (AMDGRP)</td>
<td>Alarm definitions sorted by group</td>
</tr>
<tr>
<td>Alarm Definitions Product (AMDPRD)</td>
<td>Alarm definitions sorted by product</td>
</tr>
<tr>
<td>Alarm Definitions Context (AMDCON)</td>
<td>Alarm definitions sorted by context (target)</td>
</tr>
<tr>
<td>Alarm Definitions Active (AMDACT)</td>
<td>Active alarm definitions in the ACTIVE library</td>
</tr>
<tr>
<td>Alarm Definitions Migration (AMDMIG)</td>
<td>Migrated alarm definitions that are in MIGRATE library</td>
</tr>
<tr>
<td>Alarm Definitions Group Summary (AMDGRPZ)</td>
<td>Alarm definition group summaries</td>
</tr>
</tbody>
</table>
Alarm Definition (AMD) view

The AMD view (Figure 8) is the default alarm definition view. The AMD view shows the alarm definitions sorted alphabetically by name. The other alarm definition views are similar to the AMD view, but they display the alarm definitions sorted by different criteria.

Figure 8  Alarm Definition (AMD) view

<table>
<thead>
<tr>
<th>Alarm</th>
<th>Group</th>
<th>Library</th>
<th>Admin</th>
<th>Freq</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISERV</td>
<td>MVIMS</td>
<td>ACTIVE</td>
<td>NotActive</td>
<td>60</td>
<td>Monitor Overview - Monitor</td>
</tr>
<tr>
<td>JCPU</td>
<td>DEFAULT</td>
<td>MA000</td>
<td></td>
<td>60</td>
<td>Interval job CPU utilization</td>
</tr>
<tr>
<td>JCPUMR</td>
<td>MR</td>
<td>ACTIVE</td>
<td>NotActive</td>
<td>60</td>
<td>Interval job CPU utilization</td>
</tr>
<tr>
<td>JCPUR</td>
<td>DEFAULT</td>
<td>RDHCLH</td>
<td></td>
<td>60</td>
<td>Realtime job CPU utilization</td>
</tr>
<tr>
<td>JCPUR</td>
<td>JC</td>
<td>INACTIVE</td>
<td></td>
<td>60</td>
<td>Realtime job CPU utilization</td>
</tr>
<tr>
<td>JCPUZ</td>
<td>DEFAULT</td>
<td>RDHCLH</td>
<td></td>
<td>60</td>
<td>Summary job CPU utilization</td>
</tr>
<tr>
<td>JDELAYR</td>
<td>JC</td>
<td>ACTIVE</td>
<td>NotActive</td>
<td>120</td>
<td>Realtime job delays</td>
</tr>
<tr>
<td>JHSMSTAT</td>
<td>JC</td>
<td>INACTIVE</td>
<td></td>
<td>30</td>
<td>HSM delay details</td>
</tr>
<tr>
<td>JOBCPU</td>
<td>R2</td>
<td>MIGRATE</td>
<td></td>
<td>15</td>
<td>Job CPU exceptions</td>
</tr>
<tr>
<td>JSTATMR</td>
<td>MR</td>
<td>ACTIVE</td>
<td>NotActive</td>
<td>300</td>
<td>Detailed Job status</td>
</tr>
<tr>
<td>JSTATZ</td>
<td>MR</td>
<td>ACTIVE</td>
<td>NotActive</td>
<td>300</td>
<td>Summary Job status</td>
</tr>
<tr>
<td>JSTATZ</td>
<td>MR</td>
<td>RASCOE</td>
<td></td>
<td>300</td>
<td>Summary Job status</td>
</tr>
<tr>
<td>JUSEZ</td>
<td>DEFAULT</td>
<td>BBEEMA1</td>
<td></td>
<td>60</td>
<td>Summarized job overview</td>
</tr>
<tr>
<td>MVDB2CHK</td>
<td>DS</td>
<td>ACTIVE</td>
<td>NotActive</td>
<td>60</td>
<td>MVDB2 Heartbeat</td>
</tr>
<tr>
<td>MVIACT00</td>
<td>I0</td>
<td>MIGRATE</td>
<td></td>
<td>30</td>
<td>30:IRGNPGMR ACTV-* high E</td>
</tr>
</tbody>
</table>

ddmmmyyyyy hh:mm:ss ----- MAINVIEW WINDOW INTERFACE (Vv.r.mm) ----------------
COMMAND ===>  SCROLL ===> PAGE
CURR WIN ==> 1  ALT WIN ===>>
>W1 =AMD=-------------------SJSC=----------------ddmmmyyyyy==hh:mm:ss==PLEXMGR==D==793
CMD Alarm Group Library Admin Freq Description
--- Name-------- Name---- Name---- Status--- Seco -----------
Alarm report views

Alarm Definition Detail (AMDDET) view

In the alarm definition views where the alarm definition name column contains a hyperlink, you access the AMDDET view (Figure 9) by putting your cursor on the alarm definition name and pressing Enter.

Figure 9  Alarm Definition Detail (AMDDET) view

The AMDDET views display detailed information about the alarm definition.

Alarm report views

MainView Alarm Management provides several different report views that show the alarm messages listed and sorted by different values. Table 7 describes the alarm report views.

Table 7  Alarm report views (part 1 of 2)

<table>
<thead>
<tr>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current by Severity (ALARMS)</td>
<td>List of current alarm messages</td>
</tr>
<tr>
<td></td>
<td>Whenever MainView Alarm Management evaluates an active alarm definition that results in an alarm condition an alarm message displays in the Active Alarms view. The alarm message displays in the ALARMS view until MainView Alarm Management evaluates the alarm definition again and the evaluation results in a non-alarm condition.</td>
</tr>
<tr>
<td>Alarm Reports by Name (ALBYNAME)</td>
<td>Alarm messages sorted by alarm definition name</td>
</tr>
</tbody>
</table>
MainView Alarm Management provides modification log views that show changes to alarm definitions and the alarm parameter members. Table 8 describes the modification log views.

**Table 8  Modification log views**

<table>
<thead>
<tr>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm Modifications (ALMODLOG)</td>
<td>Changes to alarm definitions over time</td>
</tr>
<tr>
<td></td>
<td>Use LOGPROF to filter the results in ALMODLOG</td>
</tr>
<tr>
<td>Alarm Parm Actions (APMOLLOG)</td>
<td>When changes were made to alarm parameter members</td>
</tr>
<tr>
<td></td>
<td>Use LOGPROF to filter the results in ALMODLOG</td>
</tr>
</tbody>
</table>
Status and performance views

MainView Alarm Management provides status and performance views that show the current status of alarm definition evaluation and evaluation performance. Table 9 describes the status and performance views.

Table 9  Status and performance views

<table>
<thead>
<tr>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AESTATUS (Alarm Evaluation Status)</td>
<td>Status of alarm definitions currently being evaluated</td>
</tr>
<tr>
<td>AEPERF (Alarm Performance)</td>
<td>CPU utilization of the tasks performing alarm definition evaluation</td>
</tr>
<tr>
<td></td>
<td>The results are shown by Alarm Set Id. An alarm set evaluates up to sixteen alarm definitions that use the same data. To see which alarm definitions are in an alarm set, hyperlink on the AlarmSet Id field.</td>
</tr>
</tbody>
</table>
Other views

Table 10 describes the other MainView Alarm Management views.

Table 10 Other MainView Alarm Management views

<table>
<thead>
<tr>
<th>View</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm Parameters</td>
<td>List of the alarm parameter files sorted by the name</td>
</tr>
<tr>
<td>(ALPARML)</td>
<td>An alarm parameter file tells how Alarm Management starts or initializes. The alarm parameter files contain the following:</td>
</tr>
<tr>
<td></td>
<td>■ Whether to start the Alarm Management in CAS or not, Yes or No.</td>
</tr>
<tr>
<td></td>
<td>■ Whether to list the names of the active alarm definitions during the Alarm Management initialization, Yes or No.</td>
</tr>
<tr>
<td></td>
<td>■ Whether the names of the alarm definitions being activated should be written to the console during the Alarm Management initialization.</td>
</tr>
<tr>
<td></td>
<td>■ The names of the groups to be automatically processed when Alarm Management is started in the CAS. System symbols may be used in the specification of group names.</td>
</tr>
<tr>
<td>MVAlarm 2.1</td>
<td>Links to the MVALARM product if it is running on the system</td>
</tr>
<tr>
<td></td>
<td>MVALARM 2.1 can run concurrently with the current version of Alarm Management. This link is intended to assist in migration to the integrated Alarm Management feature in the CAS.</td>
</tr>
<tr>
<td></td>
<td>See Chapter 2, “Migrating alarm definitions” for more information on migrating alarm definitions.</td>
</tr>
<tr>
<td>MVAlert</td>
<td>Links to the MVALERT product if it is running on this system</td>
</tr>
<tr>
<td></td>
<td>See Chapter 5, “Working with alerts” for more information on displaying alerts.</td>
</tr>
</tbody>
</table>
Symbols

The alarm message, hyperlink text, and MainView AutoOPERATOR PCMD text in an alarm definition can be made up of literal text and text substituted from symbols. The following types of symbols are available in MainView Alarm Management:

- System Symbols
- Alarm Manager Symbols
- Element Symbols

See Appendix B, “Symbolic values” for detailed instructions on using symbols.

Status values

In the alarm definition views you can see the status of the alarm definition. Table 11 describes the possible values for the status.

Table 11 Alarm status values

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>The alarm definition is evaluating MainView data at the frequency specified by its schedule.</td>
</tr>
<tr>
<td>AlarmMgrDown</td>
<td>Alarm Management is not executing.</td>
</tr>
<tr>
<td>Disabled</td>
<td>The alarm definition is activated, but it is individually disabled.</td>
</tr>
<tr>
<td>DisGrp</td>
<td>The alarm definition is activated, but its group is disabled.</td>
</tr>
<tr>
<td>EvalCancelled</td>
<td>The alarm evaluation task was cancelled.</td>
</tr>
<tr>
<td>EvalEnded</td>
<td>The alarm evaluation task ended.</td>
</tr>
<tr>
<td>EvalRestarted</td>
<td>The alarm evaluation task restarted.</td>
</tr>
<tr>
<td>InError</td>
<td>An error occurred while processing the alarm definition.</td>
</tr>
<tr>
<td>Initializing</td>
<td>The alarm definition is activated, and it is being prepared for evaluation.</td>
</tr>
<tr>
<td>NoTarg</td>
<td>The alarm definition is activated, but the service point specified in the alarm definitions not available.</td>
</tr>
<tr>
<td>NotInSchedule</td>
<td>The alarm definition is activated, but its schedule indicates that it is not being evaluated.</td>
</tr>
<tr>
<td>NotActive</td>
<td>The alarm definition is not active.</td>
</tr>
<tr>
<td>ShutdownReq</td>
<td>Alarm Management shutdown has been requested.</td>
</tr>
</tbody>
</table>
The MAKEALARM wizard and distributed alarms

MainView Alarm Management includes the MAKEALARM wizard that provides a quick and easy interface for creating and editing alarm definitions. To create an alarm definition you go to a MainView product view that shows the data you want to monitor, edit the view to reflect your alarm definition conditions, and use the MAKEALARM command on the data item to start the MAKEALARM wizard.

Some MainView products distribute alarm definitions for your use. Distributed alarms must be added to the alarm definition file system.

See Chapter 3, “Setting up an alarm definition quickly” for detailed instructions about using the MAKEALARM wizard and using distributed alarms.
The MAKEALARM wizard and distributed alarms
Migrating alarm definitions

This chapter explains how to migrate alarm definitions from MainView Alarm Manager 2.1 to the current version of MainView Alarm Management.

Overview

MainView Alarm Management version 5.0 and later uses an expanded alarm definition and new file system structure for storing the new alarm definitions. These major changes in the alarm definitions require you to migrate alarm definitions from MainView Alarm Manager 2.1 to the current version of MainView Alarm Management before they can be used. This chapter provides detailed instructions for migrating your alarm definitions.

Migration considerations

Since Alarm Management version 5.0 and later runs in the CAS and does not have knowledge of the Alarm Manager 2.1 PAS, it does not have knowledge of the Alarm Manager alerts. You will need to run both the MVALARM 2.1 PAS and MVALARM 5.0 to get all alerts. MainView Alarm Manager 2.1 can be disabled in the MVALARM 2.1 PAS.
Migration limitations

The following alarm definition features will not migrate from Alarm Manager 2.1 to Alarm Management version 5.0 or later:

■ Alarm definitions set against a summary view in an SSI context
■ Alarm definitions with modified expressions for escalation levels
■ Alarm definitions against customized views that are not available

Migrating alarm definitions

In the following procedures you will migrate alarm definitions from MainView Alarm Manager 2.1 to the current version of MainView Alarm Management. You can migrate entire alarm definition groups or individual alarm definitions.

Migrating individual alarm definitions

In this procedure you will migrate a single alarm definition.

Before you begin

Ensure that you have both MainView Alarm Manager 2.1 and MainView Alarm Management 5.0 or later installed and configured.

To migrate an individual alarm definition

1 On the EZALARMS menu, select MVAlarm 2.1 to open the EZALARM menu.

   **NOTE**
   The main menu for MainView Alarm Manager 2.1 is EZALARM, and the main menu for MainView Alarm Management 5.0 or later is EZALARMS. An S is added to the name for the new MainView Alarm Management menu.

2 On the EZALARM menu, select All Alarm Definitions to open the ALMLST03 view.

   **NOTE**
   In this procedure you are migrating an alarm definition from the ALMLST03 view, but you can also migrate individual alarm definitions from the ALMLST01 view using the same procedure.
3 Type **M** in the command column next to the alarm definition that you want to migrate, and press **Enter**.

The selected alarm definition is migrated, and the status of the migration is displayed in the command column next to the migrated alarm definition.

--- **TIP**

You can migrate multiple alarm definitions at the same time by typing an **M** next to several alarm definitions and pressing **Enter**.

The migrated alarm definitions have one of the following status values in the command column:

- **OK**—the alarm definition was migrated with no errors or problems.
- **WAR**—the alarm definition was migrated but changes were required to the alarm definition.
- **ERR**—the alarm definition was not migrated correctly because a fatal migration error occurred, but the alarm definition was copied to the MainView Alarm Management 5.0 or later MIGRATE library.

If you have a migrated alarm definition with an **ERR** status, see “Troubleshooting alarm definitions with an **ERR** status” on page 50 for more information.

4 To display the migration messages, place your cursor on the migration status for an alarm definition and press **Enter**.

--- **NOTE**

The alarm definitions that migrated with a status of **WAR** and **ERR** have warning messages included as comments in the new alarm definitions.

5 Once you finish migrating your individual alarm definitions, exit the view by pressing **F3**.

--- **TIP**

You can migrate alarm definitions more than once, but each time you migrate the same alarm definition, the latest migration replaces the same alarm definition in the MIGRATE library in MainView Alarm Management 5.0 or later.
Where to go from here

After you migrate your alarm definitions, see “Displaying and editing migrated alarm definitions” on page 51 for information working with your migrated alarm definitions.

Migrating alarm definition groups

In this procedure you will migrate an entire alarm definition group.

Before you begin

Ensure that you have both MainView Alarm Manager 2.1 and the current version of MainView Alarm Management installed and configured.

To migrate a group of alarm definitions

1. On the EZALARMS menu, select MAVAlarm 2.1 to open the EZALARM menu.

   **NOTE**

   The main menu for MainView Alarm Manager 2.1 is EZALARM, and the main menu for MainView Alarm Management 5.0 or later is EZALARMS. An S is added to the name for the new MainView Alarm Management menu.

2. On the EZALARM menu, select List Alarm Groups to open the ALGLST01 view.

3. Type M in the command column next to the alarm definition group that you want to migrate, and press Enter.

   **TIP**

   You can migrate multiple alarm definition groups at the same time by typing an M next to several alarm definitions and then pressing Enter.

The selected alarm definition group is migrated and the status of the migration is displayed in the command column next to the migrated group.
The migrated alarm definition groups have one of the following status values in the command column:

- **OK**—all alarm definitions in the group were migrated with no errors or problems.
- **WAR**—at least one alarm definition in the group migrated with changes required to the alarm definition.
- **ERR**—at least one alarm definition in the group was not migrated because a fatal migration error occurred.

The status of the group migration is the same as the worst migration status in the group. For example, if you migrate an alarm definition group with ten alarm definitions and nine of the alarm definitions migrate with a status of OK, and one alarm definition has a status or ERR, the migration status of the group is ERR.

4 Place your cursor on the migration status for an alarm definition and press Enter.

The alarm definition group migration messages are displayed (Figure 10).

**NOTE**

Once you exit the view where you were migrating the alarm definition groups, you will not be able to display the migration status messages. The alarm definitions that migrated with a status of WAR or ERR have warning messages included with the new alarm definitions.

---

**Figure 10  Alarm definition group migration messages**

```
... ddmmmyyyy hh:mm:ss ------ MAINVIEW WINDOW INTERFACE (Vv.r.mm) ---------------
COMMAND ===> SCROLL ===> PAGE
CURR WIN ===> 1        ALT WIN ===> W1 =ALGLST01==========CXTSTW===*========ddmmmyyyy==hh:mm:ss======MVALARM========
BBMXCB356I Action GroupConvert completed with return code: 4
-Related:BBMXCB351 For: ATGCID = _____
-Related:BBMXCB371 AT: 09:36:50 on 17MAY2005
--Related:BBHAA4826E Error executing GroupConvert request
---Related:BBHAA4401 Initializing Alarm Group: BBHTMND0 from DD: BBIPARM
---Related:BBHAA4401 Alarm Group: BBHTMND0 Initialization complete
---Related:BBHAA4981 DB2STOR /D0 successfully converted and stored
---Related:BBHAA499W THDELAP /D0 converted and stored with changes
----Related:BBHAA4100W See comments in converted alarm definition
----Related:BBHAA497E FSFREELO/DD conversion failed
----Related:BBHAA492E Product: MVUSS target:* not available
---Related:BBHAA4120 Total number of alarm definitions processed: 3
---Related:BBHAA41031 Number of alarm definitions converted successfully: 1
---Related:BBHAA4104W Number of alarm definitions converted with changes: 1
---Related:BBHAA4105E Number of alarm definitions not converted: 1
```

In Figure 10, the group had three alarm definitions:

- One alarm definition migrated with a status of OK, indicated by the following text in the message:
Working with migrated alarm definitions

The following procedures show you how to troubleshoot failed alarm definition migrations and how to work with migrated alarm definitions.

Troubleshooting alarm definitions with an ERR status

When you have a failed migration conversion, you can display the alarm definition migration messages to see why the migration failed. Figure 11 on page 51 shows the migration message for a single alarm definition migration that failed.

TIP
You can migrate alarm definitions more than once, but each time you migrate the same alarm definition, the latest migration replaces the same alarm definition in the MIGRATE library in MainView Alarm Management 5.0 or later.

Where to go from here

After you migrate your alarm definitions, see “Displaying and editing migrated alarm definitions” on page 51 for information working with your migrated alarm definitions.
NOTE
Even when a migration fails, the migrated alarm definition is copied to the MIGRATE library in MainView Alarm Management 5.0 or later.

Figure 11  Alarm definition migration error message

The following example shows the alarm definition name, the group name, and the reason the migration failed:

---Related:BBHAA497E CHISTJEN/M0 conversion failed
---Related:BBHAA492E Product:MVMVS target:CXTSTQ not available

The first message shows the alarm definition name (CHISTJEN) and the group (MO), and the second lines tells you that the alarm definition conversion failed because the target is not available.

TIP
The message for a failed alarm definition migration is the same if the alarm definition was included in a group migration, but you would have to scroll to find the message because the group migration messages contain at least one message for each alarm definition in the group.

Displaying and editing migrated alarm definitions

In this procedure, you will display and edit a migrated alarm definition.

Before you begin

Ensure that you have migrated one or more alarm definitions from MainView Alarm Manager 2.1 to the current version of MainView Alarm Management.
To display and edit a migrated alarm definition

1 On the EZALARMS menu, select Migrated Alarms to display the AMDMIG view.

On the AMDMIG view, the Status field shows the status of the migrated alarm definition. The migrated alarm definitions have one of the following status values:

- MIGRATED—indicates that the alarm definition migrated with no problems.
- ERROR—indicates that the alarm definition had one or more errors or values that need to be changed during the migration. If you edit or browse the alarm definition of an alarm definition with an ERROR status, the comments in the alarm definition describe the errors or changes made to the alarm definition.

2 On the AMDMIG view edit an alarm definition by typing one of the following commands in the command column next to the alarm definition and pressing Enter:

- B—opens the MAKEALARM wizard for the selected alarm definition in browse mode so you can display the migrated alarm definition.
- CH—opens the MAKEALARM wizard for the selected alarm definition in change mode so you can edit the migrated alarm definition.

When you edit or display the alarm definition of a migrated alarm, the MAKEALARM wizard—Alarm Definition Make dialog (Figure 17 on page 67.) contains notes associated with the alarm definition migration. Review these notes and take any required action to fix the alarm definition.

See Chapter 3, “Setting up an alarm definition quickly” for information on using the MAKEALARM wizard.

Where to go from here

You can also perform the following tasks for migrated alarm definitions from the AMDMIG view:

<table>
<thead>
<tr>
<th>Task</th>
<th>See Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displaying alarm definition details</td>
<td>72</td>
</tr>
<tr>
<td>Activating an alarm definition</td>
<td>74</td>
</tr>
<tr>
<td>Enabling an alarm definition</td>
<td>76</td>
</tr>
<tr>
<td>Copying an alarm definition</td>
<td>76</td>
</tr>
</tbody>
</table>
Setting up an alarm definition quickly

This chapter provides a quick procedure for setting up an alarm definition from a MainView product view using the MAKEALARM wizard. MainView Alarm Management gets values from the view when you set up an alarm which enables you to set up an alarm definition quickly.

Tips for creating alarms

Use the following information to more effectively create alarms:

- Do not rely on one instance of MainView Alarm Management in a multi-image environment. Run MainView Alarm Management in every CAS.

- Avoid using CONTEXT ALL or other multi-image contexts in alarm definitions. Keep alarm definitions within a single image.

- You can use any data on any view, but since the MAKEALARM wizard uses the values from the view, it is much easier to customize the view the way you want the alarm to work and then use the MAKEALARM wizard to create the alarm definition. To display the filters that were set in your product view, use the SHOWFILT primary command in that view.

- Realtime views make the best alarms. They can be tabular or summary views. Realtime views can pin-point an immediate problem or trouble maker. Definitions that use persistence, provide reliable results for decision making.

- Interval-type views can also make good alarms depending on how long the interval is. Interval data tends to average measurements and flatten the results. If the interval sets are too long then the alarm might not be that valuable.
Creating an alarm by using the MAKEALARM wizard

This section shows you how to create an alarm definition using the MAKEALARM wizard.

1 From a MainView product that is running in windows mode, display a view that has thresholds set for one or more fields.

2 From the selected view, type MAKEALarm on the COMMAND line, but do not press Enter.

3 Place the cursor on any field with a defined threshold, and press Enter.

MainView Alarm Management opens the first dialog of the MAKEALARM wizard (Figure 12 on page 55).

4 Complete the MAKEALARM wizard.

   A Fill out the Consider These Records dialog (see page 54).
   B Fill out the Use These Conditions dialog (see page 58).
   C Fill out the Report Alarms dialog (see page 62).
   D Fill out the Alarm Definition Make dialog (see page 66).

Consider These Records dialog

Use the Consider These Records dialog (Figure 12 on page 55) to define the subset of records that you want to consider for the alarm definition by specifying filter values that narrow the values and conditions you are monitoring.

Avoid making alarms based on long-term views. There are too many history records involved. Critical problems will be masked by averaging.
The fields shown on the Consider These Records dialog are dependent on the view selected in the MainView product when you use the MAKEALARM command. The values in the MAKEALARM wizard come from the context, parameters, column filters, Where clauses, and QWhere clauses of the selected view.

Your dialog may be slightly different than the one shown in Figure 12 because of the view you selected.

**Figure 12  MAKEALARM wizard—Consider These Records dialog**
If you want to add additional columns to filter the alarm definition, type **Select** on the **COMMAND** line, and press enter to open the Select Elements for Filters dialog (Figure 13).

**Figure 13** MAKEALARM wizard—Select Elements for Filters dialog

<table>
<thead>
<tr>
<th>Description</th>
<th>Cond Elementname:sumtype</th>
<th>Column Visible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>----- APPLID</td>
<td>A</td>
</tr>
<tr>
<td>Area</td>
<td>----- AREA</td>
<td>B</td>
</tr>
<tr>
<td>Number Targets</td>
<td>---MC CONTEXT:count</td>
<td>C</td>
</tr>
<tr>
<td>Number Active</td>
<td>---MC CONTEXT:count</td>
<td>D</td>
</tr>
<tr>
<td>Number NotAct</td>
<td>---MC CONTEXT:count</td>
<td>E</td>
</tr>
<tr>
<td>Description of Product</td>
<td>----- DDESC</td>
<td>F</td>
</tr>
<tr>
<td>Description</td>
<td>----- DESC:minimum</td>
<td>G</td>
</tr>
<tr>
<td>Status</td>
<td>---MC STATUS:count</td>
<td>H</td>
</tr>
<tr>
<td>System</td>
<td>----- SYSTEM</td>
<td>I</td>
</tr>
<tr>
<td>Status</td>
<td>----- STATUS:minimum</td>
<td>J</td>
</tr>
<tr>
<td>Status</td>
<td>----- STATUS:count</td>
<td>K</td>
</tr>
<tr>
<td>Server</td>
<td>----- USERID</td>
<td>L</td>
</tr>
<tr>
<td>System</td>
<td>----- SYSTEM</td>
<td>M</td>
</tr>
<tr>
<td>Default View</td>
<td>----- EZMENU</td>
<td>N</td>
</tr>
</tbody>
</table>

End to return to Consider These Records
HELP to goto help

---

**TIP**

For a description of the values on the Select Elements for Filters dialog, enter **HELP** on the **COMMAND** line and press Enter, or press F1.

---

After you select the elements you want to add, press **End** to return to the Consider These Records dialog.

2 Specify the values for the Consider These Records dialog.

**Table 12** on page 57 describes the values you specify for the Consider These Records dialog. Depending on the selected view, you may not have all the items displayed on the Consider These Records dialog.
### Table 12  MAKEALARM wizard—Consider These Records dialog values (part 1 of 2)

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>View</td>
<td>The view name identifies the product view used for the alarm definition. This view is used to create the alarm definition. The view name cannot be changed. The information in the view is incorporated in the alarm definition. After the alarm definition is saved, it can be changed without using the view because a view definition is saved as a subset of the alarm definition.</td>
</tr>
<tr>
<td>Product</td>
<td>The product identifies the name of the product associated with the view. The product name cannot be changed.</td>
</tr>
<tr>
<td>Context</td>
<td>The context specifies the target or SSI Context for the alarm definition. The initial context is the one being used when MAKEALARM is issued. Summary views can only be used in target mode. Summary views are not allowed in SSI Contexts.</td>
</tr>
<tr>
<td>Parameters</td>
<td>The parameters are from the view. Parameters are the column filters in the view. You can change the parameter values in the alarm definition. BMC Software recommends that you specify the parameters you intend to use prior to issuing MAKEALARM. Defining the parameters first ensures that the records displayed in the view are the records you want to consider in the alarm definition.</td>
</tr>
<tr>
<td>Column Filters</td>
<td>The column filters show you the filters from the view. Column filters can be added using the Select primary command. They may be deleted by typing a D in the space before the filter and pressing enter. BMC Software recommends that you use view customization to specify the column filters prior to issuing MAKEALARM to ensure that the records displayed in the view are the records you want to consider in the alarm definition.</td>
</tr>
<tr>
<td>Where</td>
<td>The Where clause specifies complex filter conditions that are applied in addition to the column filters. For alarm definitions based on views that are not summarized, there is no difference in the handling of Where and QWhere. The Where statement is the AND of any Where and QWhere. BMC recommends that you have the Where clause in effect before you use MAKEALARM to ensure that the records displayed in the view are the records you want to consider in the alarm definition. For more information on Where statements, see the MainView User Guide.</td>
</tr>
</tbody>
</table>
Use These Conditions dialog

Use the Use These Conditions dialog (Figure 14 on page 59) to specify the conditions which must be satisfied in order to report an alarm with a specific severity.

Table 12 MAKEALARM wizard—Consider These Records dialog values (part 2 of 2)

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>QWhere</td>
<td>QWhere is only shown on the dialog if the alarm is based on a summary view. The QWhere clause allows you to specify complex filter conditions that are applied to base records to be summarized. BMC Software recommends that you have the QWhere clause in effect before you use MAKEALARM to ensure that the records displayed in the view are the records you want to consider in the alarm definition. For more information on QWhere statements, see the MainView User Guide.</td>
</tr>
<tr>
<td>Schedule</td>
<td>The Schedule section allows you to specify two items:</td>
</tr>
<tr>
<td>Frequency</td>
<td>The frequency specifies, in seconds, how often the alarm definition is evaluated. The frequency must be a multiple of five seconds and a minimum of five seconds. The frequency is the single most important factor in the amount of CPU used in the evaluation of alarm definitions. A lower number will use more CPU. A higher number will use less CPU. By default, Alarm Management evaluates alarm conditions every 60 seconds.</td>
</tr>
<tr>
<td>Periods</td>
<td>The periods specification allows you to specify start and stop times for the alarm evaluation on various days of the week. Up to four periods can be specified. A period can specify start/stop times for every day of the week, or for individual days of the week, but not both. If the start time is later in the day than the stop time, the alarm definition is presumed to span midnight. The period will start on the day specified, and stop at the stop time on the following day.</td>
</tr>
</tbody>
</table>

3 After you define the subset of records that you want to consider for your alarm definition, type Next on the COMMAND line, and press Enter to continue to the next step in the MAKEALARM wizard as shown Figure 14 on page 59.
1 If you want to add additional elements to the conditions of the alarm definition, type Select on the COMMAND line, and press Enter to open the Select Elements for Conditions dialog (Figure 15).

**Figure 14**  MAKEALARM wizard—Use These Conditions dialog

<table>
<thead>
<tr>
<th>COMMAND ====&gt; Use These Conditions</th>
<th>SCROLL ===&gt; PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence</td>
<td></td>
</tr>
<tr>
<td>Samples 1</td>
<td></td>
</tr>
<tr>
<td>Info 1, Warn 1, Minor 1, Major 1, Critical 1</td>
<td></td>
</tr>
<tr>
<td>Conditions/Thresholds</td>
<td></td>
</tr>
<tr>
<td>Report if corresponding conditions are true for ALL (ALL</td>
<td>ANY) elements</td>
</tr>
<tr>
<td>ValueOne(YDF0VAL1) Use Dynamic Threshold? YES</td>
<td></td>
</tr>
<tr>
<td>Severity Op Value</td>
<td></td>
</tr>
<tr>
<td>Info &gt; 0</td>
<td></td>
</tr>
<tr>
<td>Warn &gt; 1</td>
<td></td>
</tr>
<tr>
<td>Minor &gt; 2</td>
<td></td>
</tr>
<tr>
<td>Major &gt; 3</td>
<td></td>
</tr>
<tr>
<td>Critical &gt; 4</td>
<td></td>
</tr>
</tbody>
</table>

Back to return to previous step
Next to goto next step
Select to select elements
CANCEL to exit without saving changes
HELP to goto help

**Figure 15**  MAKEALARM wizard—Select Elements for Conditions dialog

<table>
<thead>
<tr>
<th>COMMAND ====&gt; Select Elements For Conditions</th>
<th>SCROLL ===&gt; PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Cond Elementname:sumtype</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Record ID</td>
<td>YDF0RCID</td>
</tr>
<tr>
<td>SET?</td>
<td>YDF0SET</td>
</tr>
<tr>
<td>SUM</td>
<td>YDF0SUM0</td>
</tr>
<tr>
<td>Value One</td>
<td>YDF0VAL1</td>
</tr>
<tr>
<td>Value Two</td>
<td>YDF0VAL2</td>
</tr>
<tr>
<td>Value Three</td>
<td>YDF0VAL3</td>
</tr>
<tr>
<td>Value Four</td>
<td>YDF0VAL4</td>
</tr>
</tbody>
</table>

End to return to Use These Conditions
HELP to goto help
Use These Conditions dialog

A Select any additional elements you want to include in your alarm definition by entering an S to the left of the element description.

TIP
For a description of the values on the Select Elements for Conditions dialog, enter HELP on the COMMAND line and press Enter, or press F1.

B After you select any elements you want to add, press End to return to the Use These Conditions dialog.

2 Specify the values for the Use These Conditions dialog.

Table 13 describes the values you specify for the Use These Conditions dialog.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence</td>
<td>Use the persistence specification to define alarm definitions that require a condition to be true for more than one sample.</td>
</tr>
<tr>
<td></td>
<td>Persistence requires that an alarm condition be true for ( n ) of ( m ) samples. The Samples value specifies ( m ) in the expression ( n ) of ( m ). The maximum sample size is 32. The ( n ) is specified for each severity, Info, Warn, Minor, Major and Critical.</td>
</tr>
<tr>
<td></td>
<td>Conditions for severities are evaluated from highest to lowest. Evaluation stops when a condition is true. All the lower level severities are assumed to be true. For example, if the persistence condition for Warn is 3 of 5, and on successive evaluations, the highest severity conditions for a record are Warn, Info, Major and Critical, Alarm Management generates the alarm report with a severity of Warn.</td>
</tr>
<tr>
<td></td>
<td>If you want an alarm report generated whenever a condition is true, specify a sample size of 1 and 1 for the severity.</td>
</tr>
</tbody>
</table>
Use the Conditions/Thresholds section to specify the conditions that must be true for each severity of an alarm definition.

**All or any**

This specification only has meaning if you have used the SELECT command to add additional elements to the Element Severity section. If the alarm definition is based on one element, then ALL or ANY have the same meaning. ALL means that the condition for a severity is true if the corresponding severity conditions are true for ALL the elements. ANY means that the condition for a severity is true if any one of the corresponding conditions is true.

If a condition for a severity is specified for one element and not another element. The empty specification is ignored regardless of the specification of ALL or ANY.

**Dynamic thresholds**

Indicate whether the alarm definition should make use of dynamic thresholds, if any are defined for the specified elements.

YES (the default) means any dynamic thresholds that are defined for an element take precedence. Thresholds that are specified in the alarm definition take effect only when no dynamic threshold is active. To use only dynamic thresholds for an alarm, accept the default of YES and do not specify any conditions for any of the element’s severity levels.

For information about dynamic thresholds, see the MainView Threshold Management Guide.

**Element severity conditions**

The alarm definition may be based on one or more elements from the view. This section repeats for each element.

For each element, you can specify a different operator and value for each of the following levels of severity:

- Info
- Warn
- Minor
- Major
- Critical

The initial conditions for each severity are determined from the view. The threshold conditions are taken from the view in order. The first threshold condition for the field becomes the critical condition, the second major and so on, down to Info.
After you define the elements and conditions for your alarm definition, enter **Next** on the **COMMAND** line, and press **Enter** to continue to the next step in the MAKEALARM wizard as shown Figure 16 on page 63.

### Report Alarms dialog

Use the Report Alarms dialog (Figure 16 on page 63) to define messages and other customized information for the alarm reports. The alarm messages generated by an alarm definition are one type of alert that can be displayed by the Alert Management component. For information about displaying alerts, see Chapter 5, “Working with alerts.”

**TIP**

If you want to remove an element from the Conditions/Thresholds section, enter a **D** to the left of the element and press **Enter**, and the dialog refreshes with the element removed.
1 Specify the values for the Report Alarms dialog.

Table 14 on page 64 describes the values you specify for the Report Alarms dialog.

**NOTE**

The messages and other text can use symbols that are replaced by text when the message is issued. For detailed information on the available symbols, see Appendix B, “Symbolic values.”
**Table 14  MAKEALARM wizard—Report Alarms dialog values (part 1 of 3)**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message destinations</td>
<td>Alarm Management always attempts to send an alarm report to MainView AutoOPERATOR, MVAalert and to CONTROL-O. Other report destinations are specified by the following:</td>
</tr>
<tr>
<td>View</td>
<td>View specifies that the alarm report is sent to the following destinations:</td>
</tr>
<tr>
<td></td>
<td>■ ALARMS view</td>
</tr>
<tr>
<td></td>
<td>■ MainView Logger</td>
</tr>
<tr>
<td></td>
<td>Specify yes if you want the alarm history recorded to the MainView Logger and the alarm report log views (ALHIST and ALHISTR).</td>
</tr>
<tr>
<td>WTO (Write to Operator)</td>
<td>Specifies if messages are sent to the MVS Console via WTO.</td>
</tr>
<tr>
<td></td>
<td>■ Repeat</td>
</tr>
<tr>
<td></td>
<td>— No</td>
</tr>
<tr>
<td></td>
<td>Only the beginning, ending, upgrade, and downgrade alarm reports are displayed, regardless of how long the alarm is active.</td>
</tr>
<tr>
<td></td>
<td>— Yes</td>
</tr>
<tr>
<td></td>
<td>The start message is repeated each time the alarm is evaluated.</td>
</tr>
<tr>
<td></td>
<td>■ Info, Warn, Minor, Major, Critical</td>
</tr>
<tr>
<td></td>
<td>— No</td>
</tr>
<tr>
<td></td>
<td>The start message is not repeated as long as the alarm stays in the same state.</td>
</tr>
<tr>
<td></td>
<td>— Yes</td>
</tr>
<tr>
<td></td>
<td>The start message is repeated each time the alarm is evaluated.</td>
</tr>
</tbody>
</table>
### Table 14  MAKEALARM wizard—Report Alarms dialog values (part 2 of 3)

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Messages</td>
<td>Start message</td>
</tr>
<tr>
<td></td>
<td>The start message is used for the initial alarm report, continuations, and any severity changes. For the start message, you may specify the following values:</td>
</tr>
<tr>
<td></td>
<td>- Message ID</td>
</tr>
<tr>
<td></td>
<td>Message ID for the start message.</td>
</tr>
<tr>
<td></td>
<td>- Message Text</td>
</tr>
<tr>
<td></td>
<td>Specifies the text of the message issued for the alarm. The message can contain both variables and text. Variables are preceded by an ampersand (&amp;) in the text.</td>
</tr>
<tr>
<td></td>
<td>End message</td>
</tr>
<tr>
<td></td>
<td>The end message is used when the Alarm conditions are not satisfied for any severity. For the End Message you must specify:</td>
</tr>
<tr>
<td></td>
<td>- Message ID</td>
</tr>
<tr>
<td></td>
<td>Message ID for the End message.</td>
</tr>
<tr>
<td></td>
<td>- Message Text</td>
</tr>
<tr>
<td></td>
<td>Specifies the text of the message issued for the alarm. The message can contain both variables and text. Variables are preceded by an ampersand (&amp;) in the text.</td>
</tr>
<tr>
<td>Hyperlink</td>
<td>Defines the hyperlink path for the Message ID field in the ALARM and ALARMH views. The default hyperlink path is to the view containing the data that generated the alert.</td>
</tr>
<tr>
<td>User values</td>
<td>Defines user-defined values for the alarm report. User values appear in the ALARMS view. You can use these values to filter, summarize, or sort the ALARMS view.</td>
</tr>
<tr>
<td>HelpLink</td>
<td>Identifies your user-written help topic that opens from the HLP IND hyperlink in the ALARMS, ALHIST, and and ALHISTR views. You will provide a topic and sub topic for your helplink. See the <em>MainView Administration Guide</em> for information on creating your own online Help.</td>
</tr>
</tbody>
</table>
After you define the messages and other customized information for the alarm reports for your alarm definition, type Next on the COMMAND line, and press Enter to continue to the next step in the MAKEALARM wizard as shown Figure 17 on page 67.

### Alarm Definition Make dialog

Use the Alarm Definition Make dialog (Figure 17 on page 67) to finalize and save your alarm definition.

#### Table 14  MAKEALARM wizard—Report Alarms dialog values (part 3 of 3)

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AutoOPERATOR</td>
<td>Identifies the User ID, Queue, and PCMD (command) that are sent to MainView AutoOPERATOR. See the MainView AutoOPERATOR product documentation for more information. The message can contain both variables and text. Variables are preceded by an ampersand (&amp;) in the text.</td>
</tr>
<tr>
<td>BSM Threshold Component</td>
<td>This field</td>
</tr>
<tr>
<td></td>
<td>■ is used as part of a unique identifier in events that are sent to BMC Event Manager, BMC Service Impact Manager, and BMC Discovery for z/OS</td>
</tr>
<tr>
<td></td>
<td>■ identifies the target of a specific metric whose threshold was exceeded</td>
</tr>
<tr>
<td></td>
<td>The default value is the element name that identifies the object for which an alarm is being reported. The element name that identifies an object is known as the key field in a view. The key field is generally the first column on the left in a tabular view or the first field in the top left of a detail view.</td>
</tr>
</tbody>
</table>

**TIP**

If you are editing a message, hyperlink, or PCMD text and you want to return the text to the default text, clear the field and press Enter, and the dialog refreshes with the default text in the blank text fields.

2  After you define the messages and other customized information for the alarm reports for your alarm definition, type Next on the COMMAND line, and press Enter to continue to the next step in the MAKEALARM wizard as shown Figure 17 on page 67.
Specify the values for the Alarm Definition Make dialog.

Table 15 describes the values you specify for the Alarm Definition Make dialog.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save Alarm Properties</td>
<td>Define how your alarm is saved. You can define the following properties:</td>
</tr>
<tr>
<td></td>
<td>■ User Library; specify the user library where this alarm will be saved</td>
</tr>
<tr>
<td></td>
<td>■ Group Name; specify the group for the alarm; if the group does not exist, it will be created</td>
</tr>
<tr>
<td></td>
<td>■ Alarm Name; specify the alarm name</td>
</tr>
<tr>
<td></td>
<td>■ Description; provide a brief description of the alarm</td>
</tr>
<tr>
<td></td>
<td>■ Replace Alarm (Yes/No); whether to replace an alarm with the same name in the same group if it exists</td>
</tr>
<tr>
<td>Comments</td>
<td>Specify any comments or notes that describe the alarm definition.</td>
</tr>
</tbody>
</table>

After you define the save properties for your alarm definition, press End to save your alarm definition. When the alarm is saved, MainView Alarm Management displays the AMD view (Figure 8 on page 37).
Using distributed alarms

Some MainView products distribute alarm definitions for your use. This section describes how to determine whether a product has any distributed alarms and how to add distributed alarms to the alarm definition file system.

After adding a distributed alarm to the alarm definition file system, you can use the alarm just like your own defined alarms. For more information about using alarms, see Chapter 4, “Working with alarm definitions” on page 71.

To determine whether a product has distributed alarms

1. Access your MainView product.

2. Type `ALRMDIST` on the COMMAND line and press Enter.

The ALRMDIST view is displayed with the distributed alarms listed (Figure 18). If no alarms are listed, your product does not have any distributed alarms.

Figure 18 ALRMDIST view

<table>
<thead>
<tr>
<th>ddmmmyyyy hh:mm:ss</th>
<th>COMMAND ====&gt;</th>
<th>SCROLL ===&gt;</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURR WIN ===&gt; 1</td>
<td>ALT WIN ===&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;W1 =ALRMDIST========MA2ISJSC=*========ddmmmyyyy==hh:mm:ss==MVTOM====D====</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Distributed Alarms</td>
<td>- Hide Fixed Section</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMD Alarm</td>
<td>Library</td>
<td>Group</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>MAMOBJ01</td>
<td>BCVAXT1</td>
<td>MVTOM</td>
<td>Objects - LastStat not equal to EvalStat</td>
</tr>
<tr>
<td>MAMOBJ02</td>
<td>BCVAXT1</td>
<td>MVTOM</td>
<td>Objects - Curr Sys Status FAILURE</td>
</tr>
<tr>
<td>MAMOBJ03</td>
<td>BCVAXT1</td>
<td>MVTOM</td>
<td>Objects - Curr Sys NE Prim sys</td>
</tr>
<tr>
<td>MAMOBJ04</td>
<td>BCVAXT1</td>
<td>MVTOM</td>
<td>Objects - Dependency Evaluation EQ NO</td>
</tr>
<tr>
<td>MAMOBJ05</td>
<td>BCVAXT1</td>
<td>MVTOM</td>
<td>Objects - Exception Indicator EQ YES</td>
</tr>
</tbody>
</table>
To add a distributed alarm to the alarm definition file system

1 From the ALRMDIST view, use one of the following commands to add distributed alarms to the alarm definition file system:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADD primary command</td>
<td>Adds one or more alarms to the alarm definition file system</td>
</tr>
<tr>
<td></td>
<td>ADD pattern</td>
</tr>
<tr>
<td></td>
<td>The * pattern variable uses the * and ? wild cards to select which alarms to add. For example</td>
</tr>
<tr>
<td></td>
<td>■ ADD * selects all distributed alarm definitions.</td>
</tr>
<tr>
<td></td>
<td>■ ADD ABC* selects all distributed alarm definitions with alarm names beginning with 'ABC'.</td>
</tr>
<tr>
<td></td>
<td>■ ADD ABC? selects all distributed alarm definitions with alarm names beginning with 'ABC' that are four characters in length.</td>
</tr>
<tr>
<td></td>
<td>The specified alarms are added to the alarm definition file system in the library and group indicated in the ALRMDIST view list.</td>
</tr>
<tr>
<td>A (Add) line command</td>
<td>Adds the selected alarm to the alarm definition file system</td>
</tr>
<tr>
<td></td>
<td>The selected alarm is added to the alarm definition file system in the library and group indicated in the ALRMDIST view list.</td>
</tr>
<tr>
<td></td>
<td>Before issuing the line command, you can overtype the library name, group name, or both to specify a different location for the alarm.</td>
</tr>
</tbody>
</table>
Using distributed alarms
Working with alarm definitions

This chapter explains some of the basic tasks you will perform when you are working with alarm definitions, alarm definitions groups, and alarm definitions libraries.

Working with alarm definitions

When you are working with alarm definitions you will usually access the alarm definitions from one of the following views:

- Alarm Definitions (AMD)
- Alarm Definitions Library (AMDLIB)
- Alarm Definitions Group (AMDGRP)
- Alarm Definitions Product (AMDPRD)
- Alarm Definitions Context (AMDCON)
- Alarm Definitions Active (AMDACT)
- Alarm Definitions Migration (AMDMIG)
- Alarm Definitions Group Summary (AMDGRPZ)

For more information on the alarm definition list views, see “Alarm definition list views” on page 36. The following sections describe common tasks you will perform when you are working with alarm definitions:

<table>
<thead>
<tr>
<th>Task</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displaying alarm definition details</td>
<td>72</td>
</tr>
<tr>
<td>Browsing an alarm definition</td>
<td>73</td>
</tr>
<tr>
<td>Editing an alarm definition</td>
<td>74</td>
</tr>
<tr>
<td>Activating an alarm definition</td>
<td>74</td>
</tr>
<tr>
<td>Inactivating an alarm definition</td>
<td>75</td>
</tr>
<tr>
<td>Enabling an alarm definition</td>
<td>76</td>
</tr>
<tr>
<td>Disabling an alarm definition</td>
<td>75</td>
</tr>
</tbody>
</table>
Displaying alarm definition details

You can display the alarm definition details from any one of the alarm definition list views. The details that are displayed are:

- Name and short description of the alarm
- Name of the group and library the alarm belongs to
- View, context, and product associated with the alarm
- Administrative status of the alarm (see “Status values” on page 42)
- Frequency of execution of the alarm
- Information relating to the creation of the alarm (such as date and creator)
- Information relating to the modification of the alarm (such as date and modifier)
- Alarm set that the alarm is assigned to

To display alarm definition details

1. In one of the alarm definition list views, put your cursor in the first column of the alarm definition that you want to display the details for, and press Enter.

NOTE

The first column in the different alarm definition list views contain different data in each of the different views, but the column will always link to the alarm definition detail view for the alarm definition described in the selected row.

The Alarm Definition Detail (AMDDET) view is displayed (Figure 19 on page 73).
Browsing an alarm definition

You can browse an alarm definition from any alarm definition list view. Browsing an alarm definition shows you the criteria that make up the alarm.

To browse an alarm definition

1 In one of the alarm definition list views, type B in the command column next to the alarm definition that you want to browse, and press Enter.

The MAKEALARM wizard starts for the selected alarm definition in browse mode so you can display the alarm definition.

See Chapter 3, “Setting up an alarm definition quickly” for information on using the MAKEALARM wizard, or press F1 to display the online Help for the MAKEALARM wizard.

2 When you are finished browsing the alarm definition, exit the MAKEALARM wizard to return to the alarm definition list view.
Editing an alarm definition

You can edit an alarm definition from any alarm definition list view.

To edit an alarm definition

1 In one of the alarm definition list views, type CH in the command column next to the alarm definition that you want to edit, and press Enter.

The MAKEALARM wizard starts for the selected alarm definition in change mode so you can edit the alarm definition.

See Chapter 3, “Setting up an alarm definition quickly” for information on using the MAKEALARM wizard, or press F1 to display the online Help for the MAKEALARM wizard.

2 When you are finished editing the alarm definition, exit the MAKEALARM wizard to return to the alarm definition list view.

Activating an alarm definition

To use an alarm definition, you must activate it. When you activate an alarm definition, it is moved to the ACTIVE library and it becomes active.

You can activate an alarm definition from any alarm definition list view.

To activate an alarm definition

1 Open one of the alarm definition list views.

2 On the row of the alarm definition you want to activate, type an A in either the CMD column or the Admin Status column, and press Enter.

The alarm definition is moved to the ACTIVE library, and the alarm is started.
Inactivating an alarm definition

You can inactivate an ACTIVE alarm definition from any alarm definition list view. Inactivating an alarm permanently stops the processing of the alarm (see also “Disabling an alarm definition”). When you inactivate an alarm definition, it is moved to the INACTIVE library and it becomes inactive.

To inactivate an alarm definition

1 Open one of the alarm definition list views.

2 On the row of the alarm definition you want to activate, type an I in either the CMD column or the Admin Status column, and press Enter.

The alarm definition is made inactive and moved to the INACTIVE library.

Disabling an alarm definition

Disabling an alarm temporarily stops the processing of the alarm (see also “Inactivating an alarm definition”). You can disable an active and enabled alarm definition from any alarm definition list view.

To disable an alarm definition

1 Open one of the alarm definition list views.

2 On the row of the alarm definition you want to disable, type an D in either the CMD column or the Admin Status column, and press Enter.

The alarm definition is disabled and stops executing. The alarm definition remains in the ACTIVE library.
Enabling an alarm definition

You can enable a disabled alarm definition from any alarm definition list view.

**To enable an alarm definition**

1. Open one of the alarm definition list views.

2. On the row of the alarm definition that is disabled, type an E in either the CMD column or the Admin Status column, and press Enter.

   The alarm definition is enabled and starts executing. The alarm definition remains in the ACTIVE library.

Copying an alarm definition

You can copy an alarm definition from any alarm definition list view. When you copy an alarm definition, the original definition remains the same, and a new definition is created (see also “Moving or renaming an alarm definition” on page 77 and “Deploying alarm definitions” on page 92).

**To copy an alarm definition**

1. Open one of the alarm definition list views.

2. On the row of the alarm definition you want to copy, type CO in the CMD column.

3. Over type the Alarm Name, Group Name, or Library name values with a new value.

   **NOTE**

   - If you copy an alarm definition that is not in the ACTIVE library, and you put the copy in the ACTIVE library, the copy will not be active until you make it active (see “Activating an alarm definition” on page 74).

   - If you copy an alarm definition from a library other than the ACTIVE library, and you put the copy in the ACTIVE library, the alarm will not be made active when it is copied (see “Activating an alarm definition” on page 74).

   - If you copy an alarm definition to a library or group that contains an alarm with the same name, you are prompted to either confirm or cancel the request.

4. Press Enter to copy the alarm definition.
Moving or renaming an alarm definition

You can move or rename an alarm definition from any alarm definition list view. You can move an alarm definition to a different group, a different library, or both. When you move or rename an alarm definition, the original definition is changed, a copy is not created (see also “Copying an alarm definition” on page 76).

To move an alarm definition

1 Open one of the alarm definition list views.

2 On the row of the alarm definition you want to move, type M in the CMD column.

3 Over type the Group Name value, the Library Name value, or both with a new value.

4 Press Enter to move the alarm definition.

To rename an alarm definition

1 Open one of the alarm definition list views.

2 On the row of the alarm definition you want to move, type M in the CMD column.

3 Over type the Alarm Name value with a new value.

4 Press Enter to rename the alarm definition.

NOTE

■ If you move an alarm definition into the ACTIVE library, the alarm is not activated when it is moved (see “Activating an alarm definition” on page 74).

■ If you move an alarm definition to a library and group that contains an alarm with the same name, you are prompted to either confirm or cancel the request.

NOTE

If you rename an alarm definition to an alarm definition with the same name, you are prompted to either confirm or cancel the request.
Deleting an alarm definition

You can delete an alarm definition from any alarm definition list view. When you delete an alarm definition, it is moved to the DELETED library. The alarm definition is logically deleted. To physically delete an alarm definition, delete the alarm definition from the DELETED library.

To delete an alarm definition

1 Open one of the alarm definition list views.

2 On the row of the alarm definition you want to delete, type an DEL in the CMD column, and press Enter.

The Alarm Definition Delete dialog opens (Figure 20).

Figure 20  Alarm Definition Delete dialog

The Alarm Definition Delete dialog allows you to perform the following actions:

- Type Back, and press Enter to review the alarm definition using the MAKEALARM wizard in browse mode.
- Type Yes, and press Enter to delete the alarm definition.
- Type CAN, and press Enter to cancel the delete request.
3 Type Yes, and press Enter to delete the alarm definition.

The alarm definition is moved to the DELETED library. The alarm definition is not completely deleted until you delete it from the DELETED library.

**To delete an alarm definition from the DELETED library**

1 Type SHOWDEL on the COMMAND line, and press Enter to make the DELETED alarm definitions show up in the alarm definition list views.

2 On the row of the alarm definition you want to delete, type an DEL in the CMD column, and press Enter.

3 When the Alarm Definition Delete dialog opens, type Yes, and press Enter to delete the alarm definition.

4 Type HIDEDEL on the COMMAND line, and press Enter to hide the alarm definitions in the DELETED library on the alarm definition list views.

**Undeleting an alarm definition**

You can undelete an alarm definition from any alarm definition list view. Undeleting a DELETED alarm definition requires you to move the alarm definition out of the DELETED library and into some other library. You cannot delete an alarm definition that was physically deleted (see “Deleting an alarm definition” on page 78).

**To undelete an alarm definition**

1 Type SHOWDEL on the COMMAND line and press Enter to display the deleted alarm definitions in the alarm definition list views.

2 On the row of the alarm definition you want to undelete, type M in the CMD column.

3 Over type the Library Name value with a new value.

4 Press Enter to undelete the alarm definition.

5 Type HIDEDEL on the COMMAND line and press Enter to hide the alarm definitions in the DELETED library on the alarm definition list views.
# Displaying alarm evaluation status

You can display the alarm evaluation status of the active alarm definitions by opening the Alarm Evaluation Status view from the EZLARMS menu or from one of the alarm definition list views.

## To display the alarm evaluation status

In the Status and Performance area of the EZLARMS menu, select **Alarm Evaluator Status**, or put your cursor in the **Admin Status** column in an alarm definition list view, and press **Enter** to open the Alarm Evaluation Status view (Figure 21).

### Figure 21  Alarm Evaluation Status (AESTATUS) view

You can perform the following tasks on the Alarm Evaluation Status view:

- Disable individual alarm definitions with the Disable line command.
- Enable individual alarm definitions with the Enable line command.
- Disable an entire alarm group with the GDisable line command.
- Enable an entire alarm group with the GEnable line command.
- Change an alarm evaluation frequency by over typing the current frequency in the **AlarmEval Frequency** field and pressing Enter.
- Display error messages for an alarm definition with an **InError** administrative status by putting your cursor on the **InError** status and pressing Enter.
Displaying and evaluating alarm performance

You can display the performance of evaluation sets and alarm definitions to evaluate the overhead of the alarm.

**TIP**

If you see an alarm set that appears to be using an excessive amount of CPU time, you can drill down through several views to investigate the alarm definition as shown in this procedure.

To display the alarm performance

1. In the Status and Performance area of the **EZALARMS** menu, select **Alarm Performance**, and press **Enter** to open the Alarm Performance view (Figure 22).

**Figure 22** Alarm Performance (AEPERF) view

You can display the performance of evaluation sets and alarm definitions to evaluate the overhead of the alarm.
Because alarm definitions are executed in evaluation sets, the Alarm Performance view provides performance statistics for the evaluation sets. By default, the Alarm Performance view provides the following information about the alarm set:

- Alarm Set ID (AlarmSet Id)
- Product Name
- Context Name
- Percentage of CPU Utilization (% CPU Util)
- Average CPU used per Alarm Set Evaluation (AvgCpu /Eval)
- Average Elapsed Time for each Alarm Set Evaluation (AvgElap/Ev)
- Total Number of Times the Alarm Set was Evaluated (#of Evals)
- Total CPU Consumed for Evaluation the Alarm Set (Total CpuTm)
- Total Elapsed Time Used Evaluation the Alarm Set (Total ElapTm)
- System Name
- Server Name

If you notice any values that look high or out of line, you can investigate further by examining what alarm definitions are in the alarm set. You can display the alarm definitions in an alarm set by using the hyperlinks in the AlarmSet column.

2 Place your cursor on the AlarmSet ID of an alarm set, and press Enter to open the Alarm Evaluation Status view showing the alarm definitions in the selected alarm set (Figure 23).

Figure 23 Alarm Evaluation Status (AESTATUS) view

3 To display the alarm definitions in the alarm set, put your cursor in the Alarm Group column, and press Enter to open the AMDGRP view to see the alarm definition list view sorted by group with the selected group at the top of the view.

Displaying current alarms

Use the following procedure to display current alarms to ensure that your alarm definitions are generating alarm reports correctly. You can display current alarms by using one of the current alarm views.
Current alarms are alarms that have generated a start message but have not generated an end message. The start message is displayed until an alarm evaluation determines that the exception condition has ended. Then, the start message is replaced by the end message. The end message persists in the ALARMS view for thirty seconds, before it is removed.

MainView Alarm Management includes the following current alarm views:

- Current By Severity (ALARMS)
- Current By Name (ALBYNAME)
- Current by Target (ALBYTGT)
- Current by Product (ALBYPROD)

To display current alarms (by name)

- Select Current By Name from the Alarm Reports section of the EZALARMS menu.

The ALBYNAME view is displayed (Figure 24).

Figure 24 Current Alarms by Name (ALBYNAME) view

<table>
<thead>
<tr>
<th>ddmmyyyy hh:mm:ss</th>
<th>COMMAND ====&gt;</th>
<th>SCROLL ===&gt;</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CURR WIN ===&gt;</td>
<td>1</td>
<td>ALT WIN ===&gt;</td>
</tr>
<tr>
<td></td>
<td>&gt;W1 =ALBYNAME==CXTSTW==ddmmmyyyy==hh:mm:ss==PLEXMGR==D=2636</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


--- Name--- OnsetTm Duration --- Ind ------------

ECSAMAX > 13:05:55 02:52:04 MIN No ECSAMAXSMO ECSA usage >
ECSAMAX2 > 13:05:55 02:52:03 MIN No ECSAMAXSMO ECSA usage >
JCPUALLMSG > 15:46:42 00:11:16 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 15:46:42 00:11:16 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 15:46:13 00:11:46 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 15:17:13 00:40:45 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 15:16:43 00:41:15 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 14:36:26 01:21:32 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 14:31:25 01:26:33 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 14:16:26 01:41:32 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 14:09:45 01:48:13 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 14:09:00 01:48:58 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 14:01:52 01:56:06 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 13:57:01 02:00:57 CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 7754:36: CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 7754:36: CRI No JCPUALLMSGS00 CXTSTW Jobnam
JCPUALLMSG > 7754:36: CRI No JCPUALLMSGS00 CXTSTW Jobnam
For each alarm message, the current alarm views display the following information:

- Time the alarm was issued
- Severity of the alarm
- Whether or not additional user-written help is available
- Message ID for the alarm
- Message text

**Displaying changes to alarm definitions**

Use the following procedure to display changes to your alarm definitions. The MainView Logger records changes to the alarm definitions.

1. On the EZALARMS menu, select **Alarm Modifications** in the Modification Log area to open the ALMODLOG view.

**Displaying alarm history**

The MainView Logger records alarm history. The following views are available to display alarm history:

- **ALHIST** is a tabular view that displays a log of alarm reports.

- **ALHISTR** is a hybrid view that contains a fixed section and a scrollable list of recent alarm reports. The fields in the fixed section determine which records are displayed.

**To display the ALHIST view**

1. Perform one of the following actions:

   - On the EZALARMS menu, select **Alarm Report Log**.
   - Type **ALHIST** on the COMMAND line, and press Enter.

The ALHIST view is displayed (Figure 25 on page 85).
Figure 25   Alarm Report Log (ALHIST) view

To display the ALHISTR view

1. Perform one of the following actions:

   - On the EZALARMS menu, select Recent Alarm Report.
   - Type ALHISTR on the COMMAND line, and press Enter.

By default, the fixed section of ALHISTR is hidden. The hyperlink on the first field of the fixed section (- | +) is used as a toggle to show (include) or hide (exclude) the fixed section. The primary commands INC FIX and EXC FIX serve the same purpose as the - and + hyperlinks. Figure 26 is an example of ALHISTR with the fixed section displayed.

Figure 26   Recent Alarm Report (ALHISTR) view
By default, the number of records displayed for an individual target is 1000 and the time is set to the current time. To display a different set of records, you can overtype the fields in the fixed section or use the LOGTIME primary command.

For more information about the fields on ALHISTR, see the online Help.

---

**Working with alarm definition groups**

The following sections describe common tasks you will perform when you are working with alarm definition groups:

<table>
<thead>
<tr>
<th>Task</th>
<th>See Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating an alarm definition group</td>
<td>87</td>
</tr>
<tr>
<td>Enabling the evaluation of an alarm definition group</td>
<td>88</td>
</tr>
<tr>
<td>Disabling the evaluation of an alarm definition group</td>
<td>88</td>
</tr>
<tr>
<td>Creating and editing Alarm Management parameter files</td>
<td>88</td>
</tr>
</tbody>
</table>

---

**TIP**

Avoid using alarm definition group names that are greater than 8 characters in length. While group names can be up to 16 characters, because of space constraints, the alarm views display only the first 8 characters of the names. You will not see the complete group name if it is longer than 8 characters.

If you want to use group names that are longer than 8 characters, you might want to create customized views that display up to the full 16-character names.
Creating an alarm definition group

Alarm definition groups are created and deleted by MainView Alarm Management as required.

To create an alarm definition group

1 Copy, move, or create an alarm definition that requires a new group.

For more information on moving, copying, or creating an alarm definition see the following sections:

- “Copying an alarm definition” on page 76
- “Moving or renaming an alarm definition” on page 77
- Chapter 3, “Setting up an alarm definition quickly”

Renaming an alarm definition group

There is no command for renaming an alarm definition group, but it is possible to rename a group by moving all the alarm definitions to another group.

To rename an alarm definition group

1 Move all the alarm definitions from the group you want to rename to a new group that has the new name.

For more information on moving alarm definitions, see “Moving or renaming an alarm definition” on page 77.

Copying an alarm definition group

There is no command for copying an alarm definition group, but it is possible to copy a group by copying all the alarm definitions to another group.

To copy an alarm definition group

1 Move all the alarm definitions from the group you want to copy to a new group that has a different new name.

For more information on copying alarm definitions, see “Copying an alarm definition” on page 76.
Disabling the evaluation of an alarm definition group

Sometimes you may need to disable an entire alarm definition group at the same time. In the following procedure, you will disable the evaluation of a group.

To disable the evaluation of an alarm definition group

1. Open one of the alarm definition list views.

2. On the row of the alarm definition that is in the group you want to disable, type GD in the CMD column, and press Enter.
   
   All alarm definitions in the same group as the selected alarm are disabled.

Enabling the evaluation of an alarm definition group

Sometimes you may need to enable an entire alarm definition group at the same time. In the following procedure, you will enable the evaluation of a group.

To enable the evaluation of an alarm definition group

1. Open one of the alarm definition list views.

2. On the row of the alarm definition that is in the group you want to enable, type GE in the CMD column, and press Enter.
   
   All disabled alarm definitions in the same group as the selected alarm are enabled.

Creating and editing Alarm Management parameter files

The default initialization groups for Alarm Management are controlled by the alarm parameter file that tells how Alarm Management is started or initialized. Each alarm parameter file contains the following information:

■ Whether to start the alarm manager in CAS or not, Yes or No.

■ Whether to list the names of the active alarm definitions during the alarm manager initialization, Yes or No.

■ Whether the names of the alarm definitions being activated should be written to the console during the alarm manager initialization.
The names of the groups to be automatically processed when Alarm Management is started in the CAS. System symbols may be used in the specification of group names.

For more information on Alarm Management initialization and alarm parameter files, see “MainView Alarm Management initialization” on page 28.

From the ALPARML view, you can perform the following alarm parameter file actions:

- Add a new alarm parameter file.
- Change an alarm parameter file.
- Delete an alarm parameter file.
- Display the content of an alarm parameter file.

**To create an alarm parameter file**

1. On the EZALARMS menu, select Alarm Parameters in the Other area to open the ALPARML view (Figure 27).

**Figure 27 Alarm Parameters (ALPARM) view**

```
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Modified by</th>
<th>Modified YYYY-MM-DD HH:MM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALPRM01</td>
<td>Test Parameter File 1</td>
<td>BITKCY4</td>
<td>2005/04/26 17:57</td>
</tr>
<tr>
<td>ALPRM02</td>
<td>Test Parameter File 2</td>
<td>RDAPQF</td>
<td>2005/05/19 14:20</td>
</tr>
<tr>
<td>ALPRM03</td>
<td>Test Parameter File 3</td>
<td>BITKCY3</td>
<td>2004/11/04 15:53</td>
</tr>
<tr>
<td>ALPRM04</td>
<td>Test Parameter File 4</td>
<td>BITKCY3</td>
<td>2004/11/04 17:12</td>
</tr>
<tr>
<td>ALPRM05</td>
<td>Test Parameter File 5</td>
<td>BITKCY4</td>
<td>2005/04/26 18:11</td>
</tr>
<tr>
<td>ALPRM06</td>
<td>Test Parameter File 6</td>
<td>BITKCY4</td>
<td>2005/04/26 16:41</td>
</tr>
<tr>
<td>ALPRM07</td>
<td>Test Parameter File 7</td>
<td>BITKCY4</td>
<td>2005/04/26 18:10</td>
</tr>
</tbody>
</table>
```

The ALPARML view displays a list of the alarm parameter files sorted by name.

2. Type A in the CMD column or Type ADD on the COMMAND line, and press Enter to open the Add a New Alarm Parameter File dialog (Figure 28 on page 90).

**TIP**

- If you want to create a parameter file that is based on the contents of an existing parameter file use the A line command on the line of the model parameter file.
- If you want to create a new parameter file starting from scratch, use the ADD COMMAND line command.
Creating and editing Alarm Management parameter files

**Figure 28 Add New Alarm Parameter File dialog**

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>SCROLL</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm Parameter Name:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start Alarm Mgmt in CAS:</td>
<td>Yes or No</td>
<td></td>
</tr>
<tr>
<td>List Alarm Definitions:</td>
<td>Yes or No</td>
<td></td>
</tr>
<tr>
<td>Description:</td>
<td>Enter description here</td>
<td></td>
</tr>
<tr>
<td>Groups to Activate at initialization</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3 Specify the required information for your alarm parameter file and press **End** to create your new parameter file.

**To edit an alarm parameter file**

1 On the **EZALARMS** menu, select **Alarm Parameters** in the Other area to open the ALPARML view (Figure 27 on page 89).

2 Type **C** in the **CMD** column of the parameter file you want to edit, and press **Enter** to open the Update Alarm Parameter File dialog, similar to the Add a New Alarm Parameter File dialog shown in Figure 28.

3 Specify the required information for your alarm parameter file, and press **End** to save the changes to your parameter file.

**To delete an alarm parameter file**

1 On the **EZALARMS** menu, select **Alarm Parameters** in the Other area to open the ALPARML view (Figure 27 on page 89).

2 Type **D** in the **CMD** column of the parameter file you want to delete, and press **Enter**. The Delete Alarm Parm File Confirmation dialog opens (Figure 28).

3 Press **End** to confirm the deletion of the alarm parameter file.
To display alarm parameter file changes

The MainView Logger records changes to the alarm parameter files.

1. On the EZALARMS menu, select Alarm Param Actions in the Modification Log area to open the APMODLOG view.

Working with alarm definition libraries

Other than the ACTIVE, MIGRATED, and DELETED libraries, libraries are created and removed by MainView Alarm Management as needed.

When you copy, move, or create an alarm definition and you specify a library that does not exist, the library is created. When a library becomes empty, it is deleted.

If you want to copy or rename a library, you have to copy or move all the groups in the library to another library.

**TIP**

Avoid using alarm library names that are greater than 8 characters in length. While alarm group names can be up to 16 characters, because of space constraints, the alarm views display only the first 8 characters of the names. You will not see the complete name if it is longer than 8 characters.

If you want to use library names that are longer than 8 characters, you might want to create customized views that display up to the full 16-character names.
Deploying alarm definitions

When using the alarm definition list views, you can move and copy alarm definitions to other groups and libraries that exist within the same file system (see “Alarm definition file system structure” on page 29).

By using alarm definition deployment or the alarm export and import batch jobs, you can copy alarm definitions to other file systems.

**NOTE**

- The alarm definition deployment feature is available in MainView Alarm Management 5.0 and later only.
- To copy alarm definitions in MainView Alarm Manager 2.1, use the alarm export and import batch jobs.
- To copy or move alarm definitions from MainView Alarm Manager 2.1 to the current version of MainView Alarm Management, use the migration steps in Chapter 2, “Migrating alarm definitions.”

Using the alarm deployment feature

With alarm definition deployment, you can deploy one or more MainView Alarm Management definitions from one file system to one or more file systems for use on other systems.

You can use MainView Explorer or the MainView windows environment to deploy MainView Alarm Management definitions.

**To deploy alarm definitions**

1. Display one of the alarm definition views.
2. Select one or more definitions that you want to deploy.
   - MainView windows environment—Enter the T line command next to one or more definition names.
   - MainView Explorer
     - To select one definition, click a definition name.
     - To select multiple definitions, click the **Enable Selections** button ![Checkmark](https://example.com/checkmark.png), press and hold the **Ctrl** key, and click definition names.
3 Start the deployment wizard.

- MainView windows environment—Enter the DEPloY primary command.
- MainView Explorer—Right-click a selected definition name and choose Line action => Deploy an Alarm Definition.

4 Complete the deployment wizard.

The deployment process starts and the DPLYMNT view is displayed showing the status of the request. For more information about the DPLYMNT view, see “Managing and monitoring the deployment process.”

Managing and monitoring the deployment process

Use the DPLYMNT view to monitor and manage the deployment process. The DPLYMNT view lists:

- Deployment requests that have been made from the current system
- Status of the deployment requests

From the DPLYMNT view, you can:

- Stop, start, delete, and cancel individual deployment requests by using the available line commands
- Delete multiple deployment requests by using the Tag line command and the DELete primary command
- Display details about a deployment request by using the S (select) line command, which displays the DPLYITMS view
- Display details about the status of a deployment request by hyperlinking from the status, which displays the LOGDEPLM view
Using the export and import batch jobs

The following members are provided in BBSAMP. The members contain jobs to export and import alarm definitions. Follow the instructions in the members to complete the JCL correctly.

<table>
<thead>
<tr>
<th>Member name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBMPAXEX</td>
<td>Exports the specified alarm definition, group, or library from the specified file system to the specified file</td>
</tr>
<tr>
<td>BBMPAXIM</td>
<td>Imports the contents of a specified export file to the specified file system</td>
</tr>
</tbody>
</table>
Chapter 5 Working with alerts

This chapter describes how to use Alert Management to display MainView alerts in windows mode.

Overview

An alert is an automation concept that differs from an alarm report. While they have some features in common, such as a severity and message text, alerts are created and deleted as a consequence of alarm reports. They are separate entities with unique capabilities.

An alarm report is the presentation of information. It does not trigger any actions. Alerts are used to trigger actions based on the information in the reports.

Alerts commonly contain the following types of information:

- Alert text
- Response command text and parameters
- Escalation command text and parameters
- Escalation intervals

All alerts issued by MainView products are sent to the Alert Management component of MainView Alarm Management. The alerts that can be displayed through Alert Management include the following:

- Alarm reports generated by the Alarm Administration component
- MainView AutoOPERATOR alerts
- MainView Storage Resource Manager (SRM) alerts
- MainView SYSPROG Services Exception Monitor messages
Setting up Alert Management

To set up Alert Management, you have to modify BBPARM member **BBOTA000** as shown in the following example:

```
<mvalert>

- Specify that information from all Alert repositories in the OS/390 image are to be displayed in this MVALET service point:

  <ssid>
  
  * 

  </include>

  </ssid>

</mvalert>
```

**Table 16** describes the tags used in the **BBOTA000** BBPARM member.

**Table 16  ** **BBOTA000** BBPARM member tags (part 1 of 2)**

<table>
<thead>
<tr>
<th>Tag</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;mvalert&gt;</td>
<td>Marks the beginning of the MVALERT control sequence. This tag must be matched with a &lt;/mvalert&gt; tag at the end.</td>
</tr>
<tr>
<td>&lt;ssid&gt;</td>
<td>Marks the beginning of the subsystem ID (SSID) control sequence. This tag must be matched with a &lt;/ssid&gt; closing tag.</td>
</tr>
</tbody>
</table>
Accessing Alert Management

You access Alert Management from the EZALARMS view.

To access Alert Management

1 On the EZALARMS menu, position your cursor on MVAlert, and press Enter.

The EZALERT menu is displayed (Figure 29).

Table 16  BBOTA000 BBPARM member tags (part 2 of 2)

<table>
<thead>
<tr>
<th>Tag</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;include&gt; ssidmask1 ssidmask2...</td>
<td>Identifies one or more wildcard SSIDs of alert repository address spaces (either MainView Alarm Management or MainView AutoOPERATOR). This tag must be matched with a subsequent &lt;/include&gt; tag. Address spaces with SSIDs that match one of the wildcard masks are the source of alerts presented by Alert Management.</td>
</tr>
<tr>
<td>&lt;exclude&gt; ssidmask1 ssidmask2...</td>
<td>Identifies one or more wildcard SSIDs of alert repository address spaces (either MainView Alarm Management or MainView AutoOPERATOR). This tag must be matched with a subsequent &lt;/exclude&gt; tag. Address spaces with SSIDs that match one of the wildcard masks are not used as a source of alerts presented by Alert Management.</td>
</tr>
</tbody>
</table>

**NOTE**

When determining whether a particular alert repository should be included or excluded, the <exclude> sequence takes precedence. That is, if the SSID matches a mask in the <exclude> sequence, it is not used as a source, even if it also matches a mask in the <include> sequence.

Accessing Alert Management

You access Alert Management from the EZALARMS view.

To access Alert Management

1 On the EZALARMS menu, position your cursor on MVAlert, and press Enter.

The EZALERT menu is displayed (Figure 29).

Figure 29  EZALERT menu

```
<table>
<thead>
<tr>
<th>ddmmyyyy hh:mm:ss</th>
<th>COMMAND =&gt;</th>
<th>SCROLL =&gt;</th>
<th>CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WI =EZALERT=DXTSTH=ddmmmyyyy=hh:mm:ss=MVALERT=D1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Alert Detail      | Alert Management | +-------------+
| . Ordered by Time | . Place cursor on | . Summarized by Target |
| . Ordered by Queue Name | . menu item and | . Summarized by Queue |
| . Ordered by Priority | . press ENTER | . All Queues |
| +-------------------+------------------+
```
The EZALERT menu is the starting point for using Alert Management. From the EZALERT menu, you can display alerts in several different ways:

- **Alert Detail views** present detailed alert information sorted by the following properties:
  - time (the default)
  - queue name
  - priority

- **Alert Summary views** present summarized alert information for the following objects:
  - targets
  - queues

### Using alert detail views

On the EZALERT menu under Alert Detail, position the cursor on **Ordered by Time**, and press **Enter**.

The ALERTS view is displayed (Figure 30).

**Figure 30  Alert Detail—Ordered by Time (ALERTS) view**

- ddmmmyyyy hh:mm:ss ------- MAINVIEW WINDOW INTERFACE (Vv.r.mm)--------
- COMMAND ===> SCROLL ===> PAGE
- CURR WIN ====> 1  ALT WIN ==>>
- >W1 =ALERTS=============SJSCDAXM=*----------ddmmmyyyy=hh:mm:ss====MVALERT==D==13
- C Rsp Time Ind Origin Alert Text
- ___ hh:mm eh TC6D ACM720A START command has timed out for AAOTC777
- ___ hh:mm eh TC6D ACM740A AAOTC318 is not up as scheduled
- ___ hh:mm mh MH61 ACM720A START command has timed out for AAOMH005
- ___ hh:mm eh MH61 ACM720A START command has timed out for AAOMH002
- ___ hh:mm h MH61 ACM716A Subsystem Communications INACTIVE A0 will NOT allow any Cross System Functions to be performed
- ___ hh:mm CSMCSTR .ACM716A Subsystem Communications INACTIVE A0 will NOT allow any Cross System Functions to be performed
- ___ hh:mm OLTV SOL TEST OLTV
- ___ hh:mm OLTV SOL TEST OLTV
- ___ hh:mm h OLTV ACM223W ONLY 2 SUBSYSTEM CONSOLES ALLOCATED CSM PERFORMANCE DEGRADED.
- ___ hh:mm OLTV SOL TEST OLTV
- ___ hh:mm OLTV SOL TEST OLTV
- ___ hh:mm AAOMH61 CSM.AAOMH001.STATE UP
The ALERTS view presents detailed alert information sorted by the time the alert was generated. You can also display alert details sorted by other properties:

- Select **Ordered by Queue Name** from EZALERT to display the ALERTSQ view.
- Select **Ordered by Priority** from EZALERT to display the ALERTSP view.

**Priority level of alerts**

Each alert has a specific priority level that is represented by a specific color in the Alert Detail views. Table 17 describes the colors associated with each priority level.

<table>
<thead>
<tr>
<th>Priority Level</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical</td>
<td>red reverse video</td>
</tr>
<tr>
<td>Major</td>
<td>pink reverse video</td>
</tr>
<tr>
<td>Minor</td>
<td>yellow reverse video</td>
</tr>
<tr>
<td>Warning</td>
<td>blue reverse video</td>
</tr>
<tr>
<td>Informational</td>
<td>green reverse video</td>
</tr>
<tr>
<td>Clearing</td>
<td>green</td>
</tr>
</tbody>
</table>

**Available actions**

The Alert Detail views provide the following types of actions:

- Primary commands
- MainView AutoOPERATOR EXEC follow-up
- MainView AutoOPERATOR PCMD (primary command)

**Primary commands**

The Alert Detail views provide primary commands for sorting the view. Table 18 describes the primary commands available on the Alert Detail views.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SORTTime</td>
<td>orders the alerts by time (the default)</td>
</tr>
<tr>
<td>SORTQueue</td>
<td>orders the alerts by queue name</td>
</tr>
<tr>
<td>SORTPriority</td>
<td>orders the alerts by priority</td>
</tr>
</tbody>
</table>
MainView AutoOPERATOR EXEC follow-up commands

Some alerts have associated MainView AutoOPERATOR EXEC follow-up commands. To execute a follow-up command associated with an alert, enter appropriate text into the \textit{Rsp} field, and press \textbf{Enter}. The data entered in the Rsp field is appended, along with a leading blank, to the follow-up EXEC text. The complete follow-up EXEC text, including parameters, is then executed by the MainView AutoOPERATOR subsystem identified as the Query AOSS.

MainView AutoOPERATOR PCMD commands

Some alerts have associated MainView AutoOPERATOR PCMD (primary) commands. To execute an associated MainView AutoOPERATOR PCMD command, follow the hyperlink from the text in the \textit{Ind} field when the text contains a C.

Using alert summary views

On the EZALERT menu under Alert Summary, position the cursor on \textbf{Summarized by Target}, and press \textbf{Enter}.

The ALERTQSZ view is displayed (Figure 31).

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{alertsummaryview.png}
\caption{Alert Summary—Summarized by Target (ALERTQSZ) view}
\end{figure}

The ALERTQSZ view presents alert information summarized by the target of the alert. You can also display alert information summarized by queue name. Select \textbf{Summarized by Queue} from EZALERT to display the ALERTQQZ view.
Hyperlinking to product views

When you set up an alarm definition, MainView Alarm Management sets up and saves hyperlink information automatically. By default, if there is a C in the Ind field of an Alert Detail view, you can place the cursor on that field, and press Enter. Alert Management takes you to the product view whose data element values generated the alert. If the alert was generated in a previous interval, Alert Management automatically sets the date and time to display the view as it looked when the alert was generated.

Exiting Alert Management

To exit Alert Management, type QUIT on the COMMAND line of any Alert Management screen, and press Enter. The Alerts and Alarms Menu is displayed. To return to the MainView Selection Menu, press the End key.
CAS MODIFY commands for MainView Alarm Management

To control and query MainView Alarm Management in the CAS, use the MODIFY command from an MVS console. The MODIFY command uses the following syntax:

```
/F mvalarm_cas,MVA,command
```

In the example, the variables have the following values:

- `mvalarm_cas` is the CAS step name
- `command` is one of the MainView Alarm Management MODIFY commands

**TIP**

When you are using the MODIFY commands, the upper-case characters used in the command names in Table 19 on page 104 show the command abbreviation. For example, you can use STAT ALL for the STATus ALL command.

In Table 19 on page 104 the variables used with the commands have the following values:

- `library`—the name of an alarm library
- `group`—the name of an alarm group
- `pattern`—an optional pattern for matching alarm names in a `group`
### Table 19  MainView Alarm Management CAS MODIFY commands

<table>
<thead>
<tr>
<th>MODIFY commands</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help</td>
<td>Displays the help information for the MODIFY commands</td>
</tr>
<tr>
<td>STATus</td>
<td>Lists the group names in the ACTIVE library and the number of alarm definitions in each group</td>
</tr>
<tr>
<td>STATus ALL</td>
<td>Lists detailed information for all the alarm definitions that are in the ACTIVE library</td>
</tr>
<tr>
<td>STATus AET</td>
<td>Lists alarm evaluation task IDs with target information</td>
</tr>
<tr>
<td>ACTivate library group pattern</td>
<td>Moves alarm definitions from the specified <em>library</em> and <em>group</em> that match <em>pattern</em> to the ACTIVE library and activates the alarm definitions</td>
</tr>
<tr>
<td>INActivate group pattern</td>
<td>Moves alarm definitions from the specified <em>group</em> that match <em>pattern</em> to the INACTIVE library and stops processing the alarm definitions</td>
</tr>
<tr>
<td>ENAble group pattern</td>
<td>Resumes processing for a disabled alarm definitions from the specified <em>group</em> that match <em>pattern</em></td>
</tr>
<tr>
<td>DISable group pattern</td>
<td>Stops processing for alarm definitions from the specified <em>group</em> that match <em>pattern</em></td>
</tr>
<tr>
<td>HALt ALARMS</td>
<td>Stops ALARM processing in CAS</td>
</tr>
<tr>
<td>DIAG ON</td>
<td>Starts diagnostic alarm output</td>
</tr>
<tr>
<td>DIAG OFF</td>
<td>Stops diagnostic alarm output</td>
</tr>
<tr>
<td>Start ALARMS</td>
<td>Starts ALARM processing</td>
</tr>
</tbody>
</table>
Symbolic values

This appendix describes how to use symbolic values with MainView Alarm Management.

System symbols

System symbols are defined in the following ways:

- In an IEASYMxx member in SYS1.PARMLIB
- Defined by the system (For example, &SYSNAME.)

System symbols have the following format:

&syssym.

The symbol starts with an ampersand (&) followed by the text of the symbol (syssym) and terminated by a period.

Alarm Management symbols

MainView Alarm Management has symbols that are defined in the MainView Infrastructure. Alarm Management symbols have the following format:

&amsym

The symbol starts with an ampersand (&) followed by the text of the symbol (amsym) with no terminating delimiter. Table 20 on page 106 lists the Alarm Management symbols.
Element symbols

Element symbols reference the values of an Alarm Management element. The element symbols have a different format on the different types of MainView view.

Element symbols on tabular and detail views

Table 20 Alarm Management symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&amp;ALMCONTX</td>
<td>Alarm context</td>
</tr>
<tr>
<td>&amp;ALMDATE</td>
<td>Alarm date</td>
</tr>
<tr>
<td>&amp;ALMGROUP</td>
<td>Name of the alarm group</td>
</tr>
<tr>
<td>&amp;ALMNAME</td>
<td>Alarm name</td>
</tr>
<tr>
<td>&amp;ALMPROD</td>
<td>Name of the alarm definition</td>
</tr>
<tr>
<td>&amp;ALMTIME</td>
<td>Alarm time</td>
</tr>
<tr>
<td>&amp;ALMVIEW</td>
<td>View sampled by the alarm definition</td>
</tr>
<tr>
<td>&amp;ALMXSSYS</td>
<td>Name of the MVS system where the alarm report was generated</td>
</tr>
<tr>
<td>&amp;ALMXSTGT</td>
<td>Alarm target</td>
</tr>
<tr>
<td>&amp;ALMZNTS</td>
<td>Alarm time/date in ZNTS format</td>
</tr>
<tr>
<td>&amp;EVALCOND</td>
<td>Alarm condition that was evaluated to produce the result</td>
</tr>
<tr>
<td>&amp;PRIORITY</td>
<td>Priority of the reported alarm</td>
</tr>
<tr>
<td>&amp;SEV</td>
<td>Severity of the reported alarm</td>
</tr>
</tbody>
</table>

Table 21 lists the element symbols for tabular and detail views.

Table 21 Element symbols on tabular and detail views (part 1 of 2)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>elementname.H</td>
<td>Element header</td>
</tr>
<tr>
<td>elementname.O</td>
<td>Element threshold operator</td>
</tr>
<tr>
<td>elementname.T</td>
<td>Element threshold</td>
</tr>
</tbody>
</table>
Table 21  Element symbols on tabular and detail views (part 2 of 2)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>elementname.V</code></td>
<td>Element value</td>
</tr>
<tr>
<td><code>elementname.VXn</code></td>
<td>Element value&lt;br&gt;<code>X</code> is the format type for the value, with the following types:&lt;br&gt;  ■ H—hex&lt;br&gt;  ■ C—character&lt;br&gt;  ■ T—time&lt;br&gt;  ■ D—date&lt;br&gt;  ■ N—decimal number&lt;br&gt;  ■ F—floating point&lt;br&gt;<code>n</code> is the number (0-99) of decimal places you want to use for a floating-point value or the width of the format for other values. If <code>n</code> is not specified the following default values are used:&lt;br&gt;  ■ 6 decimal places for floating-point values&lt;br&gt;  ■ 10 characters wide for other format values&lt;br&gt;Examples&lt;br&gt;  ■ <code>elementname.VF3</code>&lt;br&gt;    a floating-point value with three decimal places&lt;br&gt;  ■ <code>elementname.VH8</code>&lt;br&gt;    a hex value 8 characters long</td>
</tr>
</tbody>
</table>

Element symbols on summary views

Table 22 lists the element symbols for summary views

Table 22  Element symbols on summary views (part 1 of 2)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>elementname:XXX.H</code></td>
<td>Element header</td>
</tr>
<tr>
<td><code>elementname:XXX.O</code></td>
<td>Element threshold operator</td>
</tr>
<tr>
<td><code>elementname:XXX.T</code></td>
<td>Element threshold</td>
</tr>
</tbody>
</table>

Appendix B  Symbolic values  107
The following table describes the possible values of the summary type (XXX):

<table>
<thead>
<tr>
<th>Where XXX is...</th>
<th>The summary type is...</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUM</td>
<td>Sum</td>
</tr>
<tr>
<td>AVG</td>
<td>Average</td>
</tr>
<tr>
<td>PCT</td>
<td>Percent</td>
</tr>
<tr>
<td>CNT</td>
<td>Count</td>
</tr>
<tr>
<td>MIN</td>
<td>Minimum</td>
</tr>
<tr>
<td>MAX</td>
<td>Maximum</td>
</tr>
</tbody>
</table>

The element with the particular summary type must be one that is already in the view.
Substitution

You can substitute system symbols, Alarm Management symbols and element symbols in the following places in MainView Alarm Management:

- Message text
- Hyperlinks
- AutoOPERATOR PCMD text

You can also substitute system symbols in the group names listed in alarm parameter files. For more information on Alarm Management initialization and alarm parameter files, see “MainView Alarm Management initialization” on page 28.
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&ALMVIEW symbol 106
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  naming restrictions 86
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  renaming 87
  suffixes 18
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  actions 36
  activating 74
  browsing 73
  copying 76
  creating 54
  deleting 78
  deploying 92
  disabling 75
  displaying changes 84
  displaying details 72
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  editing 74
  enabling 76
  evaluation status 80
  exporting 94
  hiding deleted 79
  importing 94
  inactivating 75
  list views 36
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  overview 16
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  renaming 77
  showing deleted 79
  status values 42
  undeleting 79
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