Oracle® Communications Diameter Signaling Router

IDIH System Alarms User's Guide

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Oracle Communications Diameter Signaling Router IDIH System Alarms User's Guide, Release 8.1

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Chapter 1

Introduction

Topics:

This chapter contains an overview of the System Alarms application of the Integrated Diameter Intelligence Hub. The contents include sections on the organization, scope and audience of the documentation, as well how to receive customer support assistance.

Revision History

Date	Description
August 2011	Initial Release
June 2016	Updated to include accessibility changes

Overview

System Alarms is an application designed for viewing and filtering alarms.

From this application, the user filter in the Managed Object Class drop-down list to view specific pre-defined KPI sessions. Then, by clicking the specific link in the Troubleshooting Actions column within the Alarms List screen.

Note: The System Alarms application is only available to users logging into IDIH as "idihadmin."

Scope and Audience

This documentation is intended for personnel who maintain operation of the DSR. it provides information about System Alarms and is designed around performing common tasks to efficiently and effectively monitor alarm status.

Manual Organization

Introduction contains general information about this document, how to contact *My Oracle Support (MOS)*, and *Locate Product Documentation on the Oracle Help Center Site*.

System Alarms Procedures provides procedures for using System Alarms.

Documentation Admonishments

Admonishments are icons and text throughout this manual that alert the reader to assure personal safety, to minimize possible service interruptions, and to warn of the potential for equipment damage.

Table 1: Admonishments

Icon	Description
	Danger: (This icon and text indicate the possibility of *personal injury*.)
	Warning: (This icon and text indicate the possibility of *equipment damage*.)
	Caution: (This icon and text indicate the possibility of *service interruption*.)
	Topple: (This icon and text indicate the possibility of *personal injury* and *equipment damage*.)

Related Publications

For information about additional publications related to this document, refer to the Oracle Help Center site. See *Locate Product Documentation on the Oracle Help Center Site* for more information on related product publications.

Locate Product Documentation on the Oracle Help Center Site

Oracle Communications customer documentation is available on the web at the Oracle Help Center (OHC) site, *http://docs.oracle.com*. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at *http://www.adobe.com*.

1. Access the Oracle Help Center site at *http://docs.oracle.com*.
2. Click **`Industries`**.
3. Under the Oracle Communications subheading, click the **`Oracle Communications documentation`** link.
   The Communications Documentation page appears. Most products covered by these documentation sets will appear under the headings “Network Session Delivery and Control Infrastructure” or “Platforms.”
4. Click on your Product and then the Release Number.
   A list of the entire documentation set for the selected product and release appears.

5. To download a file to your location, right-click the **PDF** link, select **Save target as** (or similar command based on your browser), and save to a local folder.

Customer Training

Oracle University offers training for service providers and enterprises. Visit our web site to view, and register for, Oracle Communications training:

http://education.oracle.com/communication

To obtain contact phone numbers for countries or regions, visit the Oracle University Education web site:

www.oracle.com/education/contacts

My Oracle Support (MOS)

MOS (*https://support.oracle.com*) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the CAS main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at *http://www.oracle.com/us/support/contact/index.html*. When calling, make the selections in the sequence shown below on the Support telephone menu:

1. Select **2** for New Service Request
2. Select **3** for Hardware, Networking and Solaris Operating System Support
3. Select one of the following options:
   - For Technical issues such as creating a new Service Request (SR), Select **1**
   - For Non-technical issues such as registration or assistance with MOS, Select **2**

You will be connected to a live agent who can assist you with MOS registration and opening a support ticket.

MOS is available 24 hours a day, 7 days a week, 365 days a year.

Emergency Response

In the event of a critical service situation, emergency response is offered by the Customer Access Support (CAS) main number at 1-800-223-1711 (toll-free in the US), or by calling the Oracle Support hotline for your local country from the list at *http://www.oracle.com/us/support/contact/index.html*. The emergency response provides immediate coverage, automatic escalation, and other features to ensure that the critical situation is resolved as rapidly as possible.

A critical situation is defined as a problem with the installed equipment that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical situations affect service and/or system operation resulting in one or several of these situations:

- A total system failure that results in loss of all transaction processing capability
- Significant reduction in system capacity or traffic handling capability
- Loss of the system's ability to perform automatic system reconfiguration
- Inability to restart a processor or the system
- Corruption of system databases that requires service affecting corrective actions
- Loss of access for maintenance or recovery operations
- Loss of the system ability to provide any required critical or major trouble notification

Any other problem severely affecting service, capacity/traffic, billing, and maintenance capabilities may be defined as critical by prior discussion and agreement with Oracle.

Chapter 2

System Alarms Procedures

Topics:

This chapter provides information about procedures used when working in the System Alarms application.

Overview

System Alarms is an application designed for viewing and filtering alarms.

Setting Preferences

Users can set Preferences in the System Alarms application by clicking **Preferences** on the menu, which opens the **Sysalarms Preferences** screen.

Settings

On the **Settings** tab of the **Sysalarms Preferences**, the user can modify several fields including:

- Number of Records per Page - The number must be an integer from 1 to 300
- Refresh Time - The amount of time before the system checks for new alarm events
- Unfreeze Time - This delay is the amount of time the system waits before automatically reactivating the automatic refresh cycle. The unfreeze delay must be from 15 to 300 seconds.
- Enabling the Auto Comment Popup - The option toggles between two settings:
  - **Checked** - allows automatic commenting of an alarm or group of alarms when the user acknowledges or terminates alarms.
  - **Unchecked** - disables automatic commenting.
- Default Start Tab - Use the drop-down box to select either the Alarms: Opened or Alarms: Terminated screen as the default starting tab.

Colors

On the **Colors** tab of the **Sysalarms Preferences**, the user can modify the default colors that indicate alarm severity:

- Indeterminate
- Warning
- Minor
- Major
- Critical
- Clear

The colors are displayed in the Perceived Severity column of alarm tables.

Alarm Status Indicator

When logged in to IDIH, either directly or from DSR launch, the portal header displays a count of current alarms, as shown in *Figure 1: Alarm Status Indicator*. The alarm status indicator is a count of the highest severity of all open alarms and the alarm status indicator (circle) is the color (user defined,

idihadmin) of the highest severity. For example, if there are zero critical, two major, one minor, and three warnings, then the alarm status indicator contains 2+ and the color is the user-defined color for major severity. The + is used to indicate that there are additional alarms at a lesser severity. The + does not appear if, for example, there are zero critical, two major, zero minor, and zero warnings.

Initially, the alarm status is empty (non-visible). Then, after a short interval, the system queries for open alarms and updates the alarm status indicator. After the first update, the system updates the alarm status indicator every 30 seconds.

Figure 1: Alarm Status Indicator

Selecting the alarm status indicator shows a brief description of the open alarms. The system displays the list of open alarms in tabular form, as shown in *Figure 2: Alarm List*. This list can be dismissed by pressing the **Close** on the **Open Alarm** dialog window.

Note: Only open alarms may be viewed. No other actions are provided such as clear or acknowledge.

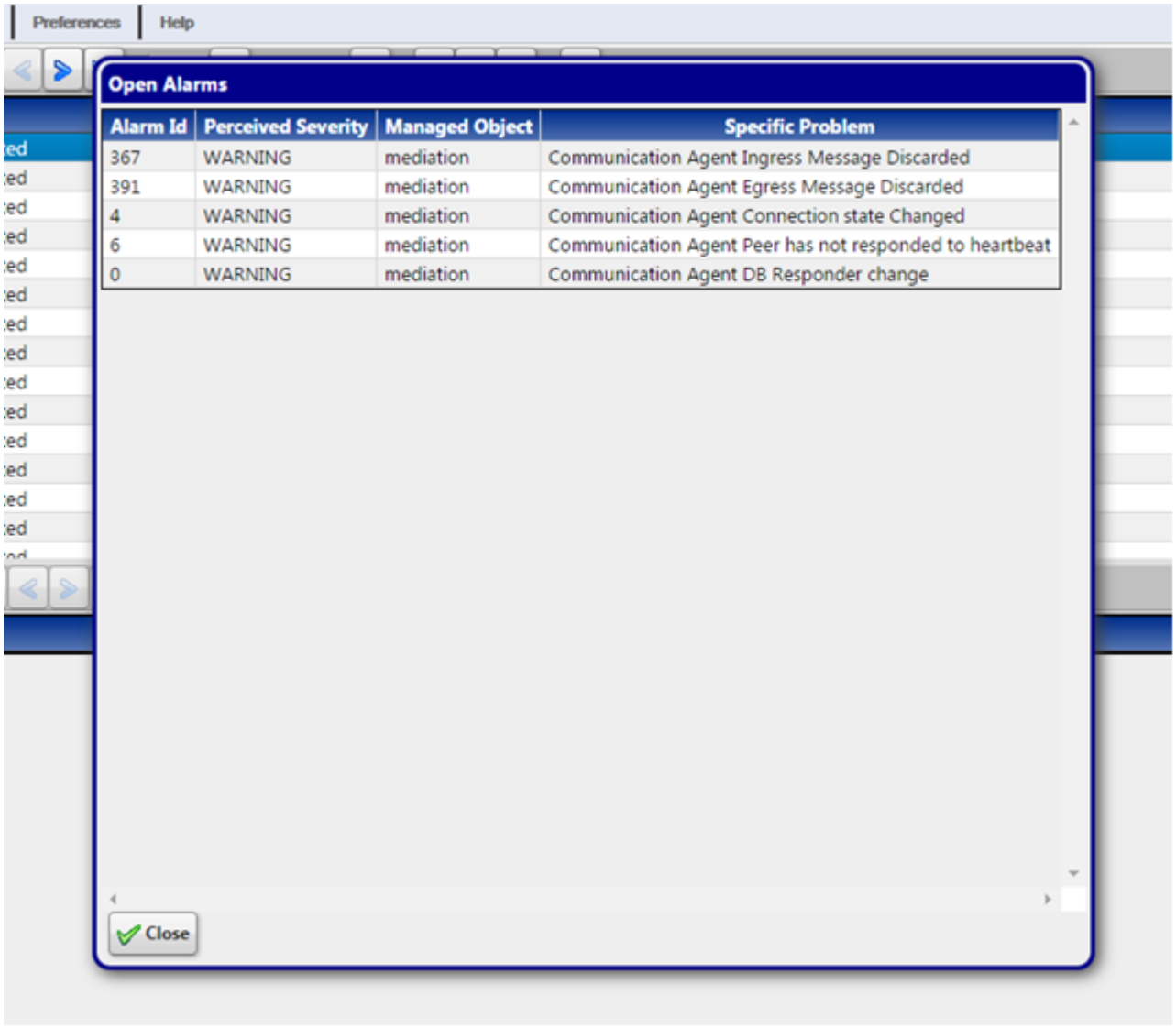


Figure 2: Alarm List

Understanding Alarm Pages

The alarm information is displayed on two tabbed pages (all read only):

- Alarms: opened screen - provides details for all open alarms; filters can be set to customize the view
- Alarms: terminated screen - provides details for terminated alarms; filters can be set to customize the view

Both **Opened** and **Terminated** tabs will contain a Detail section containing various details:

- Events screen - provides the details of events associated with a selected alarm record

- Comments screen - allows a user to add and edit comments applicable to a specific alarm when acknowledging or terminating the alarm
- Troubleshooting screen - allows a user with the NSPConfigManager role to add and edit troubleshooting guidelines for a specific alarm

Alarms: Opened Page

The Alarms: opened page displays a table with information about alarms that are still active. Each active alarm is a single record in the Alarms: opened table.

You can perform the following actions in the Alarms: opened page:

- View all opened alarms for Managed Objects.
- View the details of an alarm.
- Terminate an alarm. (When the probable cause of an alarm has been rectified, the Alarm has to be cleared or terminated.)

  Note: You can terminate an alarm only if you belong to group NSPMonitorPowerUser.

- Acknowledge an alarm.

  Note: You can acknowledge an alarm only if you belong to group NSPMonitorUser.

- Manage the display by setting filters, turning Automatic Refresh on and off, setting the number of rows per page, and sorting columns.

Filters in Alarms: Opened Page

You can filter alarms by using any combination of the three filters on the Alarms: opened page. Each filter defaults to No Filtering. The filter fields are

- **Perceived Severity** - to filter by specific severity (critical, major, minor, warning).
- **Managed Object Class** - to filter by class level of the object.
- **Alarm Type** - to filter by type (for example, communications, environment, equipment).

Icons in Alarms: Opened Page

The icons found on the Opened page are as follows:

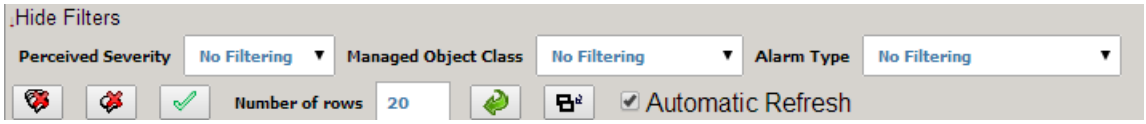


Figure 3: Alarms Opened Toolbar

- Terminate all Alarm(s) - to terminate all alarms
- Terminate selected Alarm(s) - to terminate selected alarms
- Acknowledge selected Alarm(s) - to acknowledge selected alarms
- Number of Rows - maximum number of rows to display on each page
- Change Records per Page - to refresh the view to show the number of rows entered in the Number of Rows field

- Show Detail - to view events, comments, and troubleshooting tips for a selected alarm (or the last alarm selected in a group of alarms)
- Automatic Refresh - to enable the alarms list to be refreshed automatically

Columns in Alarms: Opened Page

Table 2: Alarms: Opened Columns

Column Name	Description
Select	check box to select alarm record(s)
Alarm Identifier	unique ID for that alarm
Perceived Severity	alarm severity level (color coded)
Managed Object	specific object on which the alarm occurred, if the alarm is associated with an object
Probable Cause	cause of the alarm based on history of similar alarms
Specific Problem	alarm name
Raised Time	time the alarm was registered
Changed Time	time the status of the alarm was changed
Event Count	number of events for the alarm
Managed Object Class	class level of the object
Acknowledge • State • Time • User	• state of the acknowledged alarm; check denotes yes; yellow triangle denotes no. • time the alarm was acknowledged • user who acknowledged the alarm
Alarm Type	type of alarm (for example, equipment, processing error, quality of service).

Alarms: Terminated Page

The Alarms: terminated page displays a table that contains information about alarms that have been terminated. Each terminated alarm is a single record in the Alarms:terminated table.

The user can perform the following actions in the Alarms: terminated page:

- View all terminated alarms for Managed Objects for a designated time, ranging from the past hour through the past 30 days
- View the details of an alarm
- Manage the display by setting filters, setting the number of rows per page, and sorting columns

Filters in Alarms: Terminated Page

You can filter alarms by using any combination of the three filters on the Alarms: terminated page. The filter fields are:

- **Alarm Type** - to filter by type (for example, communications, environment, equipment). The default is No Filtering.
- **Managed Object Class** - to filter by class level of the object . The default is No Filtering.
- **Time Interval** - the time range during which the alarm was terminated. The default is Last Hour.

Icons in Alarms: Terminated Page

The icons on the Terminated page are as follows:

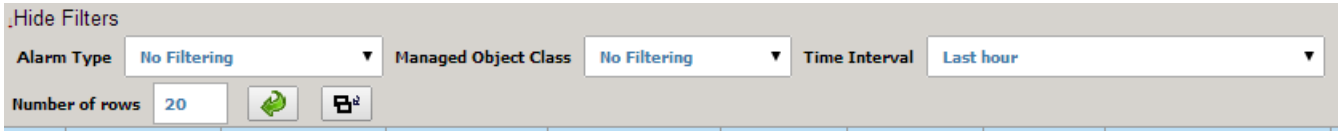


Figure 4: Alarms Terminated Toolbar

- Number of Rows -- maximum number of rows to display on each page
- Change Records per Page - to refresh the view to show the number of rows entered in the Number of Rows field
- Show Detail - to view events, comments, and troubleshooting tips for a selected alarm (or the last alarm selected in a group of alarms)

Columns in Alarms: Terminated Page

Table 3: Alarms: Terminated Columns

Column Name	Description
Select	radio button to select a terminated alarm record
Alarm Identifier	unique ID for the alarm
Managed Object	specific object on which the alarm occurred, if the alarm is associated with an object
Probable Cause	cause of the alarm based on history of similar alarms
Specific Problem	alarm name
Raised Time	time the alarm was registered
Cleared Time	time that the alarm was terminated
Event Count	number of events for the alarm record
Managed Object Class	class level of the object
User	user who terminated the alarm

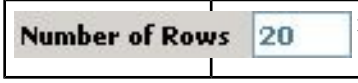
Column Name	Description
Acknowledge • State • Time • User	• indicator as to whether the alarm was acknowledged. (A check means yes and a yellow triangle means no.) • time that the alarm was acknowledged • user who acknowledged the alarm
Alarm Type	type of alarm (for example, equipment, processing error, quality of service)
Changed Time	time the alarm status was changed
Perceived Severity	alarm severity level (color coded)

Events Page

The Events page displays a table that details events for an alarm received from the Integrated Diameter Intelligence Hub (IDIH). An alarm can have more than one event associated with it.

Icons in the Events Page

Table 4: Events Icons

Alarm Icon	Description
	Change records per page-- to refresh the view to show the number of rows entered in the **Number of Rows** field.
	rows -- indicates the number of rows for display on one page.

Columns in the Events Page

Table 5: Events Page Columns

Column Name	Description
Event Identifier	unique identifier for the event; this identifier is different from that of the associated alarm
Event Time	date and time the event occurred
Specific Problem	description of the problem that occurred
Perceived Severity	event severity level (color coded)
Additional Text	additional information (optional) provided by the event originator
Alarm Type	type of alarm (for example, equipment, processing error, quality of service)

Comments Page

Users have the option to make comments about an alarm. These comments are displayed in a table on the Comments page.

Figure 5: Comments page

The user can perform the following actions in the Comments page:

- View a comment for a selected alarm
- Edit comments for a selected alarm
- Delete comments for a selected alarm
- Manage the display by setting the number of rows per page and sorting columns

Icons in the Comments Page

Table 6: Comments Page Icons

Icon	Description
	Edit Comment - to edit the comment for the selected alarm record
	Delete Comment - to remove the comment about the selected alarm from the Comments page
	nber of Rows - number of rows for display on each page
	Change records per page - to refresh the view to show the number of rows entered in the Number of Rows field.

Columns in the Comments Page

Table 7: Comments Page Columns

Column Name	Description
Select	radio button for selecting a comment to edit or delete
Comment Identifier	unique ID for the comment
Comment Time	time and date the comment was entered
User Name	person who entered the comment
Comment Text	body of the comment

Troubleshooting Page

An alarm can have a associated Troubleshooting guideline that provides specific recommendations for resolving the alarm.

You can perform the following actions in the Troubleshooting page:

- View a Troubleshooting guideline for a selected alarm
- Drill down to charts and Key Performance Indicators (KPIs) to further analize the alarm
- Write or edit a Troubleshooting guideline for a selected alarm

Icons in the Troubleshooting Page

Table 8: Troubleshooting Page Icons

Icon	Description
	Jump to chart - to open a chart in ProPerf to further troubleshoot the alarm (for ProTraq cell alarms only)
	Jump to KPI data - to access the KPI data in ProTrace to further troubleshoot the alarm (for ProTraq cell alarms only)
	Edit Guideline - to enter a new Troubleshooting guideline or edit an existing one for the selected alarm record

Sorting Columns in Alarm Pages

You can sort records in ascending or descending order in the Alarm tables by clicking the column header. A small yellow arrow is displayed, indicating in which direction the column is sorted.

Closing System Alarms

To close System Alarms, click **Home** to return to the Application board; or click **Logout** to exit IDIH.

Glossary

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A
B
C

D

DSR	Diameter Signaling Router A set of co-located Message Processors which share common Diameter routing tables and are supported by a pair of OAM servers. A DSR Network Element may consist of one or more Diameter nodes.

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I

IDIH	Integrated Diameter Intelligence Hub

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