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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

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2011</td>
<td>Initial Release</td>
</tr>
<tr>
<td>June 2016</td>
<td>Updated to include accessibility changes</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DANGER</td>
<td>Danger: (This icon and text indicate the possibility of personal injury.)</td>
</tr>
<tr>
<td>WARNING</td>
<td>Warning: (This icon and text indicate the possibility of equipment damage.)</td>
</tr>
<tr>
<td>CAUTION</td>
<td>Caution: (This icon and text indicate the possibility of service interruption.)</td>
</tr>
<tr>
<td>TOPPLE</td>
<td>Topple: (This icon and text indicate the possibility of personal injury and equipment damage.)</td>
</tr>
</tbody>
</table>

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.

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/communications

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

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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.
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](image)

- 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

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

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:

![Alarms Terminated Toolbar](image)

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

<table>
<thead>
<tr>
<th>Alarm Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="chart" alt="Number of Rows icon" /></td>
<td>Change records per page-- to refresh the view to show the number of rows entered in the <strong>Number of Rows</strong> field.</td>
</tr>
<tr>
<td><img src="chart" alt="Number of Rows" /></td>
<td>rows -- indicates the number of rows for display on one page.</td>
</tr>
</tbody>
</table>

**Columns in the Events Page**

**Table 5: Events Page Columns**

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

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="edit.png" alt="Edit Comment" /></td>
<td>Edit Comment - to edit the comment for the selected alarm record</td>
</tr>
<tr>
<td><img src="delete.png" alt="Delete Comment" /></td>
<td>Delete Comment - to remove the comment about the selected alarm from the Comments page</td>
</tr>
<tr>
<td><img src="number.png" alt="Number of Rows" /></td>
<td>Number of Rows - number of rows for display on each page</td>
</tr>
<tr>
<td><img src="change.png" alt="Change records per page" /></td>
<td>Change records per page - to refresh the view to show the number of rows entered in the Number of Rows field.</td>
</tr>
</tbody>
</table>

Columns in the Comments Page

Table 7: Comments Page Columns

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select</td>
<td>radio button for selecting a comment to edit or delete</td>
</tr>
<tr>
<td>Comment Identifier</td>
<td>unique ID for the comment</td>
</tr>
<tr>
<td>Comment Time</td>
<td>time and date the comment was entered</td>
</tr>
<tr>
<td>User Name</td>
<td>person who entered the comment</td>
</tr>
<tr>
<td>Comment Text</td>
<td>body of the comment</td>
</tr>
</tbody>
</table>
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 analyze the alarm
• Write or edit a Troubleshooting guideline for a selected alarm

Icons in the Troubleshooting Page

Table 8: Troubleshooting Page Icons

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="chart.png" alt="Chart Icon" /></td>
<td>Jump to chart - to open a chart in ProPerf to further troubleshoot the alarm (for ProTraq cell alarms only)</td>
</tr>
<tr>
<td><img src="kpi.png" alt="KPI Icon" /></td>
<td>Jump to KPI data - to access the KPI data in ProTrace to further troubleshoot the alarm (for ProTraq cell alarms only)</td>
</tr>
<tr>
<td><img src="guideline.png" alt="Guideline Icon" /></td>
<td>Edit Guideline - to enter a new Troubleshooting guideline or edit an existing one for the selected alarm record</td>
</tr>
</tbody>
</table>

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

#
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.

E
F
G
H

I

IDIH
Integrated Diameter Intelligence Hub

J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X