This guide provides an end-to-end example for how to use Oracle Enterprise Manager Ops Center.

**Introduction**

Oracle Enterprise Manager Ops Center includes rules and policies that provide in-depth monitoring and generate alerts and incidents to notify you when there is a problem.

All open incidents appear in the Message Center. You can assign incidents to others for resolution, add comments, view a list of possible causes and impacts, view recommendations, add utilities or scripts to resolve an issue, view progress, and open a service desk ticket.

The goal of this document is to give you a basic understanding of how to manage incidents. This example describes how to set up an e-mail notification for incidents on a specific set of assets, how to view and assign incidents, how to mark them repaired and how to close incidents.

See Related Articles and Resources for links to related information and articles.

**What You Will Need**

You need the following:

- Enterprise Controller running in connected mode.
- Managed assets in a user-defined group. This is not required, but it is useful to refine the notification parameters to send notification on only specific assets.
- At least one managed asset with an open incident. To create an incident, you can change a monitoring rule threshold to a point where an alert and incident is generated. See Oracle Enterprise Manager Ops Center Tuning Monitoring Rules and Policies for details.
- At least two users with the Fault Administrator role. This role is needed to assign, acknowledge, take action on, and close an incident.
- At least one user with the User Management Admin role. This role is needed to set up Notification profiles for users.
- A script to perform a task. This example uses a script that executes commands to unmount an NFS file system. In this example the script is added as a recommended action.
Managing Incidents

- How Alerts and Incidents Work
- Configuring Notifications
- Viewing Incidents
- Assigning Incidents
- Viewing Incident Details
- Acknowledging and Reassigning Incidents
- Provide a Comment for a Known Problem
- Take Action on an Incident
- Closing Incidents

How Alerts and Incidents Work

An alert indicates that a monitored asset is not performing as expected. An incident is one or more alerts for the same rule on the same asset. New alerts will update an open incident. Monitoring rules determine when an alert is triggered and the severity: Informational (info), Warning, or Critical. When an asset is not operating within the parameters defined in the monitoring rules and policies, the software generates an alert and an incident. When the same rule triggers another alert for the same asset, the incident management system correlates the alerts under the open incident and associates the worst severity level with the incident. For example, when an incident is at a Critical severity level and a new Warning alert is added to the incident, the incident severity remains at the Critical level.

Configuring Notifications

When you want to be notified of incidents without continuously monitoring the user interface, you can create one or more Notification profiles. You can configure the profiles to send an e-mail or pager message to one or more users when a new incident is created, or when an incident changes severity level. If you only want to receive messages for a group of assets that are on a critical path, you can choose to subscribe to messages for a custom list of assets.

This example shows how to create a notification profile to send a page when a critical severity incident is detected for a specific group of assets. In this case, a user-defined group of assets called HA Assets.

1. Select Administration in the Navigation pane, then select Local Users under Enterprise Controller in the Navigation pane.
2. Select one or more users, then click the **Configure Notification Profile** icon.

In this example, the selected user does not have an existing Notification profile, as indicated by the icon with the red badge in the lower right corner.

3. Select **Subscribe to Custom List of Messages**, then click **Next**.

4. Select the group, in this case our user-defined group is called HA Assets. Each category: User Interface, E-mail, and Pager has a drop-down menu. The default for each is **None**. Select the incident severity for each type of notification you want to configure, then click **Next**. The following are selected for this example:

   - **User Interface**: Incident Updates and All Severities
   - **E-mail**: Incident Severity >= WARNING
   - **Pager**: None
5. Complete the same notifications categories for the Server Pool Notifications, then click Next.

### Configure Group Notifications

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>User Interface</th>
<th>Email</th>
<th>Pager</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA Assets</td>
<td>Assets are</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Servers</td>
<td>Predefined</td>
<td>None</td>
<td>Incident updates</td>
<td>None</td>
</tr>
<tr>
<td>Sun Blade 80</td>
<td>Predefined</td>
<td>None</td>
<td>Incident Severity &gt;= CRITICAL</td>
<td>None</td>
</tr>
<tr>
<td>Other Linux</td>
<td>Predefined</td>
<td>None</td>
<td>Incident Severity &gt;= INFO</td>
<td>None</td>
</tr>
<tr>
<td>SUSE 10</td>
<td>Predefined</td>
<td>None</td>
<td>Incident updates and all severities</td>
<td>None</td>
</tr>
</tbody>
</table>

6. Complete the E-mail information, then click Next.

- E-mail address: The destination e-mail address
- Mail Host: You can enter the mail host to use in sending the e-mail, or enter local host or the name or IP address of the Enterprise Controller to send e-mails directly.
- Port: Enter the port used by the e-mail server.
- Mail User Name: Enter a user name, if the mail host requires a name.
- Mail Password: Enter a password if the mail host requires a password.
- Connection Security: Select STARTTLS or SSL/TLS for the connection security.
7. Click **Finish** on the Summary page to apply the Notification profile.

### Summary

- **Message Subscription:** Subscribe to Custom list of messages

### Group Notifications

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>User Interface</th>
<th>Email</th>
<th>Pager</th>
</tr>
</thead>
<tbody>
<tr>
<td>HA Assets</td>
<td>Assets are on a critical path and must be available 99.99% are members of this group.</td>
<td>Incident updates and all severities</td>
<td>Incident Severity &gt;= WARNING</td>
<td>None</td>
</tr>
</tbody>
</table>

The Notification Profile for the user shows enabled. You can edit the profile for other notifications.

### Users and Notification Profiles

<table>
<thead>
<tr>
<th>User</th>
<th>Notification Profile</th>
<th>Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iahartma</td>
<td>[ ]</td>
<td>Asset Admin</td>
</tr>
</tbody>
</table>

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**Viewing Incidents**

A ticker appears at the top of the UI that shows the following five incident categories: Unassigned Critical Incidents, All Relayed Incidents, My Critical Incidents, and My Warning Incidents. To view the details, click an icon.
Alternatively, you can open the Message Center in the Navigation pane to view all open incidents, and their severity. Incidents appear in the following categories in the Message Center:

- **Unassigned Incidents**: Newly created incidents and those that have not been assigned an owner.
- **My Incidents**: All incidents that are assigned to you. You can perform additional actions to these incidents to manage their status, such as: Take Action, mark as being repaired, acknowledge, and open a service request for the incident.
- **Incidents Assigned to Others**: Incidents that are currently assigned to other users. You can view these incidents, but you cannot perform specific actions on them.
- **Relayed Incidents**: All incidents reported from any discovered Oracle Engineered System. Log in to the Oracle Enterprise Manager Ops Center instance that manages each Oracle Engineered system to fix any incidents related to its assets.

### Assigning Incidents

You can assign incidents one at a time, or you can assign several at the same time. In this example, there are several incidents related to file systems.

1. Click **Message Center** in the Navigation pane, then click **Unassigned Incidents**.

2. Select the incidents from the Unassigned Incident list, then click the **Assign Incident(s)** icon.

<table>
<thead>
<tr>
<th>Severity</th>
<th>ID</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>58426</td>
<td>File System Reachability (A)</td>
<td>myhost</td>
</tr>
<tr>
<td></td>
<td>58402</td>
<td>Storage Library Status has</td>
<td>nfs://203.0.1</td>
</tr>
<tr>
<td></td>
<td>58411</td>
<td>SMF Service State svc:ap</td>
<td>myhost-1</td>
</tr>
<tr>
<td></td>
<td>58424</td>
<td>File System Reachability (A)</td>
<td>myhost</td>
</tr>
<tr>
<td></td>
<td>58404</td>
<td>File System Reachability (A)</td>
<td>myhost-1</td>
</tr>
<tr>
<td></td>
<td>58428</td>
<td>Storage Library Status has</td>
<td>nfs://203.0.1</td>
</tr>
</tbody>
</table>
3. Select a user from the **Assign To** drop-down menu. Only users that have the Fault Administrator role appear in the list. A text box lets you add a note to the recipient. Click **Assign Incidents**.

### Assign Incidents

The following incidents will be assigned and moved to the specified user incident queue. To move the incidents back to 'Unassigned', select 'No one' in the 'Assign To' drop-list.

<table>
<thead>
<tr>
<th>Severity</th>
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<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>58426</td>
<td>File System Reachability /var/mnt/virtlib/13</td>
<td>myhost</td>
</tr>
<tr>
<td>✗</td>
<td>58424</td>
<td>File System Reachability /var/mnt/virtlib/13</td>
<td>myhost</td>
</tr>
<tr>
<td>✗</td>
<td>58434</td>
<td>File System Reachability /var/mnt/virtlib/13</td>
<td>myhost-1</td>
</tr>
</tbody>
</table>

* **Assign To:** Bob Smith

Note: Please investigate why we are getting these File System errors.

4. The incidents will move from the Unassigned category into either the Assigned to Other category or the My Incidents category, depending on the recipient.

### All Incidents Assigned to Others (3)

<table>
<thead>
<tr>
<th>Severity</th>
<th>State</th>
<th>ID</th>
<th>Description</th>
<th>Source</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>📸</td>
<td>58426</td>
<td>File System Reachability</td>
<td>myhost</td>
<td>Bob Smith</td>
</tr>
<tr>
<td>✗</td>
<td>📸</td>
<td>58424</td>
<td>File System Reachability</td>
<td>myhost</td>
<td>Bob Smith</td>
</tr>
<tr>
<td>✗</td>
<td>📸</td>
<td>58404</td>
<td>File System Reachability</td>
<td>myhost-1</td>
<td>Bob Smith</td>
</tr>
</tbody>
</table>

### Viewing Incident Details

You can view details about an incident, or the alerts that comprise an incident. In some cases, the information is populated by you or your coworkers. See **Acknowledging and Reassigning Incidents** for how to add a comment, annotation, or suggested action.

1. Click **Message Center**, then click **My Incidents** to open the incident from the Message Center.
   - To view the alerts that comprise the incident and the history of an alert, click the **View Alerts** icon.
To view annotations and state changes associated with the incident, click the **Annotations** icon.

To view possible impacts and causes of the incident, click the **Possible Impacts and Causes** icon. The information in this section is populated by members of your organization.

To view comments made by members of your organization, click the **View Comments** icon.

To view suggested actions, including scripts that are provided by members of your organization, click the **Suggested Actions** icon.

2. You can also view details from the asset view. Click **Assets**, then select the asset. The dashboard with the incident levels appears in the center pane. Click the tabs for the asset to view additional information. For example, click **Library** for more details about the library.

**Acknowledging and Reassigning Incidents**

In this example, three incidents are assigned to a user. After investigation, two are accepted and the third is re-assigned to a new user.

1. After reviewing the comments, annotations, and suggested actions for the incident, highlight one or more incidents and click the **Acknowledge** icon to indicate that you are working on the issue.

2. You can add a note to describe the status. Click **Acknowledge Incidents**.
Acknowledged incidents appear with the acknowledge incident icon, which includes a green check mark. In this example, the first two incidents are acknowledged and the third incident is incorrectly assigned. Reassign an incident by selecting the incident, then clicking the Assign Incident icon.

<table>
<thead>
<tr>
<th>Severity</th>
<th>ID</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>×</td>
<td>58424</td>
<td>File System Reachability /var/inn</td>
<td>myhost</td>
</tr>
<tr>
<td>×</td>
<td>58426</td>
<td>File System Reachability /var/inn</td>
<td>myhost</td>
</tr>
</tbody>
</table>

3. Acknowledged incidents appear with the acknowledge incident icon, which includes a green check mark. In this example, the first two incidents are acknowledged and the third incident is incorrectly assigned. Reassign an incident by selecting the incident, then clicking the Assign Incident icon.

4. Select a user from the Assign drop-down menu, add a note to the user, then click Assign Incidents.
The incident is now in the new user’s queue for review and acknowledgment.

Provide a Comment for a Known Problem
You can provide comments on an incident throughout the incident process.

1. Select the incident, then click the Add Annotation to Incident icon.

2. Select Comments from the Annotation Type drop-down menu, enter a synopsis, then enter your comment in the Note field. Click Save.
Take Action on an Incident

Taking action on an incident enables you to run an existing operational plan, execute a command, or run a script file on the asset. When a suggested action and associated Operational Plan for the issue is in the Incident Knowledge Base, it will appear as an option on this page.

In this example, the file system is not reachable. An Operational Plan with a script to unmount the file system is available.

1. Expand the Message Center and click My Incidents.
2. Select the incident, then click the Take Action on Incident icon.
3. Three options are available on the Take Action page: Execute a Selected Suggested Action, Execute an Operational Plan, or Execute a Command or a Script File. Select the Execute an Operational Plan option and expand the drop-down menu against the managed asset. In this case, there are two operational plans available for the asset on which the incident occurred. Click the appropriate plan.
4. Click **Execute Selected Action**.

5. After you resolve the underlying problem, click the **Mark as Repaired** icon.

6. Add a note in the comment field and click **Tag Incidents as Being Repaired**.

**Mark Incidents as Being Repaired**

Select the appropriate action to be executed on the following incidents.

<table>
<thead>
<tr>
<th>Severity</th>
<th>State</th>
<th>ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>×</td>
<td>☑</td>
<td>58426</td>
<td>File System Reachability /usr/mnt/virtlibs</td>
</tr>
</tbody>
</table>

**Notes:** Unmounted the NFS library and remounted it.

7. The state will change on the Incidents page.
Closing Incidents

Marking an incident as repaired does not remove the incident from the Message Center or your queue. Closing the incident will remove it from the queue. If another alert is generated from the same asset and monitoring rule is triggered, a new incident is generated. You can close the incident, as described below, or the software automatically closes incidents after seven days of no activity. Closed incidents are automatically deleted after 60 days.

1. Select the incident, then click the Close Incident icon.

2. Add a note in the incident. If needed, you can disable the monitoring rule for a time by clicking the Disable check box and providing a time frame for reactivating the monitors. Click Close Incidents.

What’s Next?

This example describes situations where information, such as operational profiles and recommended actions are already in the Incident Knowledge Base. Advanced incident management features enable you to associate operational profiles with specific types of incidents or add automated response scripts to the Incident Knowledge Base.

If you cannot resolve the issue, you can use the Auto Service Request feature to file a service request from within Oracle Enterprise Manager Ops Center.
Related Articles and Resources

The Oracle Enterprise Manager Ops Center 12c Release 2 documentation is available at http://docs.oracle.com/cd/E40871_01/index.htm.

See the Oracle Enterprise Manager Ops Center Feature Reference Guide for more information on the features.

The Oracle Enterprise Manager Ops Center Administration Guide has information about user roles and permissions, and about configuring and unconfiguring notifications.

For end-to-end examples, see the workflows and how to documentation in the Deploy How To library at http://docs.oracle.com/cd/E40871_01/nav/deployhowto.htm and the Operate How To library at http://docs.oracle.com/cd/E40871_01/nav/operatehowto.htm. See Tuning Monitoring Rules and Policies in the Operate How To library for how to customize the profiles for your environment.

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