

## **Oracle® Enterprise Manager**

Installation and Configuration Guide for HP Service Manager  
Connector

Release 12.1.0.2.0

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Oracle Enterprise Manager Installation and Configuration Guide for HP Service Manager Connector, Release 12.1.0.2.0

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# Preface

This *Connector Configuration* guide provides the information that you require to configure Management Connectors that integrate Enterprise Manager with other management tools and help desk systems.

## Audience

This guide is written for Oracle Database system administrators who want to configure Management Connectors to enable integration between Enterprise Manager and other systems.

You should already be familiar with Oracle Enterprise Manager.

## Documentation Accessibility

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## Related Documents

For more information, see the following books in the Oracle Enterprise Manager documentation set:

- *Oracle Enterprise Manager Cloud Control Basic Installation Guide*
- *Oracle Enterprise Manager Cloud Control Advanced Installation and Configuration Guide*
- *Oracle Enterprise Manager Cloud Control Administrator's Guide*
- *Oracle Enterprise Manager Cloud Control Upgrade Guide*
- *Oracle Enterprise Manager Framework, Host, and Services Metric Reference Manual*
- *Oracle Enterprise Manager Command Line Interface*
- *Oracle Enterprise Manager Cloud Control Extensibility Programmer's Guide*

- *Oracle Database 2 Day DBA*

The latest versions of this and other Oracle Enterprise Manager documentation can be found at:

<http://www.oracle.com/technology/documentation/oem.html>

Oracle Enterprise Manager also provides extensive online help. Click **Help** on any Oracle Enterprise Manager page to display the online Help system.

Printed documentation is available for sale in the Oracle Store at

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To download free release notes, installation documentation, white papers, or other collateral, please visit the Oracle Technology Network (OTN). You must register online before using OTN; registration is free and can be done at

<http://otn.oracle.com/membership/>

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## Conventions

The following text conventions are used in this document:

<b>Convention</b>	<b>Meaning</b>
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.



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# Introduction to the Connector

The HP Service Manager Connector 12.1.0.2.0 integrates HP Service Manager Version 7 (HPSM) incident management with Enterprise Manager. Using this connector, you can create, update, reopen, and close an HP Service Manager Incident (ticket) based on incidents in Enterprise Manager. The HP Service Manager Connector integrates Enterprise Manager with HP Service Manager through either an HTTP or HTTPS connection. Note that the term *ticket* refers to an HP Service Manager incident, and is used throughout this document.

The ticket generated by the connector contains the relevant information about the Enterprise Manager incident, including a link to the Enterprise Manager console to enable helpdesk analysts leverage Enterprise Manager's diagnostic and resolution features to resolve the incident. In Enterprise Manager, the ticket ID, ticket status, and link to the HP Service Manager console is shown in the context of the incident. This provides Enterprise Manager administrators with ticket status information and an easy way to quickly access the ticket.

The following sections explain various HP Service Manager Connector concepts and requirements that you should understand before you start using the HP Service Manager Connector:

- [Auto Ticketing](#)
- [Manual Ticketing](#)
- [Ticket Templates](#)
- [Grace Period](#)
- [Retry](#)
- [Versions Supported](#)
- [Prerequisites](#)

## 1.1 Auto Ticketing

Auto ticketing refers to creating or updating tickets automatically for any matching rule(s) in Enterprise Manager. You can define a set of event or incident rules for which tickets must be opened/updated for changes in underlying event or incident attributes. For example, changing event severity from Warning to Critical can update the associated ticket.

**See Also:** "Incident Management Chapter" in the *Oracle Enterprise Manager Administrator's Guide*.

After the ticket is opened, any subsequent update of the incident attributes or underlying event attributes, such as a change in underlying events severity, updates the ticket. After the incident is cleared in Enterprise Manager, the ticket is updated and you can optionally go to HPSM to close the ticket.

**See Also:** [Section 4.1, "Automatically Creating a Ticket"](#).

## 1.2 Manual Ticketing

From the Enterprise Manager console, you can manually open a CASD ticket based on an open incident in Enterprise Manager. The HPSM Connector populates the ticket with details based on the incident and the ticket template selected.

## 1.3 Ticket Templates

Ticket templates are XML transformation style sheets that transform Enterprise Manager incidents to a ticket format before the requests are sent to HPSM. A ticket template specifies how an Enterprise Manager incident and its associated event attributes can be mapped to the ticket attributes of HPSM.

These templates specify how Enterprise Manager incident attributes can populate the fields of a Service Manager ticket. A ticket template helps in the mapping of Enterprise Manager incident fields into Service Manager incident fields.

In Auto Ticketing, while setting up a rule, you select a configured connector and select the ticket template from the template list. The selected ticket template is used when a ticketing request is sent to the HPSM. For manual ticketing, you have to select a connector instance and ticket template before submitting a request for ticket creation.

## 1.4 Grace Period

The grace period enables you to prevent creating a large number of tickets for frequently created incidents due to reoccurrence of the same event.

For recurring incidents, the grace period is a time period during which reoccurrences of the same incident update (or reopen) an existing ticket for the incident instead of opening a new ticket.

For example, an incident triggers and a ticket is opened for it. If the grace period is one hour and the incident is cleared at 10:00 a.m., and if the same incident retriggers before 11:00 a.m. (one-hour grace period), the ticket that had been originally created for the incident is updated/reopened rather than creating a new ticket.

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**Note:** In HPSM, after a ticket is set to a Closed status, it cannot be reopened. Consequently, an incident that re-triggers within the grace period cannot reopen the ticket but only annotate it.

If you want to reopen a ticket for incident occurrences that fall within the grace period, set the ticket status to Resolved instead of Closed when the incident clears. This enables the HPSM Connector to reopen the ticket if the same incident reoccurs within the grace period.

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## 1.5 Retry

The “Retry” section, available on the connector configuration page, enables you to specify whether a failed ticketing request needs to be retried within a configurable expiration time.

Enabling the Retry option gives you the option of specifying whether you want to resend a ticketing request if the request fails the first time, and specifying the time period after which you want to abandon the retry. Enterprise Manager retries every 5 minutes until the request is successful or the retry interval expires.

## 1.6 Versions Supported

There are two different version-specific HPSM connectors that you can install.

- HPSM 7.0 Connector is for versions 7.0 and 7.01.
- HPSM 7.1 Connector is for versions 7.10 and 7.11.

The base Enterprise Manager version number for the HP Service Manager Connector Release 12.1.0.2.0 is Enterprise Manager 12c Release 1 (12.1.0.1 with Bundle Patch 1).

## 1.7 Prerequisites

Before using the HP Service Manager Connector, ensure that you meet the following prerequisites:

- Service Manager 7 service tier is installed and configured.
- Service Manager 7 consoles are installed and configured. If the URL connector framework option is selected, the Service Manager Web console must be installed and configured. To install the middle tier, see the *HP Service Manager 7 Web Tier Installation Guide*. To configure the Web console, see [Section 3.6, "Configuring the HP Service Manager Web Console"](#) for instructions.



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## Installing and Uninstalling the Connector

The HP Service Manager Connector is not installed as part of the Enterprise Manager base installation, so you need to manually install it as described in this chapter. The following topics are discussed:

- [Installing the Connector](#)
- [Uninstalling the Connector](#)

### 2.1 Installing the Connector

The HPSM connector is not included out-of-the-box, so you must download it from the Oracle Enterprise Manager store. All connectors in the Enterprise Manager store are available on the Self Update page for downloading.

To download and install the connector:

1. From the Setup menu of the Enterprise Manager console, select **Extensibility**, then **Self Update**.

2. Click on the **Management Connector** link in the Type column.

The HPSM connectors appear in the list with a status of Available.

3. Click on the appropriate HPSM connector to select it, and then click **Download**.

The Schedule Download window appears, where you can determine when the download should be performed.

4. Click **Select** to download immediately.

If you want to schedule the download for a later time, specify the date and time when the download should occur, and click **Select**. You will need to return and finish the remainder of this procedure after the scheduled download date and time.

5. If necessary, refresh the screen until the status of the connector changes to Downloaded.

6. Click on the HPSM connector to select it, then click **Apply**.

After you respond to the prompt to confirm the operation, a page appears that indicates the request has been submitted.

7. Refresh the screen until the status of the connector changes from Apply Scheduled to Applied.

## 2.2 Uninstalling the Connector

To uninstall the connector, you must first delete all defined instances of the connector, then you must delete the connector from the Self Update page.

To uninstall the connector:

1. From the Setup menu, select **Extensibility**, then **Management Connectors**.
2. Select an instance of the connector you want to delete, then click **Delete**.
3. On the Confirmation page, click **Yes**.
4. Repeat steps 2 and 3 until all instances of the connector have been deleted.
5. From the **Setup** menu, select **Extensibility**, then **Self Update**.
6. Click on the **Management Connector** link in the Type column.  
A list of updates appears for Management Connectors.
7. Click on the connector you want to delete, select **Actions**, then select **Delete**.  
The Delete Update window appears.
8. Click **Delete** to delete the connector.  
A pop-up confirmation window appears.
9. Click **OK** to confirm and delete the connector.

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## Configuring the Connector

This chapter explains how to perform tasks directly or indirectly related to configuring the connector, and also discusses the post-configuration task of navigating between the Enterprise Manager and HP Service Manager consoles. The following topics are discussed:

- [Creating a Connector Instance](#)
- [Configuring the Connector](#)
- [Enabling or Disabling the Connector](#)
- [Providing General Settings](#)
- [Working with Ticket Templates](#)
- [Configuring the HP Service Manager Web Console](#)
- [Navigating Between Enterprise Manager and HP Service Manager](#)

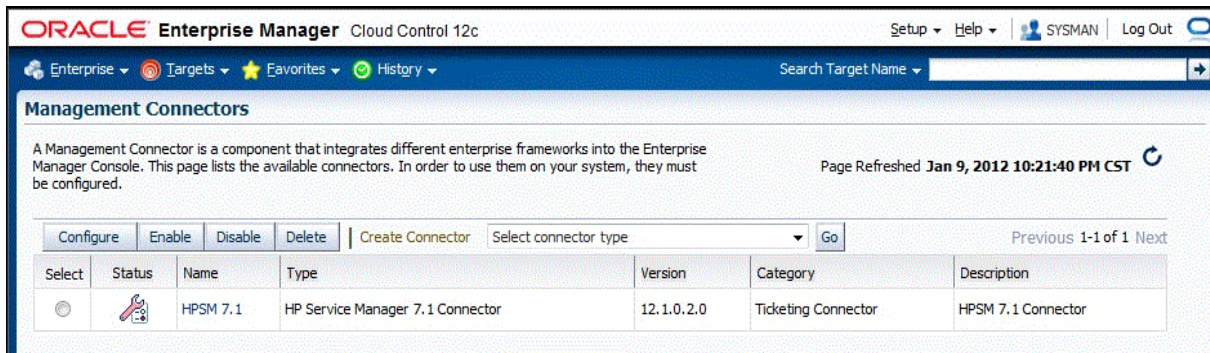
### 3.1 Creating a Connector Instance

To create a connector instance:

1. From the Setup menu of the Enterprise Manager console, select **Extensibility**, then **Management Connectors**.
2. Select a connector type of **HPSM 7.0 Connector** or **HPSM 7.1 Connector** from the Create Connector drop-down list, then click **Go**.
3. Enter the connector name and description on the next page, then click **OK**.

The connector instance appears as unconfigured in the Management Connectors page, as shown in [Figure 3-1](#).

**Figure 3–1 Unconfigured HPSM 7.1 Connector**



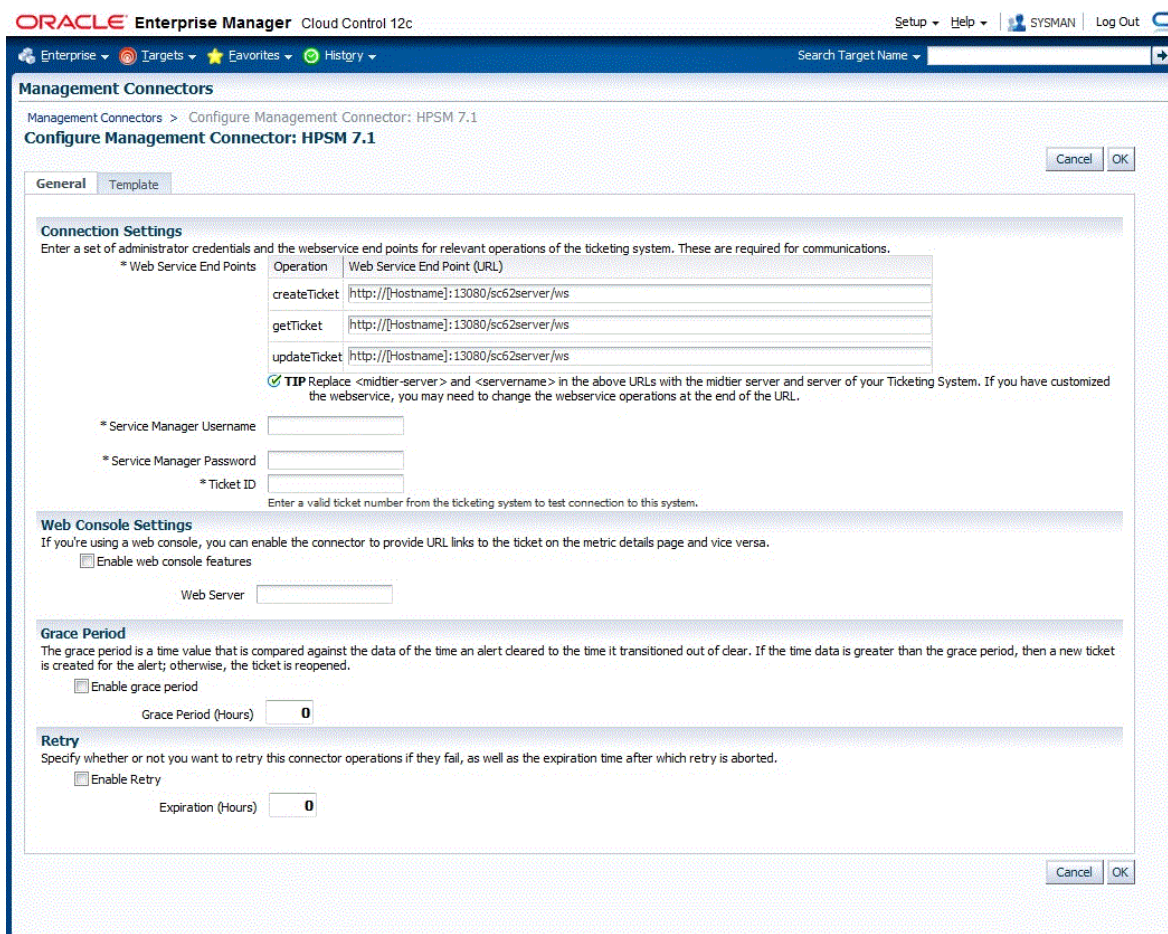
## 3.2 Configuring the Connector

To configure the connector:

1. Click on the name of the HPSM Connector.

The General tab of the Configure Management Connector page appears, as shown in Figure 3–2.

**Figure 3–2 Configure Management Connector Page**





2. Provide the required settings. See [Section 3.4, "Providing General Settings"](#) for details.

3. Click **OK**.

The Management Connectors page reappears. The row for the HPSM Connector should have a check mark in the Configured column.

4. Optionally, you can click the configure icon again to check for the available ticket templates.

5. Click the **Ticket Templates** tab.

All out-of-box ticket templates should appear in the table.

If you choose HTTPS as the protocol to establish a connection between CASD and Enterprise Manager, see ["Importing the Adapter Certificate into Enterprise Manager"](#) in [Appendix A](#).

### 3.3 Enabling or Disabling the Connector

You can enable or disable a connector from the Management Connectors page by selecting the connector and clicking either Enable or Disable. After a connector is disabled, a red cross icon appears under the status column. By default, the connector instance is enabled as soon as it is configured.

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**Note:** Only enabled connectors are available for ticketing operations.

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## 3.4 Providing General Settings

The following sections explain how to provide various configuration details.

### 3.4.1 Connection Settings

The HPSM Connector communicates with the Service Manager server through a web service provided through the Service Manager web tier. All fields are mandatory.

- **Web Service End Points** - URL of the web service end-point to call for the createTicket, updateTicket, and getTicket operations. The Service Manager web service URL is formatted as shown below:

```
http://[Hostname]:13080/sc62server/ws
```

In most cases, you will just need to replace [Hostname] with the host name or IP address of the server where the web tier is located. The port number defaults to 13080, so you only need to change the port number if you have changed the port used by the web tier. The only other change you might make is the protocol. If you want to use SSL, you need to change the protocol from http to https.

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**Note:** If you want to use SSL to encrypt communications between Enterprise Manager and Service Manager, see ["Importing the Adapter Certificate into Enterprise Manager"](#) in [Appendix A](#).

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- **Service Manager Username** - Specify the user name for HTTP basic authentication supported by the HP Service Manager web services. This user name must have the appropriate privileges/roles in HP Service Manager to create, update, and query

tickets in the HP Service Manager. All tickets created through the connector are generated with this user account.

- **Service Manager Password** - Specify the password associated with the user specified in the Service Manager Username field.
- **Ticket Number** - Enter a valid ticket number to test the connection when you save the configuration.
  - If you specify the correct Web service end-points and enter a valid ticket number, the following message appears on the Management Connectors page after you click OK:  
*Connection test succeeded. The configuration was saved.*
  - If you have not previously saved the connector configuration and enter incorrect Web service endpoints or an invalid ticket number, the following message appears on the Management Connectors page after you click OK:  
*Connection test failed. The configuration was saved.*
  - If you have previously saved the connector configuration and enter incorrect Web service endpoints or an invalid ticket number, the following message appears on the Management Connectors page after you click OK:  
*Connection test failed. The configuration was not saved.*

### 3.4.2 Web Console Settings

Web Console settings are required if you want the Connector to provide links to HPSM tickets created by Enterprise Manager in the context of an incident. This feature requires configuration changes in HPSM. See [Section 3.6, "Configuring the HP Service Manager Web Console"](#) for details.

To enable this functionality, provide the following Web console settings:

- **Enable web console** - Check this box to enable launching of the HPSM ticket page within context from Enterprise Manager.
- **Web Server** - Specifies Web server information the connector uses to connect to the web tier when accessing incidents in HPSM. Set the value using the following format:

`<hostname>:<port>/<tier>`

Where `<hostname>` is the hostname or IP address of the web tier server machine, `<port>` is the port that the web tier is configured to support, and `<tier>` is the name of the web services tier. The default value for the port is 8080, and the default name of the web tier is `sm7`.

A sample value for the field is as follows:

`10.2.1.110:8080/sm7`

### 3.4.3 Grace Period

You can enable and disable the grace period and configure its value. By default, the grace period is disabled. See [Section 1.4, "Grace Period"](#) for details. This setting applies to all incidents the HPSM Connector processes.

### 3.4.4 Retry

You can enable and disable the Retry option and configure its interval value. By default, the Retry is disabled. See [Section 1.5, "Retry"](#) for details. This setting applies to all incidents the HPSM Connector processes.

## 3.5 Working with Ticket Templates

When a connector instance is created in Enterprise Manager, all associated templates are available for ticket create/update operations. For Auto Ticketing, a notification method is created based on the ticket template selected while creating an incident rule. For manual ticketing, a ticket template is selected while creating a ticket from the Enterprise Manager console.

There are two default templates for each of the HPSM Connectors. The default templates for the HPSM 7.0 connector are:

- `ServiceManager_7.0_Default_Incident_AutoClose.xml`
- `ServiceManager_7.0_Default_Incident.xml`

The default templates for the HPSM 7.1 connector are:

- `ServiceManager_7.1_Default_Incident_AutoClose.xml`
- `ServiceManager_7.1_Default_Incident.xml`

**Tip:** See [Section 5.1, "Out-of-Box HP Service Manager Templates"](#) for detailed information about these templates.

### 3.5.1 Adding Ticket Templates

If you want to create a custom template, you need to add ticket templates before they are recognized in Enterprise Manager. For each new custom template, run the following `emctl register_template` connector command as a user with execute privilege on `emctl` and the ability to read the ticket template:

```
$ORACLE_HOME/bin/emctl register_template connector
-t <template.xml> -repos_pwd <reposPassword>
-cname <connectorName> -iname <internalName>
-tname <templateName> -ttype 2 [-d <description>]
```

Where —

`<template.xml>` is the full path name of the template file.

`<reposPassword>` is the Enterprise Manager root (SYSMAN) password.

`<connectorName>` is the name of the connector instance installed in step 3 of [Section 3.1, "Creating a Connector Instance"](#).

`<internalName>` is the internal name to use for the template.

`<templateName>` is the name to display for the template.

`<description>` is the description of the template.

For example, the following command adds a new outbound template (`newTemplate.xml`) for the connector instance with the HPSM 7.1 Connector Instance:

```
emctl register_template connector
-t /home/oracle/custom_templates/template.xml
-repos_pwd sysmanpass
```

```
-cname "HPSM 7.1"  
-iname "newTemplate"  
-tname "New Template"  
-ttype 2  
-d "Demo template"
```

### 3.5.2 Viewing Template Code

To view template code, do the following:

1. Select the connector instance and go to the Configure Management Connector page.
2. Select the **Template** tab.
3. Click a template name or click **View** to view the XSLT code for the template.

The ticket templates are in XSLT format. A basic knowledge of XSLT is required to understand the code.

### 3.5.3 Removing a Template

To remove a template, do the following:

1. Select the connector instance and go to the Configure Management Connector page.
2. Select the **Template** tab.
3. Select the template and click **Delete**.
4. Click **Yes** to confirm the delete operation.

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**Important:** If the template you delete has an incident rule associated with it, ticketing will not function for this particular incident rule after the deletion.

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### 3.5.4 Editing Templates

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**Note:** The Edit Template feature is available in Oracle Enterprise Manager Release 12.1.0.2 and later.

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#### **Release 12.1.0.2 and Later**

To edit an existing ticket template for Release 12.1.0.2 and later, do the following:

1. Select the connector instance and go to the Configure Management Connector page.
2. Select the **Template** tab.
3. Select the template and click **Edit**.
4. Edit the Description and Template Contents fields as needed, then click **Save**.

The ticket template is automatically registered. Saving the registered template updates it in the repository.

**Releases Prior to 12.1.0.2**

To edit an existing ticket template for versions prior to Release 12.1.0.2, replace the template as a substitute for direct editing:

1. Click **Delete** to remove the ticket template.
2. Re-register the separately edited template using the `emctl register_template` command described in [Section 3.5.1, "Adding Ticket Templates"](#).

For instance, for a template named `template1.txt` that you have just edited outside of Enterprise Manager, to use this newer version of the file, you would delete `template1.txt` as instructed above, then re-register the edited `template1.txt` file.

**3.5.5 Restoring Templates**

After you edit or customize a template, you can restore it to its previous default contents if needed by performing the following steps.

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**Note:** The Restore feature is available in Oracle Enterprise Manager Release 12.1.0.2 and later.

You can restore out-of-box templates that you have may edited or customized to their default values. You cannot restore new templates that you have created (using the `emctl register_template` command).

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1. Select the connector instance and go to the Configure Management Connector page.
2. Select the **Template** tab.
3. Select the template and click **Restore**.
4. Click **Yes** in the confirmation page that appears in order to restore.

**3.6 Configuring the HP Service Manager Web Console**

To verify the configuration of the `web.xml` file in the WEB-INF folder of the Tomcat web tier context root:

1. Make sure to change the `serverHost` parameter value from local host to the fully-qualified name of the web tier server.
2. Make sure the `querySecurity` parameter is set to false as follows:

```
<init-param>
<param-name>querySecurity</param-name>
<param-value>>false</param-value>
```

3. If any changes were made to the configuration file, you must restart the web application server for the changes to take effect.

**Tip:** See the "Generating Web Tier URL Queries" section in the Service Manager client help contents for additional information.

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**Note:** Based on how the Enterprise Manager Connector Framework functions, the hash information normally required in the URL when `querySecurity` is set to true cannot be present. This requires that the URL security be turned off.

Your security team needs to evaluate if the risks outweigh the need for the URL to be able to access the HPSM incident directly from Enterprise Manager. Service Manager still requires user authentication when hashing is turned off to access the web console enforcing authorization to the operation requested.

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## 3.7 Navigating Between Enterprise Manager and HP Service Manager

After you have configured the connector, you will want to access incidents from the Enterprise Manager and HP Service Manager consoles. The following sections explain how to switch from one console to the other.

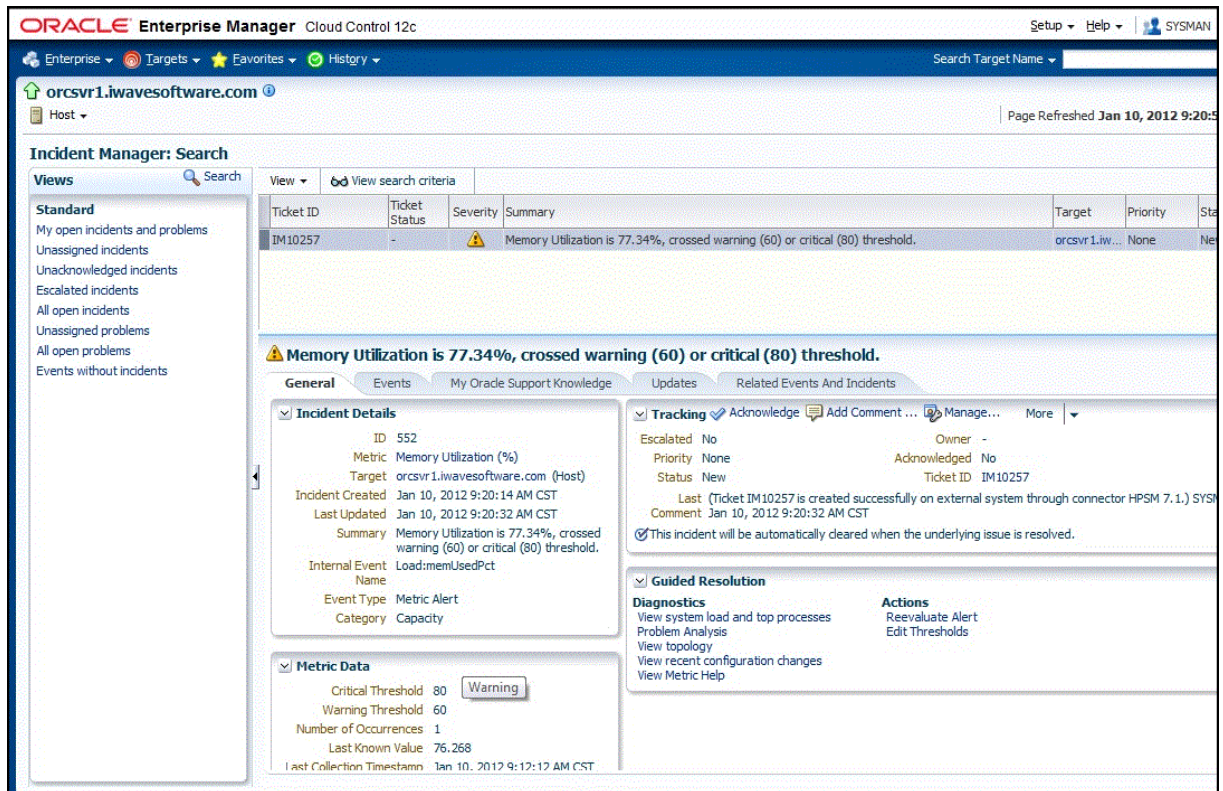
### 3.7.1 Navigating from Enterprise Manager to HP Service Manager

To navigate from Enterprise Manager to HPSM:

1. From the Enterprise Manager console Enterprise menu, select Monitoring, then Incident Manager.  
The open incidents appear.
2. Click on the desired incident to display information for the incident.
3. Click on the ticket identifier listed to the right of the Ticket ID label in the Tracking section as shown in [Figure 3-3](#).

You will be forwarded to the HPSM Web console login page.

Figure 3–3 Alert details in Enterprise Manager Console



4. Provide valid HPSM account details.

The HPSM incident details associated with this incident are displayed through the HPSM web console.

---

**Note:** If you do not use the HP Service Manager Web console, uncheck the "Enable web console features" option discussed in [Section 3.4.2, "Web Console Settings"](#) so that the ticket ID is shown in plain text. Otherwise, it is displayed as a link that does not function.

---

### 3.7.2 Navigating from HP Service Manager to Enterprise Manager

To navigate from HPSM to Enterprise Manager:

1. At the HPSM client, open an incident from Enterprise Manager as shown in [Figure 3–4](#).
2. Scroll down in the Description field to the URL: field and click on the URL listed.

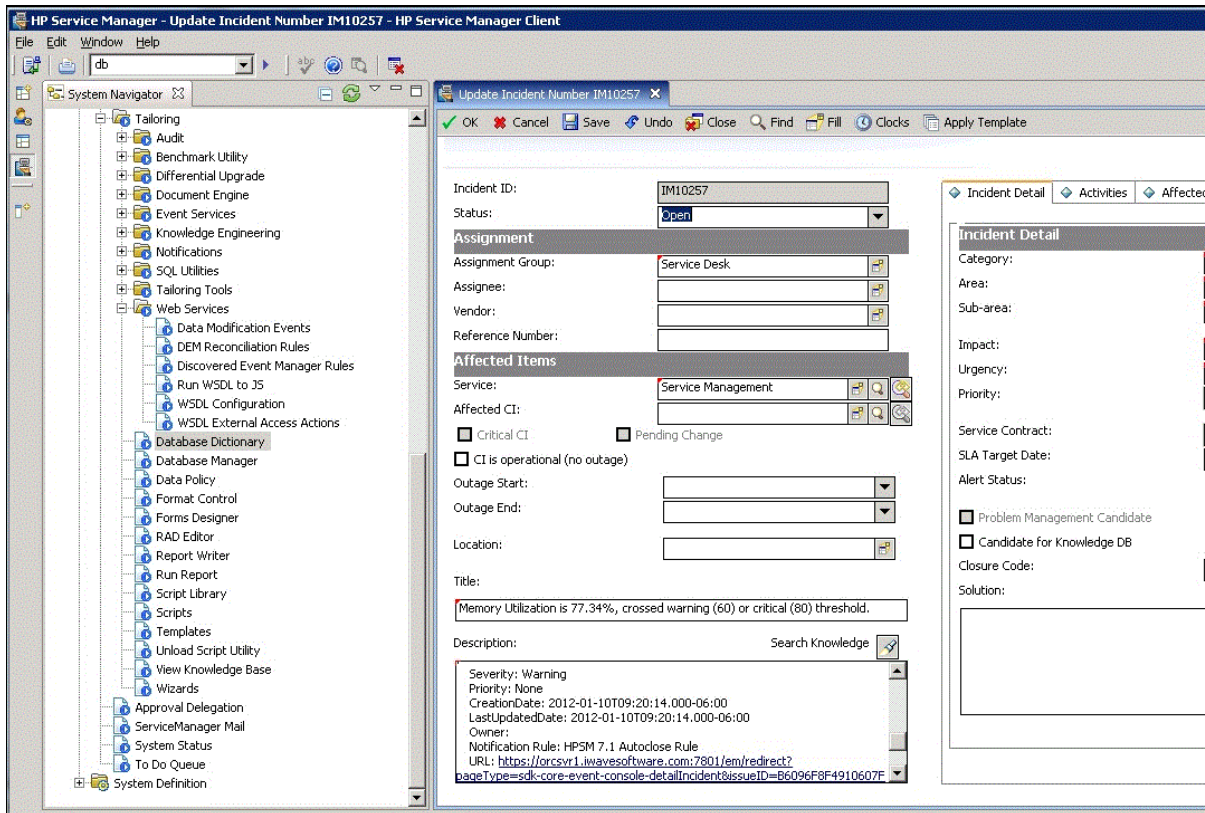
This forwards you to the Enterprise Manager console login page. After you provide the Enterprise Manager user name and password, you are forwarded to the alert related to this ticket.



**Note:**

- The Enterprise Manager user whose name you specify should at least have View privileges on the target on which the alert was raised.
- On the HP Service Manager console, if the URL appears as text, you need to cut and paste the URL into the browser.

**Figure 3–4 Alert Details in HP Service Manager Console**





---

---

## Creating Service Manager Tickets

You can create tickets automatically or manually. The following sections explain how to create both types:

- [Automatically Creating a Ticket](#)
- [Manually Creating a Ticket](#)

### 4.1 Automatically Creating a Ticket

To automatically create a ticket in HPSM, you need to create an incident rule that references a template from the HPSM connector.

To create an incident rule to automatically create a ticket in HPSM:

1. From the Enterprise Manager console, click **Setup**, then **Incidents and Incident Rules**.

2. Click **Create Rule Set**.

The Create Rule Set page appears.

3. Provide a Name and Description.

4. Click the **Rules** tab.

- For events —

Click **Create** and select **Incoming events or updates to events** as a type of rule to create from the pop-up window, then click **Continue**.

The Create New Rule wizard appears. Follow the steps to create a rule. (Refer to the "Configuring Incident Rule" section in the *Oracle Enterprise Manger Advanced Configuration Guide*.)

- For incidents —

Click **Create** and select **Newly created incidents or updates to incidents** as a type of rule to create from the pop-up window, then click **Continue**.

The Create New Rule wizard appears. Follow the steps to create a rule. (Refer to the "Configuring Incident Rule" section in the *Oracle Enterprise Manger Advanced Configuration Guide*.)

5. While configuring the above rule in the Add Actions page:

- For events —

Enable the **Create Incident** check box. This makes the Create Ticket option visible. Now enable the **Create Ticket** check box, which displays lists to select

the Connector Type, Connector Name, and Template Name as shown in Figure 4-1.

Figure 4-1 Event Add Actions

**ORACLE Enterprise Manager** Cloud Control 12c

### Add Actions

#### Add Conditional Actions Continue

Define actions to be taken when an event matches this rule.

**Conditions for actions**  
You can define the actions to apply whenever the rule matches or apply them conditionally.

Always execute the actions  
 Only execute the actions if specified conditions match

**Create Incident**  
Create an incident for the event to manage and track its resolution. You can initialize the newly created incident by assigning an owner and setting its priority.

Create Incident

Assign to

Set priority to

**Create Ticket** - Select a ticketing device that you want to use to create a ticket for this incident.

Create Ticket - Select a ticketing device that you want to use to create a ticket for this incident.

Connector Type

Connector Name

Template Name

**Notifications**  
Assign recipients for notifications. Recipients for the "To" list can only be added or removed in this section. Users who subscribe to this rule will be added to the "Cc" list; users who unsubscribe to this rule will be removed from the "Cc" list. You could specify multiple users separated by commas. Recipients could be Enterprise Manager users, direct E-mail address or [predefined variables](#).

**Basic Notifications**

E-mail To

E-mail Cc

Page

**Advanced Notifications**  
No advanced notification methods have been configured.

**Repeat Notifications(Not specified)**

**Clear events**  
For most events, Enterprise Manager detects when the underlying issue is cleared and will generate a clear event. These types of events cannot be cleared using this option. However, for some events, such as metric alert are generated by mining a log file, it is not feasible for Enterprise Manager to detect when the underlying issue is cleared. This type of events must be manually cleared by administrators. This action can be used to automa

- For incidents —  
Enable the **Create Ticket** check box, which displays lists to select the Connector Type, Connector Name, and Template Name as shown in Figure 4-2.

Figure 4–2 Incident Add Actions

**ORACLE Enterprise Manager** Cloud Control 12c

### Add Actions

#### Add Conditional Actions Continue

Define actions to be taken when an incident matches this rule.

**Conditions for actions**  
 You can define the actions to apply whenever the rule matches or apply them conditionally.  
 Always execute the actions  
 Only execute the actions if specified conditions match ⓘ

**Notifications**  
 Assign recipients for notifications. Recipients for the "To" list can only be added or removed in this section. Users who subscribe to this rule will be added to the "Cc" list; users who unsubscribe to this rule will be removed from list. You could specify multiple users separated by commas. Recipients could be Enterprise Manager users, direct E-mail address or [predefined variables](#).

**Basic Notifications**  
 E-mail To  ⓘ  
 E-mail Cc  ⓘ  
 Page  ⓘ

**Advanced Notifications**  
 No advanced notification methods have been configured.

**Repeat Notifications(Not specified)**

**Update Incident**  
 Automatically update the incidents to help triage your incoming incidents.

Assign to  ⓘ  
 Set priority to   
 Set status to   
 Escalate to

**Create Ticket**  
 Create Ticket - Select a ticketing device that you want to use to create a ticket for this incident.  
 Connector Type   
 Connector Name   
 Template Name

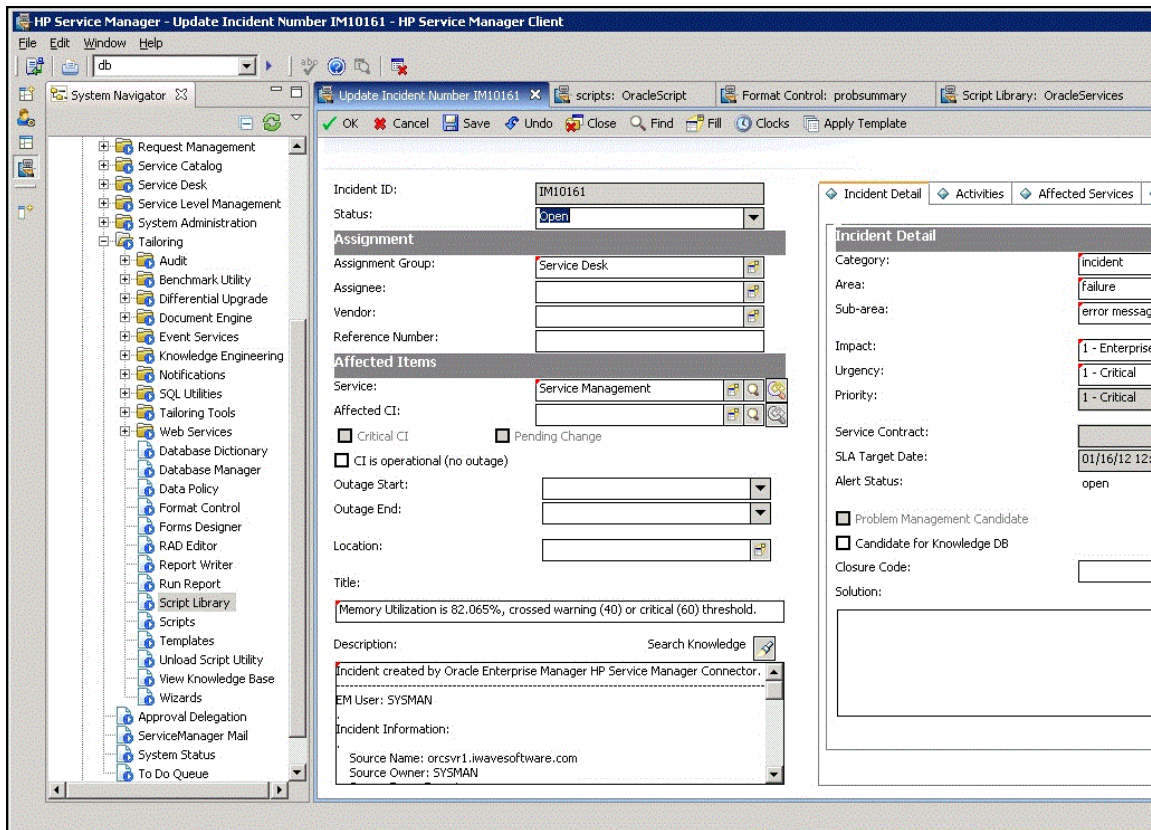
6. After completing all of the wizard steps, click **Save**.

The following process occurs after you create the incident rule for your incidents:

- A request is sent to the HPSM Connector when an incident is created due to an event that matches your rule.
- The ticket is created or updated in the HPSM system.
- In Enterprise Manager, the incident annotation is updated. A comment is added to the event Detail page of the incident to indicate that a ticket was created or updated, along with the ticket ID, status, and ticket URL.

A ticket is updated if there is an existing active ticket for an incident. [Figure 4–3](#) shows the ticket in the HPSM console.

Figure 4-3 HPSM Console Incident



## 4.2 Manually Creating a Ticket

To manually create a ticket:

1. After a metric incident occurs, go to its incident details page by clicking on the incident message in the Incident Manager console in Enterprise Manager. The incident details page for the incident should appear, as shown in [Figure 4-4](#).



Figure 4–4 Metric Incident Details Page

The screenshot displays the Oracle Enterprise Manager Incident Manager interface. The main window shows a list of incidents with columns for Ticket ID, Ticket Status, Severity, Summary, Target, Priority, and Status. A specific incident is selected, showing details for a filesystem space issue. The incident details include the ID (542), metric (Filesystem Space Available (%)), mount point (/u01), target (orcsvr1.iwavesoftware.com (Host)), and creation/update timestamps. The summary states: "Filesystem /u01 has 0% available space, fallen below warning (20) or critical (5) threshold." The internal event name is Filesystems:pctAvailable, and the event type is Metric Alert. The metric data section shows a critical threshold of 5, a warning threshold of 20, and one occurrence. The tracking section shows the incident is not escalated, has a priority of None, and a status of New. The guided resolution section includes diagnostics and actions like 'View topology', 'Reevaluate', 'View recent configuration changes', and 'Edit Threshold'.

2. In the Tracking section, select **More**, then **Create Ticket**.

The Create Ticket pop-up appears, as shown in Figure 4–5. The Create Ticket option is only available if there is at least one ticketing connector configured, and no prior ticket exists for the same incident.

3. In the Create Ticket pop-up window, select a ticket template from the Template Name list, then click **OK**.

Figure 4–5 Create Ticket Pop-up Window

The screenshot shows a "Create Ticket" dialog box. It prompts the user to "Select a ticketing device that you want to use to create a ticket for this incident." The dialog contains three dropdown menus: "Connector Type" (set to "HP Service Manager 7.1 Connector 12.1.0.2.0"), "Connector Name" (set to "HPSM 7.1"), and "Template Name" (set to "Default Incident"). There are "OK" and "Cancel" buttons at the bottom right.

### 4.3 Post-creation Advisory Information

- If you have successfully created the ticket, the ticket ID appears in the Last Comment column in the Event Details for the incident. If the Web console settings

are configured and enabled, the ticket ID appears as a link to the ticket page in Service Manager.

- If the default templates do not provide the desired mappings, you can create custom templates to map data as desired. See [Section 5.3, "Customizing Ticket Templates"](#) for additional information.
- You cannot manually update the ticket using the HPSM Connector. You need to manually update the ticket in Service Manager for any subsequent incident severity change.

---

---

## Using Out-of-Box Templates

This chapter provides details on the out-of-box ticket templates shipped with the HP Service Manager Connector based on the out-of-box Service Manager IncidentManagement WSDL. The ticket templates specify the mappings between Enterprise Manager incident attributes and HP Service Manager ticket attributes.

This chapter covers the following topics:

- [Out-of-Box HP Service Manager Templates](#)
- [Reading and Mapping Ticket Templates](#)
- [Customizing Ticket Templates](#)
- [Exporting the Ticketing Template Files](#)
- [Modifying Ticket Templates](#)
- [Custom Template Examples](#)

### 5.1 Out-of-Box HP Service Manager Templates

All out-of-box templates cause the following actions to occur when you create or update a ticket for an incident:

- Write Enterprise Manager incident information to the ticket description.
- Set the ticket summary based on the incident message.
- Add an entry to the Journal Update that shows the incident details. This provides a trail of the changes that have occurred to the incident.
- Sets the ticket severity based on the severity of the incident in Enterprise Manager.

The out-of-box templates are as follows:

- `Service_Manager_7.0_Default_Incident.xml` and `Service_Manager_7.1_Default_Incident.xml`

These templates create, update, or reopen a Service Manager ticket using the default field mapping. The templates do not close the ticket when the event severity value becomes Clear.

- `Service_Manager_7.0_Default_Incident_AutoClose.xml` and `Service_Manager_7.1_Default_Incident_AutoClose.xml`

These templates create, update, or reopen a Service Manager ticket using the default field mapping. The templates set the ticket status to Closed when the incident severity value becomes Clear.

## 5.2 Reading and Mapping Ticket Templates

This section provides detailed mapping information for the default ticket templates described above. The mappings are based on the out-of-box IncidentManagement WSDL for the HP Service Manager Web Service.

Each template is capable of handling create and update requests. The incident TicketID field determines how it is mapped. If the TicketID is empty, it is mapped to the Service Manager create request format. Otherwise, it is mapped to an update request format. The following sub-sections identify the create and update mappings for each template.

### 5.2.1 Service\_Manager\_7.0\_Default\_Incident.xsl - Create

[Table 5–1](#) lists the fields and values that this template maps for a create operation. All references to the incident refer to the Enterprise Manager incident.

**Table 5–1 7.0 Default Incident Create Field Names and Values**

Service Manager Field Name	Value
Severity	Set the severity based on the incident severity. See <a href="#">Section 5.2.10, "Severity Mapping"</a> for details.
Category	Hard-coded to "shared infrastructure".
Subcategory	Hard-coded to "enterprise".
Product Type	Hard-coded to "applications".
Problem Type	Hard-coded to "none".
Primary AssignmentGroup	Hard-coded to "HELPDESK".
Initial Impact	Hard-coded to "1".
Incident Description	Set to the formatted contents of the incident as specified in <a href="#">Section 5.2.9, "Formatted Enterprise Manager Incident Contents"</a> .
Brief Description	Set to the incident Summary.
Journal Updates	Set to the formatted contents of the incident as specified in <a href="#">Section 5.2.9, "Formatted Enterprise Manager Incident Contents"</a> .
Oracle Connector ID	Set to the incident ConnectorGUID.

### 5.2.2 Service\_Manager\_7.0\_Default\_Incident.xsl - Update

[Table 5–2](#) lists the fields and values that this template maps for an update operation. All references to the incident refer to the Enterprise Manager incident.

**Table 5–2 7.0 Default Incident Update Field Names and Values**

Service Manager Field Name	Value
Incident ID	Set to the incident TicketID.
Incident Description	Set to the formatted contents of the incident as specified in <a href="#">Section 5.2.9, "Formatted Enterprise Manager Incident Contents"</a> .
Brief Description	Set to the incident Summary.
IM Ticket Status	Set to "Open" if the incident ReopenTicket field is set to "Yes."



**Table 5–2 (Cont.) 7.0 Default Incident Update Field Names and Values**

Service Manager Field Name	Value
Alert Status	Set to "reopen" if the incident ReopenTicket field is set to "Yes."
Journal Updates	Set to the formatted contents of the incident as specified in <a href="#">Section 5.2.9, "Formatted Enterprise Manager Incident Contents"</a> .

### 5.2.3 Service\_Manager\_7.0\_Default\_Incident\_AutoClose.xsl - Create

The field mappings for this template are identical to the mappings specified in [Section 5.2.1, "Service\\_Manager\\_7.0\\_Default\\_Incident.xsl - Create"](#).

### 5.2.4 Service\_Manager\_7.0\_Default\_Incident\_AutoClose.xsl - Update

[Table 5–3](#) lists the fields and values that this template maps for an update operation. All references to the incident refer to the Enterprise Manager incident.

**Table 5–3 7.0 Default Incident AutoClose Update Field Names and Values**

Service Manager Field Name	Value
Incident ID	Set to the incident TicketID.
Incident Description	Set to the formatted contents of the incident as specified in <a href="#">Section 5.2.9, "Formatted Enterprise Manager Incident Contents"</a> .
Brief Description	Set to the incident Summary.
IM Ticket Status	Set to "Open" if the incident ReopenTicket field is set to "Yes." Set to "Closed" if the incident severity is "Clear."
Alert Status	Set to "reopen" if the incident ReopenTicket field is set to "Yes." Set to "closed" if the incident severity is "Clear."
Resolution Fix Type	Set to "permanent" if the incident severity is "Clear."
Closure Code	Set to "User Closure" if the incident severity is "Clear."
Resolution	Set to "The alert was resolved in Oracle Enterprise Manager" if the incident severity is "Clear."
Journal Updates	Set to the formatted contents of the incident as specified in <a href="#">Section 5.2.9, "Formatted Enterprise Manager Incident Contents"</a> .

### 5.2.5 Service\_Manager\_7.1\_Default\_Incident.xsl - Create

[Table 5–4](#) lists the fields and values that this template maps for a create operation. All references to the incident refer to the Enterprise Manager incident.

**Table 5–4 7.0 Default Incident Create Field Names and Values**

Service Manager Field Name	Value
Severity	Set the severity based on the incident severity. See <a href="#">Section 5.2.10, "Severity Mapping"</a> for details.

**Table 5–4 (Cont.) 7.0 Default Incident Create Field Names and Values**

Service Manager Field Name	Value
Category	Hard-coded to "incident".
Subcategory	Hard-coded to "failure".
Product Type	Hard-coded to "error message".
Problem Type	Hard-coded to "incident".
Primary AssignmentGroup	Hard-coded to "Service Desk".
Service	Hard-coded to "Service Management".
Initial Impact	Hard-coded to "1".
Incident Description	Set to the formatted contents of the incident as specified in <a href="#">Section 5.2.9, "Formatted Enterprise Manager Incident Contents"</a> .
Brief Description	Set to the incident Summary.
Journal Updates	Set to the formatted contents of the incident as specified in <a href="#">Section 5.2.9, "Formatted Enterprise Manager Incident Contents"</a> .
Oracle Connector ID	Set to the incident Connector GUID.

### 5.2.6 Service Manager\_7.1\_Default\_Incident.xml - Update

The field mappings for this template are identical to the mappings specified in [Section 5.2.2, "Service Manager\\_7.0\\_Default\\_Incident.xml - Update"](#).

### 5.2.7 Service Manager\_7.1\_Default\_Incident\_AutoClose.xml - Create

The field mappings for this template are identical to the mappings specified in [Section 5.2.5, "Service Manager\\_7.1\\_Default\\_Incident.xml - Create"](#).

### 5.2.8 Service Manager\_7.1\_Default\_Incident\_AutoClose.xml - Update

The field mappings for this template are identical to the mappings specified in [Section 5.2.4, "Service Manager\\_7.0\\_Default\\_Incident\\_AutoClose.xml - Update"](#).

### 5.2.9 Formatted Enterprise Manager Incident Contents

[Example 5–1](#) shows the format used by the templates for the Description and JournalUpdates fields.

- Text delimited by angle brackets (< and >) designates an Enterprise Manager Incident field name that will be replaced by the actual field contents.
- Lines marked with double asterisks indicate they will only be present if the designated incident field contains data.
- The Notes section after the format contains information about some of the fields.

**Example 5–1 Formatted Incident Contents**

```
EM User: <NotificationRuleOwner>
.
Incident Information:
.
    Source Name: <SourceObjInfo/ObjName>
```

```

Source Owner: <SourceObjInfo/ObjOwner>**
Source Type: <SourceObjInfo/SourceObjType>
Source SubType: <SourceObjInfo/SourceObjSubType>
Target Name: <TargetInfo/TargetName>
Target Type: <TargetInfo/TargetType>
Target Type Label: <TargetInfo/TargetTypeLabel>
Target URL: <TargetInfo/TargetURL>
.
Target Properties:**
  <TargetProperty/Name>: <TargetProperty/Value>**
.
Severity: <Severity>
Priority: <Priority>
CreationDate: <CreationDate>
LastUpdatedDate: <LastUpdatedDate>
Owner: <Owner>
Notification Rule: <NotificationRuleName>**
URL: <IncidentURL>
.
EM Incident Status: <ResolutionState>
EM Acknowledge: <Acknowledge>
EM Auto Close: <AutoClose>
EM Escalation Level: <EscalationLevel>
<AdditionalDetails/Name>: <AdditionalDetails/Value>**

```

**Example 5-1 Notes**

- EM User is set to the notification rule owner when the ticket is created through auto-ticketing, and is the Enterprise Manager log-in user when the ticket is created through manual-ticketing.
- The Target Properties section is only present if the incident contains target property values. Listed below are a couple of sample target property name/value pairs:  
 Line of business: Finance  
 Owner: Finance-DB Team
- CreationDate is set to the date the incident was created in Enterprise Manager.
- Owner is set to the incident owner in Enterprise Manager.
- URL is set to the URL of the incident details page in Enterprise Manager. The URL is set up as a link that can be clicked on to view the incident in Enterprise Manager.

**5.2.10 Severity Mapping**

The Service Manager ticket severity is set based on the Enterprise Manager incident severity value. Table 5-5 shows the values used when creating the ticket in Service Manager.

**Table 5-5 Ticket Severity Mappings**

When the incident severity is ...	Set the ticket severity to ...
Fatal	1 (Critical)
Critical	1 (Critical)
Warning	3 (Average)

**Table 5-5 (Cont.) Ticket Severity Mappings**

When the incident severity is ...	Set the ticket severity to ...
Minor Warning	4 (Low)
Informational	4 (Low)

## 5.3 Customizing Ticket Templates

If the out-of-box ticket templates do not satisfy your requirements, you can create custom templates tailored to your environment. Templates are XSLT files, so you must have a good understanding of XSLT transformations to create custom templates. To do this, Oracle recommends that you use one of the existing templates as the base template.

To create a custom template:

1. Export the default template XSLT files from Enterprise Manager to use as a baseline. Follow the instructions in [Section 5.4, "Exporting the Ticketing Template Files"](#) to obtain copies of the default template files.
2. Review [Section 5.1](#) and [Section 5.2](#) to understand the default mappings. Determine which file you want to use as a baseline and what mapping changes you want to make. Copy the baseline file to a new file with a different name.
3. Make the desired mapping changes to the new template file. See [Section 5.5, "Modifying Ticket Templates"](#) for guidance on mapping changes.
4. Register the new template with Enterprise Manager as specified in [Section 3.5.1, "Adding Ticket Templates"](#) on page 3-5.

See [Section 5.6, "Custom Template Examples"](#) for examples of how to create a custom template.

## 5.4 Exporting the Ticketing Template Files

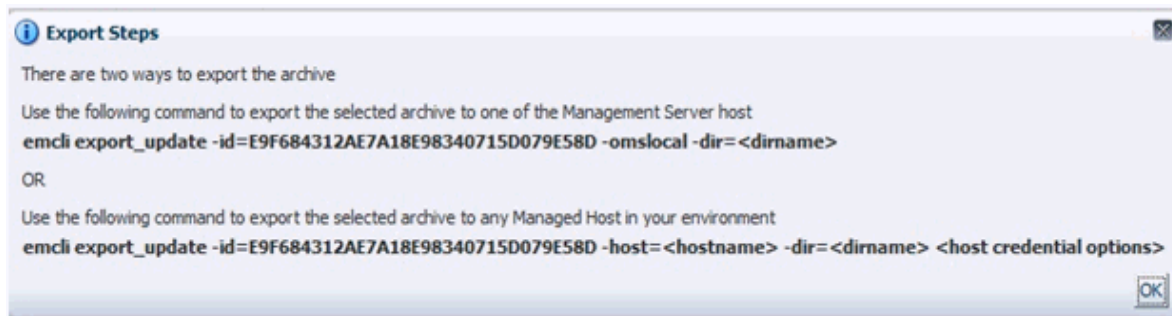
The connector installation .jar file is included in the Self Update archive that was installed in [Section 2.1, "Installing the Connector"](#).

To extract the installation file:

1. Determine the command required to export the adapter installation file. To do this, perform the following steps:
  - a. From the Setup menu in the Enterprise Manager console, select **Extensibility**, then **Self Update**.
  - b. Click on the **Management Connector** link.
  - c. Click on the **HPSM connector** and then select **Export** from the Actions list.

A pop-up window appears with the command required to export the file.

[Figure 5-1](#) shows an example of the window.

**Figure 5–1 Export Command Example**

2. Open a command window on the Management Server host system and navigate to a temporary directory where you can copy the file.
3. Log into EM CLI using the following command. You will be asked to provide the password information for the sysman account.

```
emcli login -username=sysman
```

4. Run the EM CLI `export_update` command from your system, changing `<dirname>` to the full path of the temporary directory.

This creates a .zip file. The file name is comprised of the id value specified in the `export_update` command with a .zip extension. In the example command in [Figure 5–1](#), the .zip file name would be:

```
E9F684312AE7A18E98340715D079E58D.zip
```

5. Extract the adapter installation .jar file from the .zip file using the following command:

```
unzip *.zip archives/*connector.jar
```

6. Extract the templates from the connector .jar file using the following command:

```
$JAVA_HOME/bin/jar xf archives/*.jar templates
```

---

**Note:** If the system where the connector file is located does not have the JDK installed, you cannot extract the .jar file contents. You must copy the .jar file to a system that has the JDK installed and transfer the template files after they have been extracted.

---

## 5.5 Modifying Ticket Templates

A template is an XSLT file that transforms an input XML format to an output XML format. To make the mapping changes, you need to understand the input XML format being transformed, and the output XML the template generates. The input document is the XML document that contains the Enterprise Manager incident information. The output document is the request being sent to the HPSM web service. The output XML document must conform to the data format specified in the Service Manager IncidentManagement WSDL.

[Appendix C](#) contains details on the format of the incident data Enterprise Manager generates. [Appendix D](#) contains details on the XML format required by the out-of-box IncidentManagement Service Manager web service. Service Manager web services may be customized, so the format used in your environment could be significantly different.

To modify the custom template file:

1. Review [Appendix D](#) to identify the names of the fields in Service Manager that you are planning to modify. The order of the fields is important, so if you need to add new fields, make sure to note where the field goes.
2. If you are planning on using data from the incident, review [Appendix C](#) to identify the field(s) you want to use in the mapping. [Appendix E](#) contains sample transactions that could be very helpful in identifying what data is present in the XML document from Enterprise Manager.
3. Open the custom template file in a text editor or a utility that you can use to build XSLT files.
4. Make the necessary changes to the custom template file and save it.
5. Unless the change is very simple, you should test the changes that you have made using the sample data from [Appendix E](#). This requires a utility that performs XSLT translations.

## 5.6 Custom Template Examples

This section provides walk-through examples of what is required to create custom templates. The first example is a simple case of changing values for fields that are already specified in the default templates. The second example is more involved, and includes populating fields that are not already in the default templates.

### 5.6.1 Example 1

In this example, the customer has determined that the default mappings do not function for their environment. They have created a new assignment group named "Tier 1 Support" that should handle all incidents that Enterprise Manager reports. They are running version 7.11 in their environment and would like to close the incidents in Service Manager after the incidents have cleared in Enterprise Manager. They have also created a temporary directory on the OMS server system at `/home/oracle/custom_templates` to hold the templates.

To create a custom template that handles the customer's requirements:

1. Navigate to the Management Connector Updates page and export the **HPSM 7.1 Connector**.
2. Copy the first EM CLI command listed in the Export Steps window for later use:

```
emcli export_update -id=DD4E9161C5E7129F9641447FB4F0497B -omslocal  
-dir=<dirname>
```

3. Open a command window on the OMS server system and change the working directory to the temporary directory:

```
cd /home/oracle/custom_templates
```

4. Log into EM CLI:

```
emcli login -username=sysman
```

5. Run the EM CLI command from step 1 to export the .zip file to the temporary directory.

```
emcli export_update -id=DD4E9161C5E7129F9641447FB4F0497B -omslocal  
-dir=/home/oracle/connector_templates
```

6. Extract the connector .jar file from the .zip file:

```
unzip *.zip archives/*connector.jar
```

7. Extract the template files from the .jar file:

```
$JAVA_HOME/bin/jar xf archives/*.jar templates
```

8. Copy the default template to a custom template file for modification:

```
cd templates
```

```
cp ServiceManager_7.1_Default_Incident_AutoClose.xsl Tier1_Support_AutoClose.xsl
```

9. Open the custom template file with a text editor and make the modifications shown below to the PrimaryAssignmentGroup node.

**Before changes** —

```
<m:PrimaryAssignmentGroup>Service Desk</m:PrimaryAssignmentGroup>
```

**After changes** —

```
<m:PrimaryAssignmentGroup>Tier1 Support</m:PrimaryAssignmentGroup>
```

Since this is a trivial change, you can skip testing.

10. At the OMS server system, run the following command to register your new custom template:

```
emctl register_template connector
-t /home/oracle/custom_templates/templates/Tier1_Support_AutoClose.xsl
-repos_pwd sysmanpass
-cname "HPSM 7.1"
-iname "Tier1SupportAutoClose"
-tname "Tier1 Support AutoClose"
-ttype 2
-d "Template to set assignment group to Tier1 Support"
```

## 5.6.2 Example 2

In this example, the customer would like to populate the following additional fields:

- **Affected Item** — This field will be populated by the Target Host information from the Target Properties.
- **Location** — This field will be populated by the Location information from the Target Properties.
- **Target URL** — This a new custom field that was added to their web service to hold the Target URL from the Enterprise Manager incident.

They are running version 7.01 in their environment, and would like to close the incidents in Service Manager after the incidents have cleared in Enterprise Manager. They have also created a temporary directory on the OMS server system at `/home/oracle/custom_templates` to hold the templates.

To create a custom template that handles their requirements:

1. Navigate to the Management Connector Updates page and export the **HPSM 7.0 Connector**.
2. Copy the first EM CLI command listed in the Export Steps window for later use:

```
emcli export_update -id=C5289206C5A5A84AF82C49821C8F2931 -omslocal
-dir=<dirname>
```

3. Open a command window on the OMS server system and change the working directory to the temporary directory:

```
cd /home/oracle/custom_templates
```

4. Log into EM CLI:

```
emcli login -username=sysman
```

5. Run the EM CLI command from step 1 to export the .zip file to the temporary directory.

```
emcli export_update -id=C5289206C5A5A84AF82C49821C8F2931 -omslocal
-dir=/home/oracle/connector_templates
```

6. Extract the connector .jar file from the .zip file:

```
unzip *.zip archives/*connector.jar
```

7. Extract the template files from the .jar file:

```
$JAVA_HOME/bin/jar xf archives/*.jar templates
```

8. Copy the default template to a custom template file for modification:

```
cd templates
```

```
cp ServiceManager_7.0_Default_Incident_AutoClose.xsl Target_Info_AutoClose.xsl
```

9. Open the custom template file with a text editor and make the modifications shown below. The changes are shown in bold. Note that the new fields were added in the correct sequence as defined in the WSDL.

**Before changes —**

```
<m:PrimaryAssignmentGroup>HELPDESK</m:PrimaryAssignmentGroup>
```

. . .

```
<m:InitialImpact>1</m:InitialImpact>
```

. . .

```
<m:OracleConnectorId><xsl:value-of
select="ns0:ConnectorGUID"/></m:OracleConnectorId>
```

**After changes —**

```
<m:PrimaryAssignmentGroup>HELPDESK</m:PrimaryAssignmentGroup>
```

```
<xsl:for-each
```

```
select="ns0:SystemAttributes/ns0:SourceInfo/ns0:TargetInfo/ns0:TargetProperty">
```

```
  <xsl:if test="./ns0:Name = 'Target_Host'">
```

```
    <m:AffectedItem><xsl:value-of select="./ns0:Value"/></m:AffectedItem>
```

```
  </xsl:if>
```

```
</xsl:for-each>
```

. . .

```
<m:InitialImpact>1</m:InitialImpact>
```

```
<xsl:for-each
```



```

select="ns0:SystemAttributes/ns0:SourceInfo/ns0:TargetInfo/ns0:TargetProperty">
  <xsl:if test="./ns0:Name = 'Location'">
    <m:Location><xsl:value-of select="./ns0:Value"/></m:Location>
  </xsl:if>
</xsl:for-each>

. . .

<m:OracleConnectorId><xsl:value-of
select="ns0:ConnectorGUID"/></m:OracleConnectorId>
<m:TargetURL><xsl:value-of
select="ns0:SystemAttributes/ns0:SourceInfo/ns0:TargetInfo/ns0:TargetURL"/></m:
TargetURL>

```

10. To set up for testing, create the `create.xml` file and open the file in a text editor.
11. Copy the contents of the XML document in the "Create Example" section of [Appendix E](#) into the `create.xml` file and save it.
12. Test the new template using a utility that performs XSLT translations using the `create.xml` file as the input XML document.
13. Examine the output XML document and verify that the results are correct.

---



---

**Note:** You can also use an XML client to send the XML output document to the Management Server web service to verify that it is a format accepted by Service Manager.

---



---

14. If you encounter problems with the XML document, make any necessary corrections and repeat steps 12 and 13.
15. At the OMS server system, run the following command to register your new custom template:

```

emctl register_template connector
-t /home/oracle/custom_templates/templates/Target_Info_AutoClose.xml
-repos_pwd sysmanpass
-cname "HPSM 7.0"
-iname "TargetInfoAutoClose"
-tname "Target Info AutoClose"
-ttype 2
-d "Template to set target fields"

```



---

---

## Customizing Support Ticketing Inbound Operations

Ticketing Inbound is a new optional feature added in Enterprise Manager 12c. This feature synchronizes the ticket status between Service Manager and Enterprise Manager. This feature requires the addition of a new field to the HPSM incident database to contain the Enterprise Manager connector identifier. It also requires the setup of a Java script in HPSM that is called to send the status information to Enterprise Manager whenever a status change occurs. You can skip this chapter if you choose not to implement this feature.

When a ticket or incident Enterprise Manager creates is updated manually at the Service Manager console, the new ticket status is updated in Enterprise Manager. The update at the Service Manager console triggers a Java script that calls the EM CLI utility to send the new status to Enterprise Manager.

This chapter provides the following procedures to set up the ticketing inbound feature:

- [Adding a Custom Field to HPSM](#)
- [Setting Up EM CLI](#)
- [Exporting the Notification Script Files](#)
- [Setting Up the Notification Script](#)

### 6.1 Adding a Custom Field to HPSM

This section provides instructions to add a custom field to the HPSM incident database to contain the Enterprise Manager connector identifier. The identifier must be stored with the incident, because it is a required value that must be supplied when status updates are sent to Enterprise Manager.

To add the custom field:

1. Log in to the HPSM client using an account that has Administrative permissions.
2. Add the new custom field to the HPSM database to contain the Enterprise Manager connector ID as follows:
  - a. Expand **Menu Navigation**, then **Tailoring** in the System Navigator pane.
  - b. Double-click on **Database Dictionary**.  
The Database Dictionary panel appears.
  - c. Enter a File Name of **probsummary** and click **Search**.

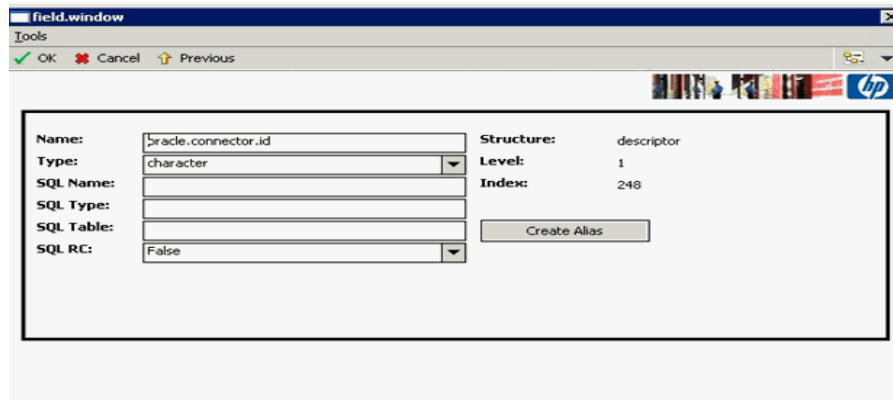
A form with the probsummary table information appears, as shown in Figure 6-1.

Figure 6-1 probsummary Information

Name	Type	Level	Index	SQL Name	SQL Type	SQL Table
descriptor	structure	0	1			
number	character	1	1	NUMBER	VARCHAR(90)	m1
number.vj.slo	character	1	1			
number.vj.sla	character	1	1			
number.vj	character	1	1			
number.vj.alerts	character	1	1			
vj.number.1	character	1	1			
vj.number.2	character	1	1			
vj.number.3	character	1	1			
vj.number.4	character	1	1			
vj.number.5	character	1	1			
number.attach	character	1	1			
category	character	1	2	CATEGORY	VARCHAR(50)	m1
open.time	date/time	1	3	OPEN_TIME	DATETIME	m1
opened.by	character	1	4	OPENED_BY	VARCHAR(50)	m1
priority.code	character	1	5	PRIORITY_CODE	VARCHAR(40)	m1
severity	character	1	6	SEVERITY	VARCHAR(50)	m1
update.time	date/time	1	7	UPDATE_TIME	DATETIME	m1
assignment	character	1	8	ASSIGNMENT	VARCHAR(50)	m1
referral.time	date/time	1	9	REFERRAL_TIME	DATETIME	m1
referred.to	character	1	10	REFERRED_TO	VARCHAR(140)	m1
alert.time	date/time	1	11	ALERT_TIME	DATETIME	m1
status	character	1	12	STATUS	VARCHAR(50)	m1
close.time	date/time	1	13	CLOSE_TIME	DATETIME	m1
closed.by	character	1	14	CLOSED_BY	VARCHAR(50)	m1

- d. Click on the line with a Name of **descriptor** and a Type of **structure**.
- e. Click on **New Field/Key**.  
The Add Field window appears.
- f. Enter a Name of **oracle.connector.id** and a type of **character**, then click **Add**.
- g. Scroll down to the bottom of the list of fields and click on the row with the name of **oracle.connector.id**.
- h. Click on **Edit Field/Key**. The field edit window appears, as shown in Figure 6-2.

Figure 6–2 Update Field Window



- i. Enter **ORACLE\_CONN\_ID** in the SQL Name field, **VARCHAR(32)** in the SQL Type field, and **m2** in the SQL Table field, then click **OK**.
  - j. Click **OK** on the main panel.
 

The **ALTER TABLE** database SQL statement appears, and you are asked whether Service Manager should automatically apply the change, or whether you want to apply it manually.
  - k. Click **SM Alters**.
 

After a period of time, a message states that the record has been updated in the `dbdict` file.
3. Modify the web service to include the new database field as follows:
    - a. Expand **Web Services** in the System Navigator pane.
    - b. Double-click on **WSDL Configuration**.
 

The External Access Definition panel appears.
    - c. Enter **probsummary** in the Name field and click **Search**.
 

The record for `probsummary` will be loaded as shown in [Figure 6–3](#).



7. Open a window using the account that runs the Service Manager Server. On a Windows system, this should be the System account.

To open a window running the System account, run the following command with `<time>` being 1 minute in the future. At the time specified, a window opens at the system console running under the context of the System account.

```
at <time> /interactive cmd.exe
```

8. Run the following command to configure the EM CLI Client to connect to OMS, where `<hostname>` is the host name or IP address where the OMS server is located, and `<sysman_pwd>` is the password for the sysman account in OMS:

```
<emcli_dir>\emcli setup -url=https://<hostname>:7801/em -username=sysman -password=<sysman_pwd>
```

9. Run the following command to synchronize the EM CLI Client with OMS:

```
<emcli_dir>\emcli sync
```

---

**Note:** EMCLI must be installed on the Service Manager server in order to communicate with your OMS.

---

## 6.3 Exporting the Notification Script Files

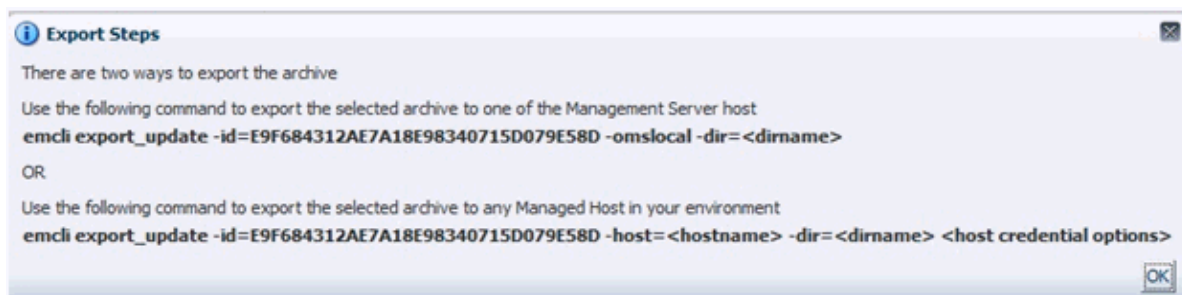
The notification script files are included in the Self Update archive that was installed in [Section 2.1, "Installing the Connector"](#).

To extract the script files:

1. Determine the command required to export the archive files. To do this, perform the following steps:
  - a. From the Setup menu of the Enterprise manager console, select **Extensibility**, then **Self Update**.
  - b. Click on the **Management Connector** link in the Type column.  
The HPSM connectors appear in the list with a status of Applied.
  - c. Click on the HPSM connector, then select **Export** from the Actions list.

A pop-up window, like the example shown in [Figure 6–4](#), appears with the command required to export the file.

**Figure 6–4** Export Command Example



2. Open a command window on the Management Server host system and navigate to a temporary directory where you can copy and unzip the file.

3. Log into EM CLI using the following command. You will be asked to provide the password information for the sysman account.

```
emcli login -username=sysman
```

4. Run the EM CLI `export_update` command from your system, changing `<dirname>` to the full path of the temporary directory.

This action creates a zip file. The file name is comprised of the `id` value you specify in the `export_update` command with a `.zip` extension. In the example command in [Figure 6-4](#), the zip file name would be:

```
E9F684312AE7A18E98340715D079E58D.zip
```

5. Extract the adapter installation jar file from the zip file using the following command:

```
unzip *.zip archives/OracleOMSPost.js
```

## 6.4 Setting Up the Notification Script

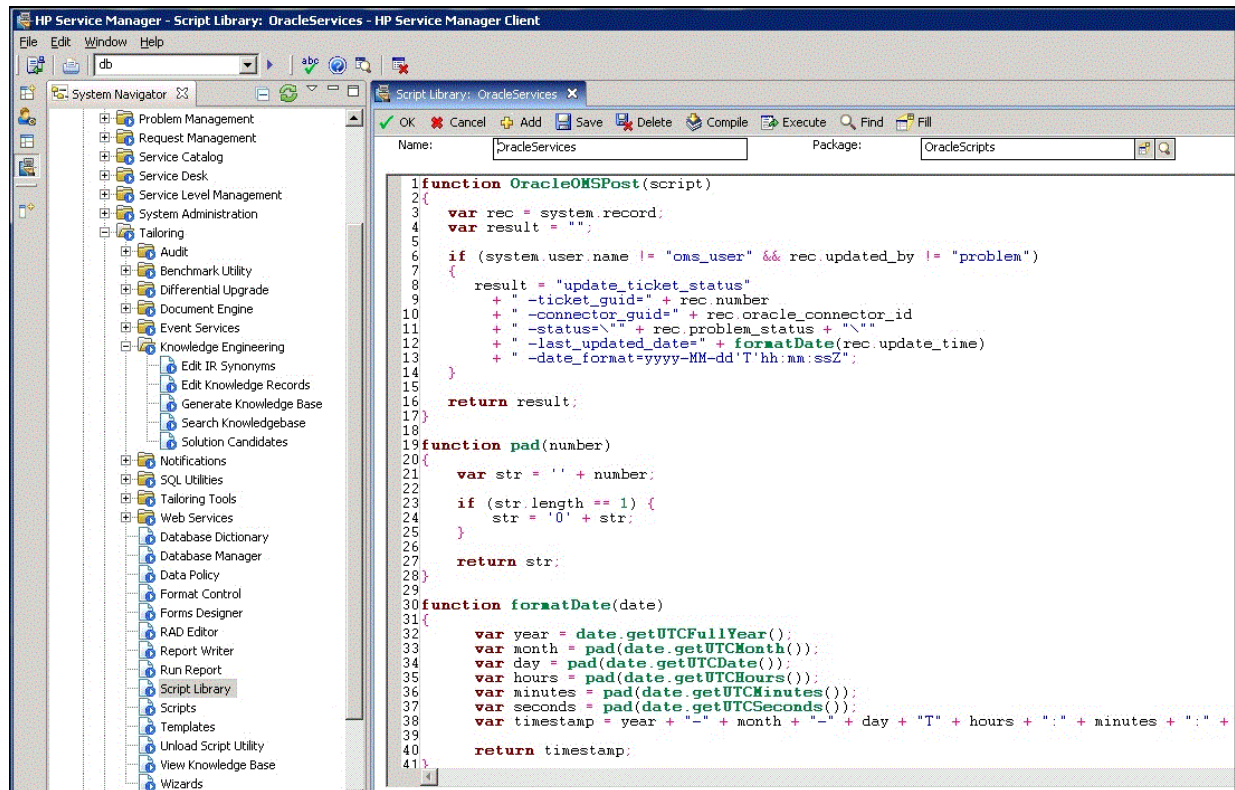
This section provides the steps required to configure HPSM to call the notification script.

To configure HPSM to call the notification script:

1. Log into the HPSM client with an account that has Administrative permissions.
2. Create a Script Library that generates the parameters for the EM CLI call by performing the following sub-steps:
  - a. Expand **Menu Navigation**, then **Tailoring** in the System Navigator pane.
  - b. Double-click on **Script Library**.  
The Script Library panel appears.
  - c. Enter a Name of **OracleServices** and a Package of **OracleScripts**.
  - d. Copy the contents of the `OracleOMSPost.js` file from [Section 6.3](#) into the script panel. [Figure 6-5](#) shows the Script Library panel after the fields have been specified.
  - e. Change the value of the username on line 6 from `oms_user` to the username that Enterprise Manager will use to access the Service Manager web service.
  - f. Click **Add**.



Figure 6–5 Script Library Panel



3. Create a Script Panel that calls the Script Library by performing the following sub-steps:
  - a. Double-click on **Scripts** in the System Navigator panel.  
The Script Panel Definition panel appears.
  - b. Enter a script name of **OracleScript**.
  - c. Click on the **Pre RAD Statements** tab.
  - d. Click on the first line and enter the following text, where `<emcli_dir>` is the path where the EM CLI tool was installed:

```
$L.command="<emcli_dir>\\emcli.bat;" + jscall("OracleServices.OracleOMSPost", $script)
```

---

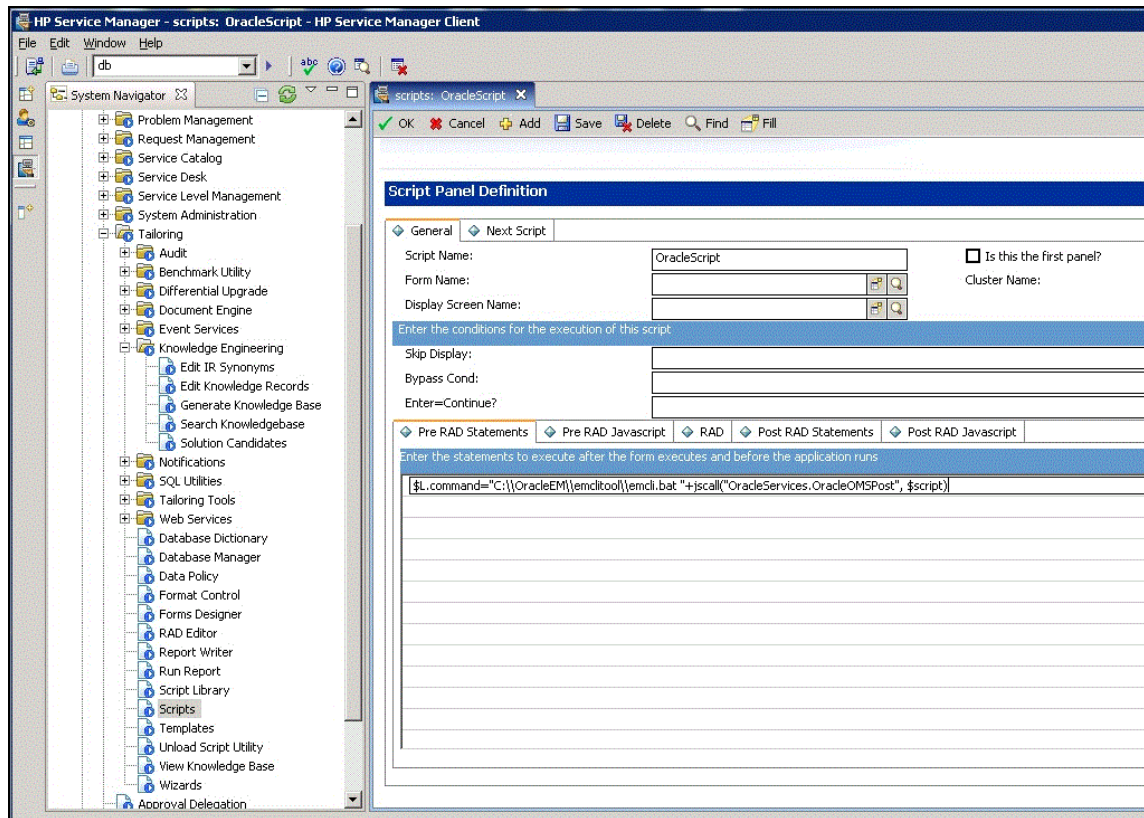
**Note:** Backslashes in the path must be entered as double backslashes. For example, `C:\tools\em\emcli.bat` would be entered as `C:\\tools\\em\\emcli.bat`.

---

Figure 6–6 shows the Script Library panel after the fields have been specified.

- e. Click on the **RAD** tab and set Application to **us.launch.external**.
- f. Click on the first line in the **Names** column and enter **name**.
- g. Click on the first line in the **Values** column and enter **\$L.command**.
- h. Click **Add** to create the Script Panel.

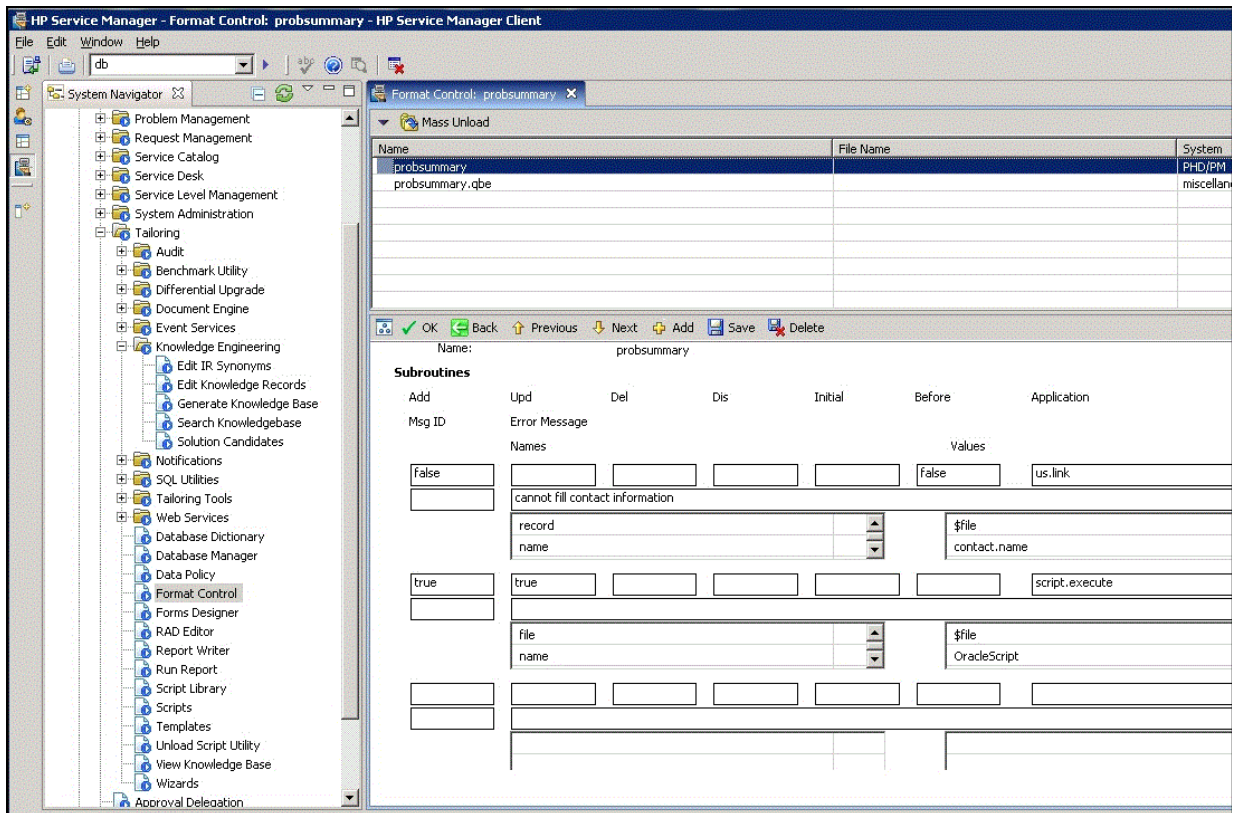
Figure 6–6 Script Panel Definition



4. Perform the following sub-steps to update the Format Control to invoke the script upon creating or updating a ticket:
  - a. Double-click on **Format Control** in the System Navigator panel.  
The Search Format Control Records panel appears.
  - b. Enter **probsummary** in the Name field and click **Search**.  
The Format Control: probsummary panel appears.
  - c. Click on the line where the Name is **probsummary**.
  - d. Click **Subroutines** to open the Subroutines tab.  
One or more subroutines may already be defined.
  - e. Scroll down the screen to the last empty entry and enter the following data:
    - Set Add to **true**.
    - Set Upd to **true**.
    - Set Names to **file** on line 1, and **name** on line 2.
    - Set Values to **\$file** on line 1, and **OracleScript** on line 2.

Figure 6–7 shows the Format Control panel after you have specified the fields.
  - f. Click **Save**.

Figure 6-7 Format Control Panel





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---

## Enabling SSL for HTTPS

This appendix provides the needed instructions if you choose HTTPS as the protocol to establish a connection between HP Service Manager and Enterprise Manager.

### Generating and Importing a Certificate Request

Do the following to generate and then import the certificate:

1. Generate a certificate request file for HP Service Manager and send it to the Certificate authority, such as VeriSign.

The host name or IP address specified in the request must exactly match the host name or IP address that the connector will use.

---

---

**Note:** The certificate request file is dependent on the Web server that HP Service Manager uses.

---

---

2. After you get the certificate, import it to the Web server that HP Service Manager uses. The import mechanism varies depending on the Web server that the HP Service Manager Help Desk uses.

### Installing and Configuring SSL

For information about installing and configuring SSL, see the *Service Manager 7.0 Installation Guide*.

### Importing the Adapter Certificate into Enterprise Manager

To import the adapter SSL certificate into the Enterprise Manager keystore:

1. At the Service Manager web server system, extract the SSL certificate from the keystore into a certificate file using the RFC 1421 format.

If you use the Java `keytool -export_cert` command to extract the certificate, the `-rfc` option stores the certificate in the correct format.

2. Transfer the certificate file to the system where Enterprise Manager is installed.
3. Append the contents of the certificate file to:

```
$INSTANCE_HOME/sysman/config/b64LocalCertificate.txt
```

- Only append the following lines to the `b64LocalCertificate.txt` file (that is, do not include blank lines or comments or any other special characters):

```
-----BEGIN CERTIFICATE-----  
<<<Certificate in Base64 format>>>  
-----END CERTIFICATE-----
```

4. Restart the OMS by entering the following commands:

```
emctl stop oms  
emctl start oms
```

---

---

**Note:** Do not run the `emctl secure oms/agent` command after adding the external certificate to the `b64LocalCertificate.txt` file. If you run the `emctl secure` command later, repeat steps 3 and 4 to make sure the external certificate exists in the `b64certificate.txt` file.

---

---

---

---

## Preventing HP Service Manager Update Issues

HP Service Manager 7.0 can cause update issues due to the method of locking for incidents. When either the Service Manager Thick or Web Client opens an incident in Service Manager for editing, a lock is placed on the incident that prohibits any updates to the incident record until it is released.

It is best practice for Help Desk administrators not to open the incident in edit mode to view the incident. If they need to edit the incident, they should minimize the time the incident is in edit mode, so if any updates are processed by the Enterprise Manager Connector Framework, the updates will be successful.





---



---

## Enterprise Manager Incident Format

Templates translate the XML format of Enterprise Manager incidents to the XML format required for the end-point application's web service. To create custom templates, you need to understand the format of both sides so that you know how to map the data. This appendix provides detailed information on the format of the XML document that contains incident information from Enterprise Manager.

A schema file defines the structure of an XML document. The `EMIncident.xsd` schema file defines the main structure of the incident data. This file also imports structure information from other schema files. The following examples provide information from the schema files that define the EMIncident XML format.

Examples in this appendix are as follows:

- [EMIncident.xsd File](#)
- [connectorCommon.xsd File](#)
- [EMEvent.xsd File](#)
- [externalEvent.xsd File](#)

### **Example C-1** *EMIncident.xsd File*

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns="http://xmlns.oracle.com/sysman/connector"
  targetNamespace="http://xmlns.oracle.com/sysman/connector"
  elementFormDefault="qualified">
  <xsd:include schemaLocation="connectorCommon.xsd"/>
  <xsd:include schemaLocation="EMEvent.xsd"/>
  <xsd:element name="EMIncident">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="ConnectorGUID" type="xsd:string"/>
        <xsd:element name="TicketID" type="xsd:string" minOccurs="0"/>
        <xsd:element name="HDUser" type="xsd:string" minOccurs="0"/>
        <xsd:element name="NotificationRuleOwner" type="xsd:string"/>
        <xsd:element name="NotificationRuleName" type="xsd:string"/>
        <xsd:element name="ReopenTicket" type="xsd:string" minOccurs="0"/>
        <xsd:element name="ConnectorVariable" type="VariableType"
          minOccurs="0" maxOccurs="50"/>
        <xsd:element name="Property" type="PropertyType" minOccurs="0"
          maxOccurs="50"/>
        <xsd:element name="SystemAttributes"
          type="IncidentSystemAttributesType"/>
        <xsd:element name="HasEMEvent" type="xsd:boolean" minOccurs="1"
          maxOccurs="1"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

---

```

        <xsd:element name="EMEvent" type="EMEventType" minOccurs="0"/>
    </xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:complexType name="IncidentSystemAttributesType">
    <xsd:sequence>
        <xsd:element name="IncidentID" type="xsd:string"/>
        <xsd:element name="SourceInfo" type="SourceInfoType"
            minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="IncidentURL" type="xsd:string"/>
        <xsd:element name="AutoClose" type="xsd:boolean"/>
        <xsd:element name="TicketStatus" type="xsd:string" minOccurs="0"/>
        <xsd:element name="Owner" type="xsd:string"/>
        <xsd:element name="ResolutionState" type="xsd:string"/>
        <xsd:element name="Acknowledge" type="xsd:boolean"/>
        <xsd:element name="Escalated" type="xsd:boolean"/>
        <xsd:element name="EscalationLevel" type="xsd:string"/>
        <xsd:element name="Priority" type="xsd:string"/>
        <xsd:element name="Summary" type="xsd:string"/>
        <xsd:element name="CreationDate" type="xsd:dateTime"/>
        <xsd:element name="LastUpdatedDate" type="xsd:dateTime"/>
        <xsd:element name="Category" type="xsd:string" minOccurs="0"
            maxOccurs="50"/>
        <xsd:element name="LastModifiedBy" type="xsd:string"/>
        <xsd:element name="Severity" type="xsd:string"/>
        <xsd:element name="SeverityCode" type="xsd:string"/>
    </xsd:sequence>
</xsd:complexType>
</xsd:schema>

```

### **Example C-2 connectorCommon.xsd File**

```

<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns="http://xmlns.oracle.com/sysman/connector"
    targetNamespace="http://xmlns.oracle.com/sysman/connector"
    elementFormDefault="qualified">
    <xsd:include schemaLocation="externalEvent.xsd"/>
    <xsd:complexType name="SourceInfoType">
        <xsd:annotation>
            <xsd:documentation>
                This section defines a complex type for Source Information.
            </xsd:documentation>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="SourceObjInfo" type="SourceObjInfoType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation>
                        This element defines the data structure for the source object, the
                        EM subsystem or component, that raises an EM event or an incident.
                    </xsd:documentation>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="TargetInfo" type="TargetInfoType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation>
                        The element defines the data structure for an EM target as related
                        to the connector framework.
                    </xsd:documentation>
                </xsd:annotation>
            </xsd:element>
        </xsd:sequence>
    </xsd:complexType>

```

---

```

        </xsd:element>
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="SourceObjInfoType">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a complex type for Source Object Information.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
        <xsd:element name="ObjID" type="xsd:string">
            <xsd:annotation>
                <xsd:documentation>
                    The unique ID to identify the source object.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="ObjName" type="xsd:string">
            <xsd:annotation>
                <xsd:documentation>
                    The name of the source object.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="ObjOwner" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation>
                    The owner of the source object.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="SourceObjType" type="xsd:string">
            <xsd:annotation>
                <xsd:documentation>
                    The type of the source object.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="SourceObjSubType" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation>
                    The subtype of the source object.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="TargetInfoType">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a complex type for target information.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
        <xsd:element name="TargetGUID" type="xsd:string">
            <xsd:annotation>
                <xsd:documentation>
                    A unique GUID for the target.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
    </xsd:sequence>
</xsd:complexType>

```

---

```

    </xsd:element>
    <xsd:element name="TargetName" type="xsd:string">
      <xsd:annotation>
        <xsd:documentation>
Name of the target.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="TargetType" type="xsd:string">
      <xsd:annotation>
        <xsd:documentation>
          Type of the target.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="TargetTypeLabel" type="xsd:string">
      <xsd:annotation>
        <xsd:documentation>
          The display label of the target type.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="TargetURL" type="xsd:string">
      <xsd:annotation>
        <xsd:documentation>
          The URL of the target.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="TargetProperty" type="PropertyType" minOccurs="0"
      maxOccurs="50">
      <xsd:annotation>
        <xsd:documentation>
          An optional list of properties for the target.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="PropertyType">
  <xsd:annotation>
    <xsd:documentation>
      This section defines a complex type for a property attribute.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="Name" type="xsd:string">
      <xsd:annotation>
        <xsd:documentation>
          A string name defining a property attribute.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="Value" type="xsd:string" nillable="true">
      <xsd:annotation>
        <xsd:documentation>
          A non-null string value.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>

```

---

```

    </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="VariableType">
  <xsd:annotation>
    <xsd:documentation>
      This section defines a complex type for a general variable.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="VariableName" type="StringStrictT32">
      <xsd:annotation>
        <xsd:documentation>
          Name of the variable. It has to be a string containing 1 or upto
          32 upper case or lower case letters or numbers.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="VariableValue" type="StringT2048">
      <xsd:annotation>
        <xsd:documentation>
          Value of the variable. It has to be a string containing 1 or up to
          2048 characters.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="GetAlertsResponse">
  <xsd:annotation>
    <xsd:documentation>
      This section defines a complex type for responses to a getAlerts
      request.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:sequence>
    <xsd:element name="Alert" minOccurs="0" maxOccurs="200">
      <xsd:annotation>
        <xsd:documentation>
          The individual alerts contained in the response. A response may
          have up to 200 alerts.
        </xsd:documentation>
      </xsd:annotation>
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="ExternalEvent">
          <xsd:annotation>
            <xsd:documentation>
              Details of the external event in the alert, as defined in
              ExternalEvent.xsd.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="InstanceVariable" type="VariableType"
          minOccurs="0" maxOccurs="50">
          <xsd:annotation>
            <xsd:documentation>
              A list of instance variables for the alert.
            </xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:sequence>
</xsd:complexType>

```

---

```

        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="ConnectorVariablesType">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a complex type for connector variables. An element
            of type ConnectorVariablesType may have up to 50 connector variables, as
            defined next.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
        <xsd:element name="ConnectorVariable" type="VariableType" minOccurs="0"
            maxOccurs="50">
            <xsd:annotation>
                <xsd:documentation>
                    A connector variable as a name/value pair.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
    </xsd:sequence>
</xsd:complexType>
<xsd:simpleType name="StringT64">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a simple type for a String with maximum length of
            64 bytes.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string">
        <xsd:minLength value="1"/>
        <xsd:maxLength value="64"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="StringT128">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a simple type for a String with maximum length of
            128 bytes.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string">
        <xsd:minLength value="1"/>
        <xsd:maxLength value="128"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="StringT256">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a simple type for a String with maximum length of
            256 bytes.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string">
        <xsd:minLength value="1"/>
        <xsd:maxLength value="256"/>
    </xsd:restriction>
</xsd:simpleType>

```

---

```

<xsd:simpleType name="StringT512">
  <xsd:annotation>
    <xsd:documentation>
      This section defines a simple type for a String with maximum length of
      512 bytes.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="512"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="StringT2048">
  <xsd:annotation>
    <xsd:documentation>
      This section defines a simple type for a String with maximum length of
      2048 bytes.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="2048"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="StringStrictT16">
  <xsd:annotation>
    <xsd:documentation>
      This section defines a simple type for a String with maximum length of
      16 bytes. The String can only contain lower or upper case letters,
numbers,
      and the underscore characters.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="16"/>
    <xsd:pattern value="([a-zA-Z0-9_])*"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="StringStrictT32">
  <xsd:annotation>
    <xsd:documentation>
      This section defines a simple type for a String with maximum length of
      32 bytes. The String can only contain lower or upper case letters,
numbers,
      and the underscore characters.
    </xsd:documentation>
  </xsd:annotation>
  <xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="32"/>
    <xsd:pattern value="([a-zA-Z0-9_])*"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="StringStrictT64">
  <xsd:annotation>
    <xsd:documentation>
      This section defines a simple type for a String with maximum length of
      64 bytes. The String can only contain lower or upper case letters,
numbers,

```

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```

        and the underscore characters.
    </xsd:documentation>
</xsd:annotation>
<xsd:restriction base="xsd:string">
    <xsd:minLength value="1"/>
    <xsd:maxLength value="64"/>
    <xsd:pattern value="([a-zA-Z0-9_])*"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="StringStrictT128">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a simple type for a String with maximum length of
            128 bytes. The String can only contain lower or upper case letters,
numbers,
            and the underscore characters.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string">
        <xsd:minLength value="1"/>
        <xsd:maxLength value="128"/>
        <xsd:pattern value="([a-zA-Z0-9_])*"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="StringStrictT256">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a simple type for a String with maximum length of
            256 bytes. The String can only contain lower or upper case letters,
numbers,
            and the underscore characters.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string">
        <xsd:minLength value="1"/>
        <xsd:maxLength value="256"/>
        <xsd:pattern value="([a-zA-Z0-9_])*"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="VersionT">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a simple type for a String with maximum length of
            20 bytes. The String can only contain numbers and the period characters.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:restriction base="xsd:string">
        <xsd:minLength value="1"/>
        <xsd:maxLength value="20"/>
        <xsd:pattern value="([0-9.])*"/>
    </xsd:restriction>
</xsd:simpleType>
</xsd:schema>

```

### **Example C-3 EMEvent.xsd File**

```

<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns="http://xmlns.oracle.com/sysman/connector"
    targetNamespace="http://xmlns.oracle.com/sysman/connector"

```



```

        elementFormDefault="qualified"
xmlns:jaxb="http://java.sun.com/xml/ns/jaxb"
  jaxb:version="2.0"
xmlns:xjc="http://java.sun.com/xml/ns/jaxb/xjc"
  jaxb:extensionBindingPrefixes="xjc">

<xsd:annotation>
  <xsd:appinfo>
    <jaxb:globalBindings>
      <xjc:simple />
    </jaxb:globalBindings>
  </xsd:appinfo>
</xsd:annotation>
<xsd:include schemaLocation="connectorCommon.xsd"/>
<xsd:element name="EMEvent" type="EMEventType" />
<xsd:complexType name="EMEventType">
  <xsd:sequence>
    <xsd:element name="ConnectorGUID" type="xsd:string"/>
    <xsd:element name="ExternalEventID" type="xsd:string"
      minOccurs="0"/>
    <xsd:element name="NotificationRuleOwner" type="xsd:string"/>
    <xsd:element name="NotificationRuleName" type="xsd:string"/>
    <xsd:element name="ConnectorVariable" type="VariableType"
      minOccurs="0" maxOccurs="50"/>
    <xsd:element name="Property" type="PropertyType" minOccurs="0"
      maxOccurs="50"/>
    <xsd:element name="SystemAttributes"
      type="EventSystemAttributesType"/>
    <xsd:element name="EventClassSpecificAttributes">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:choice minOccurs="0" maxOccurs="200">
            <xsd:element name="StringAttribute" type="StringValueType"/>
            <xsd:element name="NumberAttribute" type="StringValueType"/>
            <xsd:element name="RawAttribute" type="StringValueType"/>
            <xsd:element name="DateAttribute" type="DateValueType"/>
          </xsd:choice>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="EventContextAttributes">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:choice minOccurs="0" maxOccurs="200">
            <xsd:element name="StringAttribute" type="StringValueType"/>
            <xsd:element name="NumberAttribute" type="StringValueType"/>
          </xsd:choice>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="EventSystemAttributesType">
  <xsd:sequence>
    <xsd:element name="EventClass" type="xsd:string"/>
    <xsd:element name="EventID" type="xsd:string"/>
    <xsd:element name="SequenceID" type="xsd:string"/>
    <xsd:element name="OccurredDate" type="xsd:dateTime" minOccurs="0"/>
    <xsd:element name="ReportedDate" type="xsd:dateTime"/>
    <xsd:element name="DisplayTZ" type="xsd:string"/>
  </xsd:sequence>
</xsd:complexType>

```

```

<xsd:element name="EventName" type="xsd:string"/>
<xsd:element name="Severity" type="xsd:string"/>
<xsd:element name="SeverityCode" type="xsd:string"/>
<xsd:element name="SourceInfo" type="SourceInfoType"/>
<xsd:element name="Message" type="xsd:string" minOccurs="0"/>
<xsd:element name="ActionMessage" type="xsd:string" minOccurs="0"/>
<xsd:element name="EventURL" type="xsd:string"/>
<xsd:element name="AutoClose" type="xsd:boolean"/>
<xsd:element name="EventCategory" type="xsd:string" minOccurs="0"
maxOccurs="50"/>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="StringValueType">
<xsd:sequence>
<xsd:element name="Name" type="xsd:string"/>
<xsd:element name="Value" type="xsd:string"/>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="DateValueType">
<xsd:sequence>
<xsd:element name="Name" type="xsd:string"/>
<xsd:element name="Value" type="xsd:dateTime"/>
</xsd:sequence>
</xsd:complexType>
</xsd:schema>

```

#### **Example C-4 externalEvent.xsd File**

```

<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://xmlns.oracle.com/sysman/connector"
targetNamespace="http://xmlns.oracle.com/sysman/connector"
elementFormDefault="qualified">
<xsd:element name="ExternalEvent">
<xsd:annotation>
<xsd:documentation>
This section defines the attribute requirement of an external event
for the connector framework to process it.
</xsd:documentation>
</xsd:annotation>
<xsd:complexType>
<xsd:sequence>
<xsd:element name="SystemAttributes"
type="ExternalEventSystemAttributesType">
<xsd:annotation>
<xsd:documentation>
Attributes to capture general information about the external event
system. These attributes are system-specific, with all events from
the same external system sharing the same system attributes.
</xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="EventClassAttributes"
type="ExternalEventClassAttributesType">
<xsd:annotation>
<xsd:documentation>
Attributes to capture specific information required for the event
as defined in the event class.
</xsd:documentation>
</xsd:annotation>

```

---

```

        </xsd:element>
    </xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:complexType name="ExternalEventSystemAttributesType">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a complex type for system attributes required for
            all external events.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
        <xsd:element name="eventName" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation>
                    Name of the event.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="category" type="xsd:string" minOccurs="0" maxOccurs="50">
            <xsd:annotation>
                <xsd:documentation>
                    The event category to which the event belongs.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="targetName" type="xsd:string">
            <xsd:annotation>
                <xsd:documentation>
                    Name of the target on which event was generated. It refers
                    to an entity in external systems similar to an EM target.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="targetType" type="xsd:string">
            <xsd:annotation>
                <xsd:documentation>
                    The type of the target. Target types defined for event connectors
                    are used. See connectorDeploy.xsd.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="occurrenceDate" type="xsd:dateTime">
            <xsd:annotation>
                <xsd:documentation>
                    Date when the event occurred.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="detectedDate" type="xsd:dateTime">
            <xsd:annotation>
                <xsd:documentation>
                    Date when the event was last detected.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="autoClose" type="xsd:boolean">
            <xsd:annotation>
                <xsd:documentation>
                    A flag indicating if an event is auto closed by the system, or it

```

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```

        has to be manually closed by users.
    </xsd:documentation>
</xsd:annotation>
</xsd:element>
<xsd:element name="message" type="xsd:string">
    <xsd:annotation>
        <xsd:documentation>
            A description of the event.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="severity" type="xsd:string">
    <xsd:annotation>
<xsd:documentation>
        Severity level of the event.
    </xsd:documentation>
    </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
<xsd:complexType name="ExternalEventClassAttributesType">
    <xsd:annotation>
        <xsd:documentation>
            This section defines a complex type for class specific attributes
            required
            for all external events in the class.
        </xsd:documentation>
    </xsd:annotation>
    <xsd:sequence>
        <xsd:element name="external_event_id" type="xsd:string">
            <xsd:annotation>
                <xsd:documentation>
                    ID used in external system to identify the event.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="external_rule_id" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation>
                    Optional rule ID that delivered the event in the external system.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="external_host" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation>
                    Optional host information from external system where event was
                    generated.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="external_source" type="xsd:string" minOccurs="0">
            <xsd:annotation>
                <xsd:documentation>
                    Optional source information from the external system.
                </xsd:documentation>
            </xsd:annotation>
        </xsd:element>
        <xsd:element name="external_severity" type="xsd:string">
            <xsd:annotation>

```

---

```

        <xsd:documentation>
            Severity level of the event on external system.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="external_status" type="xsd:string" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>
            Status of the event on extenral system.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="custom_field1" type="xsd:string" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>
            An optional field.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="custom_field2" type="xsd:string" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>
            An optional field.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="custom_field3" type="xsd:string" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>
            An optional field.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="custom_field4" type="xsd:string" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>
            An optional field.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
<xsd:element name="custom_field5" type="xsd:string" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>
            An optional field.
        </xsd:documentation>
    </xsd:annotation>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
</xsd:schema>

```



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---

## HP Service Manager WSDL Format

Templates translate the XML format of Enterprise Manager incidents to the XML format required for the end-point application's web service. To create custom templates, you need to understand the format of both sides so that you know how to map the data. This appendix provides detailed information on the format of the XML document that the Service Manager Web service requires.

A WSDL file defines the interface that must be used to call a Web service. The WSDL defines the structure of the XML document that it accepts and how the Web service is to be called. The contents of the WSDL file are listed in [Example D-1](#). All unused operations and messages have been removed to reduce the amount of information. This is the out-of-box WSDL that Service Manager provides. Your WSDL may be significantly different, because the Service Manager web services can be highly customized.

Examples provided in this appendix are as follows:

- [IncidentManagement WSDL File](#)
- [Common.xsd File](#)

### **Example D-1 IncidentManagement WSDL File**

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<definitions targetNamespace="http://servicecenter.peregrine.com/PWS"
  xmlns="http://schemas.xmlsoap.org/wsdl/"
  xmlns:cmn="http://servicecenter.peregrine.com/PWS/Common"
  xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
  xmlns:mime="http://schemas.xmlsoap.org/wsdl/mime/"
  xmlns:ns="http://servicecenter.peregrine.com/PWS"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://schemas.xmlsoap.org/wsdl/
http://schemas.xmlsoap.org/wsdl/">
  <types>
    <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
      attributeFormDefault="unqualified"
      elementFormDefault="qualified"
      targetNamespace="http://servicecenter.peregrine.com/PWS"
      version="2008-09-11 Rev 0"
      xmlns="http://servicecenter.peregrine.com/PWS"
      xmlns:cmn="http://servicecenter.peregrine.com/PWS/Common">
      <xs:import namespace="http://servicecenter.peregrine.com/PWS/Common"
        schemaLocation="http://hpsm710c:13080/sc62server/PWS/Common.xsd" />
      <xs:complexType name="IncidentKeyType">
        <xs:sequence>
```

```

        <xs:element minOccurs="0" name="IncidentID" nillable="true"
            type="cmn:StringType" />
    </xs:sequence>
    <xs:attribute name="query" type="xs:string" use="optional" />
</xs:complexType>
<xs:complexType name="IncidentInstanceType">
    <xs:sequence>
        <xs:element minOccurs="0" name="IncidentID" nillable="true"
            type="cmn:StringType" />
        <xs:element minOccurs="0" name="Category" nillable="true"
type="cmn:StringType" />
        <xs:element minOccurs="0" name="OpenTime" nillable="true"
            type="cmn:DateTimeType" />
        <xs:element minOccurs="0" name="OpenedBy" nillable="true"
type="cmn:StringType" />
        <xs:element minOccurs="0" name="severity" nillable="true"
type="cmn:StringType" />
        <xs:element minOccurs="0" name="UpdatedTime" nillable="true"
            type="cmn:DateTimeType" />
        <xs:element minOccurs="0" name="PrimaryAssignmentGroup"
            nillable="true"
            type="cmn:StringType" />
        <xs:element minOccurs="0" name="ClosedTime" nillable="true"
            type="cmn:DateTimeType" />
        <xs:element minOccurs="0" name="ClosedBy" nillable="true"
            type="cmn:StringType" />
        <xs:element minOccurs="0" name="ClosureCode" nillable="true"
            type="cmn:StringType" />
        <xs:element minOccurs="0" name="AffectedItem" nillable="true"
            type="cmn:StringType" />
        <xs:element minOccurs="0" name="IncidentDescription">
            <xs:complexType>
                <xs:complexContent>
                    <xs:extension base="cmn:ArrayType">
                        <xs:sequence>
                            <xs:element maxOccurs="unbounded"
                                minOccurs="0"
                                name="IncidentDescription"
type="cmn:StringType" />
                        </xs:sequence>
                    </xs:extension>
                </xs:complexContent>
            </xs:complexType>
        </xs:element>
        <xs:element minOccurs="0" name="Resolution">
            <xs:complexType>
                <xs:complexContent>
                    <xs:extension base="cmn:ArrayType">
                        <xs:sequence>
                            <xs:element maxOccurs="unbounded"
                                minOccurs="0"
                                name="Resolution"
type="cmn:StringType" />
                        </xs:sequence>
                    </xs:extension>
                </xs:complexContent>
            </xs:complexType>
        </xs:element>
        <xs:element minOccurs="0" name="AssigneeName" nillable="true"
            type="cmn:StringType" />
    </xs:sequence>
</xs:complexType>

```



```

        <xs:element minOccurs="0" name="Contact" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="JournalUpdates">
            <xs:complexType>
                <xs:complexContent>
                    <xs:extension base="cmn:ArrayType">
                        <xs:sequence>
                            <xs:element maxOccurs="unbounded"
                                minOccurs="0"
                                name="JournalUpdates"
type="cmn:StringType"/>
                        </xs:sequence>
                    </xs:extension>
                </xs:complexContent>
            </xs:complexType>
        </xs:element>
        <xs:element minOccurs="0" name="AlertStatus" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="ContactLastName"
nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="ContactFirstName"
nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="Company" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="BriefDescription"
nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="TicketOwner" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="UpdatedBy" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="IMTicketStatus"
nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="Subcategory" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="SLAAgreementID"
nillable="true"
type="cmn:DecimalType"/>
        <xs:element minOccurs="0" name="SiteCategory" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="ProductType" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="ProblemType" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="ResolutionFixType"
nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="UserPriority" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="Location" nillable="true"
type="cmn:StringType"/>
        <xs:element minOccurs="0" name="Solution">
            <xs:complexType>
                <xs:complexContent>
                    <xs:extension base="cmn:ArrayType">
                        <xs:sequence>
                            <xs:element maxOccurs="unbounded"

```

```

minOccurs="0"
name="Solution"
type="cmn:StringType"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
</xs:element>
<xs:element minOccurs="0" name="InitialImpact" nillable="true"
type="cmn:StringType"/>
<xs:element minOccurs="0" name="folder" nillable="true"
type="cmn:StringType"/>
<xs:element minOccurs="0" name="Service" nillable="true"
type="cmn:StringType"/>
<xs:element minOccurs="0" name="OracleConnectorId"
nillable="true"
type="cmn:StringType"/>
<xs:element minOccurs="0" name="attachments" nillable="true"
type="cmn:AttachmentsType"/>
</xs:sequence>
<xs:attribute name="query" type="xs:string" use="optional"/>
<xs:attribute name="uniquequery" type="xs:string" use="optional"/>
<xs:attribute name="recordid" type="xs:string" use="optional"/>
</xs:complexType>
<xs:complexType name="IncidentModelType">
<xs:sequence>
<xs:element name="keys" type="IncidentKeysType"/>
<xs:element name="instance" type="IncidentInstanceType"/>
<xs:element minOccurs="0" name="messages"
type="cmn:MessagesType"/>
</xs:sequence>
<xs:attribute name="query" type="xs:string" use="optional"/>
</xs:complexType>
<xs:element name="RetrieveIncidentRequest">
<xs:complexType>
<xs:sequence>
<xs:element name="model" type="IncidentModelType"/>
</xs:sequence>
<xs:attribute name="attachmentInfo" type="xs:boolean"
use="optional"/>
<xs:attribute name="attachmentData" type="xs:boolean"
use="optional"/>
<xs:attribute default="true" name="ignoreEmptyElements"
type="xs:boolean"
use="optional"/>
</xs:complexType>
</xs:element>
<xs:element name="RetrieveIncidentResponse">
<xs:complexType>
<xs:sequence>
<xs:element name="model" type="IncidentModelType"/>
<xs:element minOccurs="0" name="messages"
type="cmn:MessagesType"/>
</xs:sequence>
<xs:attribute name="status" type="cmn:StatusType"
use="required"/>
<xs:attribute name="message" type="xs:string" use="required"/>
<xs:attribute name="schemaRevisionDate" type="xs:date"
use="required"/>
<xs:attribute name="schemaRevisionLevel" type="xs:int"

```

```

        use="required" />
        <xs:attribute name="returnCode" type="xs:decimal"
        use="optional" />
        <xs:attribute name="query" type="xs:string" use="optional" />
    </xs:complexType>
</xs:element>
<xs:element name="CreateIncidentRequest">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="model" type="IncidentModelType" />
        </xs:sequence>
        <xs:attribute name="attachmentInfo" type="xs:boolean"
        use="optional" />
        <xs:attribute name="attachmentData" type="xs:boolean"
        use="optional" />
        <xs:attribute default="true" name="ignoreEmptyElements"
type="xs:boolean"
        use="optional" />
    </xs:complexType>
</xs:element>
<xs:element name="CreateIncidentResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="model" type="IncidentModelType" />
            <xs:element minOccurs="0" name="messages"
type="cmn:MessagesType" />
        </xs:sequence>
        <xs:attribute name="status" type="cmn:StatusType"
        use="required" />
        <xs:attribute name="message" type="xs:string" use="required" />
        <xs:attribute name="schemaRevisionDate" type="xs:date"
        use="required" />
        <xs:attribute name="schemaRevisionLevel" type="xs:int"
        use="required" />
        <xs:attribute name="returnCode" type="xs:decimal"
        use="optional" />
        <xs:attribute name="query" type="xs:string" use="optional" />
    </xs:complexType>
</xs:element>
<xs:element name="UpdateIncidentRequest">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="model" type="IncidentModelType" />
        </xs:sequence>
        <xs:attribute name="attachmentInfo" type="xs:boolean"
        use="optional" />
        <xs:attribute name="attachmentData" type="xs:boolean"
        use="optional" />
        <xs:attribute default="true" name="ignoreEmptyElements"
type="xs:boolean"
        use="optional" />
    </xs:complexType>
</xs:element>
<xs:element name="UpdateIncidentResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element name="model" type="IncidentModelType" />
            <xs:element minOccurs="0" name="messages"
type="cmn:MessagesType" />
        </xs:sequence>

```

```

        <xs:attribute name="status" type="cmn:StatusType"
            use="required" />
        <xs:attribute name="message" type="xs:string" use="required" />
        <xs:attribute name="schemaRevisionDate" type="xs:date"
            use="required" />
        <xs:attribute name="schemaRevisionLevel" type="xs:int"
            use="required" />
        <xs:attribute name="returnCode" type="xs:decimal"
            use="optional" />
        <xs:attribute name="query" type="xs:string" use="optional" />
    </xs:complexType>
</xs:element>
</xs:schema>
</types>
<message name="RetrieveIncidentRequest">
    <part element="ns:RetrieveIncidentRequest"
name="RetrieveIncidentRequest" />
</message>
<message name="RetrieveIncidentResponse">
    <part element="ns:RetrieveIncidentResponse"
name="RetrieveIncidentResponse" />
</message>
<message name="CreateIncidentRequest">
    <part element="ns:CreateIncidentRequest" name="CreateIncidentRequest" />
</message>
<message name="CreateIncidentResponse">
    <part element="ns:CreateIncidentResponse" name="CreateIncidentResponse" />
</message>
<message name="UpdateIncidentRequest">
    <part element="ns:UpdateIncidentRequest" name="UpdateIncidentRequest" />
</message>
<message name="UpdateIncidentResponse">
    <part element="ns:UpdateIncidentResponse" name="UpdateIncidentResponse" />
</message>
<portType name="IncidentManagement">
    <operation name="RetrieveIncident">
        <documentation/>
        <input message="ns:RetrieveIncidentRequest" />
        <output message="ns:RetrieveIncidentResponse" />
    </operation>
    <operation name="CreateIncident">
        <documentation/>
        <input message="ns:CreateIncidentRequest" />
        <output message="ns:CreateIncidentResponse" />
    </operation>
    <operation name="UpdateIncident">
        <documentation/>
        <input message="ns:UpdateIncidentRequest" />
        <output message="ns:UpdateIncidentResponse" />
    </operation>
</portType>
<binding name="IncidentManagement" type="ns:IncidentManagement">
    <soap:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http" />
    <operation name="RetrieveIncident">
        <soap:operation soapAction="Retrieve" style="document" />
        <input>
            <soap:body use="literal" />
        </input>
        <output>

```

```

        <soap:body use="literal"/>
    </output>
</operation>
<operation name="CreateIncident">
    <soap:operation soapAction="Create" style="document"/>
    <input>
        <soap:body use="literal"/>
    </input>
    <output>
        <soap:body use="literal"/>
    </output>
</operation>
<operation name="UpdateIncident">
    <soap:operation soapAction="Update" style="document"/>
    <input>
        <soap:body use="literal"/>
    </input>
    <output>
        <soap:body use="literal"/>
    </output>
</operation>
</binding>
<service name="IncidentManagement">
    <port binding="ns:IncidentManagement" name="IncidentManagement">
        <soap:address location="http://hpsm710c:13080/sc62server/ws"/>
    </port>
</service>
</definitions>

```

### Example D-2 Common.xsd File

```

<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
    attributeFormDefault="unqualified"
    elementFormDefault="qualified"
    targetNamespace="http://servicecenter.peregrine.com/PWS/Common"
    version="2008-09-11 Rev 0"
    xmlns="http://servicecenter.peregrine.com/PWS/Common"
    xmlns:cmn="http://servicecenter.peregrine.com/PWS/Common">
    <xs:complexType name="StringType">
        <xs:simpleContent>
            <xs:extension base="xs:string">
                <xs:attribute fixed="String" name="type" type="xs:string"
                    use="required"/>
                <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
                <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="DecimalType">
        <xs:simpleContent>
            <xs:extension base="xs:decimal">
                <xs:attribute fixed="Decimal" name="type" type="xs:string"
                    use="required"/>
                <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
                <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="BooleanType">
        <xs:simpleContent>

```

---

```

        <xs:extension base="xs:boolean">
            <xs:attribute fixed="Boolean" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="DateTimeType">
    <xs:simpleContent>
        <xs:extension base="xs:dateTime">
            <xs:attribute fixed="DateTime" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="DateType">
    <xs:simpleContent>
        <xs:extension base="xs:date">
            <xs:attribute fixed="Date" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="TimeType">
    <xs:simpleContent>
        <xs:extension base="xs:time">
            <xs:attribute fixed="Time" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="DurationType">
    <xs:simpleContent>
        <xs:extension base="xs:duration">
            <xs:attribute fixed="Duration" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="IntType">
    <xs:simpleContent>
        <xs:extension base="xs:int">
            <xs:attribute fixed="Int" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="ShortType">
    <xs:simpleContent>

```

---

```

        <xs:extension base="xs:short">
            <xs:attribute fixed="Short" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="LongType">
    <xs:simpleContent>
        <xs:extension base="xs:long">
            <xs:attribute fixed="Long" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="ByteType">
    <xs:simpleContent>
        <xs:extension base="xs:byte">
            <xs:attribute fixed="Byte" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="FloatType">
    <xs:simpleContent>
        <xs:extension base="xs:float">
            <xs:attribute fixed="Float" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="DoubleType">
    <xs:simpleContent>
        <xs:extension base="xs:double">
            <xs:attribute fixed="Double" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="Base64Type">
    <xs:simpleContent>
        <xs:extension base="xs:base64Binary">
            <xs:attribute fixed="Base64" name="type" type="xs:string"
                use="required"/>
            <xs:attribute name="mandatory" type="xs:boolean" use="optional"/>
            <xs:attribute name="readonly" type="xs:boolean" use="optional"/>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="ArrayType">
    <xs:attribute fixed="Array" name="type" type="xs:string" use="required"/>

```

---

```

</xs:complexType>
<xs:complexType name="StructureType">
  <xs:attribute fixed="Structure" name="type" type="xs:string"
    use="required"/>
</xs:complexType>
<xs:complexType name="AttachmentType">
  <xs:attribute name="href" type="xs:string" use="optional"/>
  <xs:attribute name="contentId" type="xs:string" use="optional"/>
  <xs:attribute name="action" type="xs:string" use="optional"/>
  <xs:attribute name="name" type="xs:string" use="required"/>
  <xs:attribute name="type" type="xs:string" use="required"/>
  <xs:attribute name="len" type="xs:int" use="optional"/>
  <xs:attribute name="charset" type="xs:string" use="optional"/>
  <xs:attribute name="attachmentType" type="xs:string" use="optional"/>
</xs:complexType>
<xs:complexType name="AttachmentsType">
  <xs:sequence>
    <xs:element maxOccurs="unbounded" minOccurs="0" name="attachment"
type="AttachmentType"
    />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="MessageType">
  <xs:simpleContent>
<xs:extension base="StringType">
    <xs:attribute name="severity" type="xs:int" use="optional"/>
    <xs:attribute name="module" type="xs:string" use="optional"/>
  </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="MessagesType">
  <xs:sequence>
    <xs:element maxOccurs="unbounded" minOccurs="0" name="message"
type="MessageType" />
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="StatusType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SUCCESS"/>
    <xs:enumeration value="FAILURE"/>
  </xs:restriction>
</xs:simpleType>
</xs:schema>

```



---



---

## Enterprise Manager Incident Examples

This appendix contains examples that show the XML format of incidents from Enterprise Manager that conform to the schemas defined in [Appendix C](#). You can use these examples to help identify the fields to map when generating custom templates. You can also use them to test your custom templates after they have been built.

Examples provided in this appendix are as follows:

- [Create Example](#)
- [Update Example](#)
- [Clear Example](#)
- [Reopen Example](#)

### Create Example

The following example shows the XML format Enterprise Manager generates for HPSM create operations.

```
<?xml version="1.0" encoding="UTF-8"?>
<EMIncident xmlns="http://xmlns.oracle.com/sysman/connector">
  <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
  <TicketID/>
  <HDUser>iwave</HDUser>
  <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
  <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
  <ReopenTicket>No</ReopenTicket>
  <ConnectorVariable>
    <VariableName>TICKET_ID</VariableName>
    <VariableValue>IM10237</VariableValue>
  </ConnectorVariable>
  <Property>
    <Name>AuthenticationType</Name>
    <Value>HTTPBasicAuthentication</Value>
  </Property>
  <Property>
    <Name>IsNewTargetType</Name>
    <Value>no</Value>
  </Property>
  <SystemAttributes>
    <IncidentID>B6096FBDB6FEC905E040020A780122F7</IncidentID>
    <SourceInfo>
      <SourceObjInfo>
        <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
        <ObjName>orcsvr1.iwavesoftware.com</ObjName>
        <ObjOwner>SYSMAN</ObjOwner>
      </SourceObjInfo>
    </SourceInfo>
  </SystemAttributes>
</EMIncident>
```

```

        <SourceObjType>Targets</SourceObjType>
        <SourceObjSubType>host</SourceObjSubType>
    </SourceObjInfo>
    <TargetInfo>
        <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
        <TargetName>orcsvr1.iwavesoftware.com</TargetName>
        <TargetType>host</TargetType>
        <TargetTypeLabel>Host</TargetTypeLabel>

    <TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
    HOMEPAGE&amp;targetName=orcsvr1.iwavesoftware.com&amp;targetType=host</TargetURL>
        <TargetProperty>
            <Name>Target_Host</Name>
            <Value>orcsvr1.iwavesoftware.com</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Target Version</Name>
            <Value>5.5.0.0</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Line of Business</Name>
            <Value>Software</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Location</Name>
            <Value>Frisco, TX</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Comment</Name>
            <Value>Testing target properties</Value>
        </TargetProperty>
    </TargetInfo>
</SourceInfo>

<IncidentURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-
event-console-detailIncident&amp;issueID=B6096FBDB6FEC905E040020A780122F7
</IncidentURL>
    <AutoClose>true</AutoClose>
    <Owner/>
    <ResolutionState>new</ResolutionState>
    <Acknowledge>>false</Acknowledge>
    <Escalated>>false</Escalated>
    <EscalationLevel>0</EscalationLevel>
    <Priority>None</Priority>
    <Summary>Memory Utilization is 81.988%, crossed warning (40) or critical
    (60) threshold.</Summary>
    <CreationDate>2012-01-10T16:07:54.000-06:00</CreationDate>
    <LastUpdatedDate>2012-01-10T16:07:54.000-06:00</LastUpdatedDate>
    <Category>Capacity</Category>
    <Severity>Critical</Severity>
    <SeverityCode>CRITICAL</SeverityCode>
</SystemAttributes>
<HasEMEvent>true</HasEMEvent>
<EMEvent>
    <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
    <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
    <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
    <ConnectorVariable>
        <VariableName>TICKET_ID</VariableName>
        <VariableValue>IM10237</VariableValue>
    </ConnectorVariable>

```

```

</ConnectorVariable>
<Property>
  <Name>AuthenticationType</Name>
  <Value>HTTPBasicAuthentication</Value>
</Property>
<Property>
  <Name>IsNewTargetType</Name>
  <Value>no</Value>
</Property>
<SystemAttributes>
  <EventClass>metric_alert</EventClass>
  <EventID>B609743F7D2DA971E040020A78012529</EventID>
  <SequenceID>B609743F7D2EA971E040020A78012529</SequenceID>
  <ReportedDate>2012-01-10T16:07:53.000-06:00</ReportedDate>
  <DisplayTZ>America/Chicago</DisplayTZ>
  <EventName>Load:memUsedPct</EventName>
  <Severity>Critical</Severity>
  <SeverityCode>CRITICAL</SeverityCode>
  <SourceInfo>
    <SourceObjInfo>
      <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
      <ObjName>orcsvr1.iwavesoftware.com</ObjName>
      <ObjOwner>SYSMAN</ObjOwner>
      <SourceObjType>TARGET</SourceObjType>
      <SourceObjSubType>host</SourceObjSubType>
    </SourceObjInfo>
    <TargetInfo>
      <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
      <TargetName>orcsvr1.iwavesoftware.com</TargetName>
      <TargetType>host</TargetType>
      <TargetTypeLabel>Host</TargetTypeLabel>
      <TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
      HOMEPAGE&amp;targetName=orcsvr1.iwavesoftware.com&amp;targetType=host</TargetURL>
      <TargetProperty>
        <Name>Target_Host</Name>
        <Value>orcsvr1.iwavesoftware.com</Value>
      </TargetProperty>
      <TargetProperty>
        <Name>Target Version</Name>
        <Value>5.5.0.0.0</Value>
      </TargetProperty>
      <TargetProperty>
        <Name>Line of Business</Name>
        <Value>Software</Value>
      </TargetProperty>
      <TargetProperty>
        <Name>Location</Name>
        <Value>Frisco, TX</Value>
      </TargetProperty>
      <TargetProperty>
        <Name>Comment</Name>
        <Value>Testing target properties</Value>
      </TargetProperty>
    </TargetInfo>
  </SourceInfo>
  <Message>Memory Utilization is 81.988%, crossed warning (40) or
  critical (60) threshold.</Message>
<EventURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-eve

```

```
nt-console-detailEvent&amp;issueID=B609743F7D2EA971E040020A78012529</EventURL>
  <AutoClose>true</AutoClose>
  <EventCategory>Capacity</EventCategory>
</SystemAttributes>
<EventClassSpecificAttributes>
  <StringAttribute>
    <Name>is_thresholdable</Name>
    <Value>1</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>coll_name</Name>
    <Value>LoadLinux</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>is_metric_extension</Name>
    <Value>0</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>metric_column_resbundle</Name>
    <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>metric_description_resbundle</Name>
    <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>unit_resbundle</Name>
    <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>cycle_guid</Name>
    <Value>B609743F7D2AA971E040020A78012529</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>is_remote</Name>
    <Value>0</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>metric_type</Name>
    <Value>0</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>metric_guid</Name>
    <Value>86821B5F0CE858D6E4A7F7390E88B73C</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>num_keys</Name>
    <Value>0</Value>
  </StringAttribute>
  <StringAttribute>
    <Name>key_value</Name>
    <Value> </Value>
  </StringAttribute>
  <StringAttribute>
    <Name>metric_description_nlsid</Name>
  </StringAttribute>
  <StringAttribute>
    <Name>value</Name>
    <Value>81.988</Value>
  </StringAttribute>
```

```

    <StringAttribute>
      <Name>is_long_running</Name>
      <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>metric_group</Name>
      <Value>Load</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>is_udm</Name>
      <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>metric_description</Name>
    </StringAttribute>
    <StringAttribute>
      <Name>metric_column_nlsid</Name>
      <Value>host_load_memUsedPct</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>metric_column</Name>
      <Value>memUsedPct</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>unit_nlsid</Name>
      <Value>em__sys__standard_percent</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>unit</Name>
      <Value>%</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>metric_group_nlsid</Name>
      <Value>host_load</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>metric_group_resbundle</Name>
      <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
      <Name>severity_guid</Name>
      <Value>B609743F7D2AA971E040020A78012529</Value>
    </StringAttribute>
  </EventClassSpecificAttributes>
</EMEvent>
</EMIncident>

```

## Update Example

The following example shows the XML format Enterprise Manager generates for HPSM update operations.

```

<?xml version="1.0" encoding="UTF-8"?>
<EMIncident xmlns="http://xmlns.oracle.com/sysman/connector">
  <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
  <TicketID>IM10258</TicketID>
  <HDUser>iwave</HDUser>
  <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
  <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
  <ReopenTicket>No</ReopenTicket>

```

```

<ConnectorVariable>
  <VariableName>TICKET_ID</VariableName>
  <VariableValue>IM10237</VariableValue>
</ConnectorVariable>
<Property>
  <Name>AuthenticationType</Name>
  <Value>HTTPBasicAuthentication</Value>
</Property>
<Property>
  <Name>IsNewTargetType</Name>
  <Value>no</Value>
</Property>
<SystemAttributes>
  <IncidentID>B6096FBDB6FEC905E040020A780122F7</IncidentID>
  <SourceInfo>
    <SourceObjInfo>
      <SourceObjInfo>
        <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
        <ObjName>orcsvr1.iwavesoftware.com</ObjName>
        <ObjOwner>SYSMAN</ObjOwner>
        <SourceObjType>Targets</SourceObjType>
        <SourceObjSubType>host</SourceObjSubType>
      </SourceObjInfo>
      <TargetInfo>
        <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
        <TargetName>orcsvr1.iwavesoftware.com</TargetName>
        <TargetType>host</TargetType>
        <TargetTypeLabel>Host</TargetTypeLabel>

<TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
HOMEPAGE&targetName=orcsvr1.iwavesoftware.com&targetType=host</TargetURL>
      <TargetProperty>
        <Name>Target_Host</Name>
        <Value>orcsvr1.iwavesoftware.com</Value>
      </TargetProperty>
      <TargetProperty>
        <Name>Target Version</Name>
        <Value>5.5.0.0</Value>
      </TargetProperty>
      <TargetProperty>
        <Name>Line of Business</Name>
        <Value>Software</Value>
      </TargetProperty>
      <TargetProperty>
        <Name>Location</Name>
        <Value>Frisco, TX</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Comment</Name>
      <Value>Testing target properties</Value>
    </TargetProperty>
  </TargetInfo>
</SourceInfo>

<IncidentURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-
event-console-detailIncident&issueID=B6096FBDB6FEC905E040020A780122F7
</IncidentURL>
  <AutoClose>>true</AutoClose>
  <Owner/>
  <ResolutionState>new</ResolutionState>
  <Acknowledge>>false</Acknowledge>

```

```

<Escalated>>false</Escalated>
<EscalationLevel>0</EscalationLevel>
<Priority>None</Priority>
<Summary>Memory Utilization is 81.988%, crossed warning (40) or critical
(99) threshold.</Summary>
<CreationDate>2012-01-10T16:07:54.000-06:00</CreationDate>
<LastUpdatedDate>2012-01-10T16:09:31.000-06:00</LastUpdatedDate>
<Category>Capacity</Category>
<Severity>Warning</Severity>
<SeverityCode>WARNING</SeverityCode>
</SystemAttributes>
<HasEMEvent>>true</HasEMEvent>
<EMEvent>
  <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
  <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
  <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
  <ConnectorVariable>
    <VariableName>TICKET_ID</VariableName>
    <VariableValue>IM10237</VariableValue>
  </ConnectorVariable>
  <Property>
    <Name>AuthenticationType</Name>
    <Value>HTTPBasicAuthentication</Value>
  </Property>
  <Property>
    <Name>IsNewTargetType</Name>
    <Value>no</Value>
  </Property>
  <SystemAttributes>
    <EventClass>metric_alert</EventClass>
    <EventID>B60974257B042B09E040020A7801251A</EventID>
    <SequenceID>B609743F7D2EA971E040020A78012529</SequenceID>
    <ReportedDate>2012-01-10T16:09:30.000-06:00</ReportedDate>
    <DisplayTZ>America/Chicago</DisplayTZ>
    <EventName>Load:memUsedPct</EventName>
    <Severity>Warning</Severity>
    <SeverityCode>WARNING</SeverityCode>
    <SourceInfo>
      <SourceObjInfo>
        <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
        <ObjName>orcsvr1.iwavesoftware.com</ObjName>
        <ObjOwner>SYSMAN</ObjOwner>
        <SourceObjType>TARGET</SourceObjType>
        <SourceObjSubType>host</SourceObjSubType>
      </SourceObjInfo>
      <TargetInfo>
        <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
        <TargetName>orcsvr1.iwavesoftware.com</TargetName>
        <TargetType>host</TargetType>
        <TargetTypeLabel>Host</TargetTypeLabel>
      </TargetInfo>
    </SourceInfo>
  </SystemAttributes>
  <TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
  HOMEPAGE&amp;targetName=orcsvr1.iwavesoftware.com&amp;targetType=host</TargetURL>
  <TargetProperty>
    <Name>Target_Host</Name>
    <Value>orcsvr1.iwavesoftware.com</Value>
  </TargetProperty>
  <TargetProperty>
    <Name>Target Version</Name>
    <Value>5.5.0.0.0</Value>
  </TargetProperty>

```

```

        </TargetProperty>
        <TargetProperty>
            <Name>Line of Business</Name>
            <Value>Software</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Location</Name>
            <Value>Frisco, TX</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Comment</Name>
            <Value>Testing target properties</Value>
        </TargetProperty>
    </TargetInfo>
</SourceInfo>
<Message>Memory Utilization is 81.988%, crossed warning (40) or
critical (99) threshold.</Message>

<EventURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-eve
nt-console-detailEvent&amp;issueID=B609743F7D2EA971E040020A78012529</EventURL>
    <AutoClose>true</AutoClose>
    <EventCategory>Capacity</EventCategory>
</SystemAttributes>
<EventClassSpecificAttributes>
    <StringAttribute>
        <Name>is_thresholdable</Name>
        <Value>1</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>coll_name</Name>
        <Value>LoadLinux</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>is_metric_extension</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_column_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_description_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>unit_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>cycle_guid</Name>
        <Value>B609743F7D2AA971E040020A78012529</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>is_remote</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_type</Name>
        <Value>0</Value>
    </StringAttribute>

```



```
<StringAttribute>
  <Name>metric_guid</Name>
  <Value>86821B5F0CE858D6E4A7F7390E88B73C</Value>
</StringAttribute>
<StringAttribute>
  <Name>num_keys</Name>
  <Value>0</Value>
</StringAttribute>
<StringAttribute>
  <Name>key_value</Name>
  <Value> </Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_description_nlsid</Name>
</StringAttribute>
<StringAttribute>
  <Name>value</Name>
  <Value>81.988</Value>
</StringAttribute>
<StringAttribute>
  <Name>is_long_running</Name>
  <Value>0</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_group</Name>
  <Value>Load</Value>
</StringAttribute>
<StringAttribute>
  <Name>is_udm</Name>
  <Value>0</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_description</Name>
</StringAttribute>
<StringAttribute>
  <Name>metric_column_nlsid</Name>
  <Value>host_load_memUsedPct</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_column</Name>
  <Value>memUsedPct</Value>
</StringAttribute>
<StringAttribute>
  <Name>unit_nlsid</Name>
  <Value>em__sys__standard_percent</Value>
</StringAttribute>
<StringAttribute>
  <Name>unit</Name>
  <Value>%</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_group_nlsid</Name>
  <Value>host_load</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_group_resbundle</Name>
  <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
</StringAttribute>
<StringAttribute>
  <Name>severity_guid</Name>
```

```

        <Value>B60974257B012B09E040020A7801251A</Value>
      </StringAttribute>
    </EventClassSpecificAttributes>
  </EMEvent>
</EMIncident>

```

#### Clear Sample

Listed below is a sample of the XML format generated by Enterprise Manager for HPSM clear operations.

```

<?xml version="1.0" encoding="UTF-8"?>
<EMIncident xmlns="http://xmlns.oracle.com/sysman/connector">
  <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
  <TicketID>IM10258</TicketID>
  <HDUser>iwave</HDUser>
  <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
  <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
  <ReopenTicket>No</ReopenTicket>
  <ConnectorVariable>
    <VariableName>TICKET_ID</VariableName>
    <VariableValue>IM10237</VariableValue>
  </ConnectorVariable>
  <Property>
    <Name>AuthenticationType</Name>
    <Value>HTTPBasicAuthentication</Value>
  </Property>
  <Property>
    <Name>IsNewTargetType</Name>
    <Value>no</Value>
  </Property>
  <SystemAttributes>
    <IncidentID>B6096FBDB6FEC905E040020A780122F7</IncidentID>
    <SourceInfo>
      <SourceObjInfo>
        <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
        <ObjName>orcsvr1.iwavesoftware.com</ObjName>
        <ObjOwner>SYSMAN</ObjOwner>
        <SourceObjType>Targets</SourceObjType>
        <SourceObjSubType>host</SourceObjSubType>
      </SourceObjInfo>
      <TargetInfo>
        <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
        <TargetName>orcsvr1.iwavesoftware.com</TargetName>
        <TargetType>host</TargetType>
        <TargetTypeLabel>Host</TargetTypeLabel>

<TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
  <TargetProperty>
    <Name>Target_Host</Name>
    <Value>orcsvr1.iwavesoftware.com</Value>
  </TargetProperty>
  <TargetProperty>
    <Name>Target Version</Name>
    <Value>5.5.0.0.0</Value>
  </TargetProperty>
  <TargetProperty>
    <Name>Line of Business</Name>
    <Value>Software</Value>
  </TargetProperty>
  <TargetProperty>

```

```

        <Name>Location</Name>
        <Value>Frisco, TX</Value>
    </TargetProperty>
    <TargetProperty>
        <Name>Comment</Name>
        <Value>Testing target properties</Value>
    </TargetProperty>
</TargetInfo>
</SourceInfo>
</SourceInfo>
</IncidentURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-
event-console-detailIncident&issueID=B6096FBDB6FEC905E040020A780122F7
</IncidentURL>
    <AutoClose>>true</AutoClose>
    <Owner/>
    <ResolutionState>closed</ResolutionState>
    <Acknowledge>>false</Acknowledge>
    <Escalated>>false</Escalated>
    <EscalationLevel>0</EscalationLevel>
    <Priority>None</Priority>
    <Summary>Memory Utilization is 81.791%, fallen below warning (98) and
        critical (99) thresholds.</Summary>
    <CreationDate>2012-01-10T16:07:54.000-06:00</CreationDate>
    <LastUpdatedDate>2012-01-10T16:11:01.000-06:00</LastUpdatedDate>
    <Category>Capacity</Category>
    <Severity>Clear</Severity>
    <SeverityCode>CLEAR</SeverityCode>
</SystemAttributes>
<HasEMEvent>true</HasEMEvent>
<EMEvent>
    <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
    <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
    <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
    <ConnectorVariable>
        <VariableName>TICKET_ID</VariableName>
        <VariableValue>IM10237</VariableValue>
    </ConnectorVariable>
    <Property>
        <Name>AuthenticationType</Name>
        <Value>HTTPBasicAuthentication</Value>
    </Property>
    <Property>
        <Name>IsNewTargetType</Name>
        <Value>no</Value>
    </Property>
    <SystemAttributes>
        <EventClass>metric_alert</EventClass>
        <EventID>B609743F7D32A971E040020A78012529</EventID>
        <SequenceID>B609743F7D2EA971E040020A78012529</SequenceID>
        <ReportedDate>2012-01-10T16:11:00.000-06:00</ReportedDate>
        <DisplayTZ>America/Chicago</DisplayTZ>
        <EventName>Load:memUsedPct</EventName>
        <Severity>Clear</Severity>
        <SeverityCode>CLEAR</SeverityCode>
    <SourceInfo>
        <SourceObjInfo>
            <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
            <ObjName>orcsvr1.iwavesoftware.com</ObjName>
            <ObjOwner>SYSMAN</ObjOwner>
            <SourceObjType>TARGET</SourceObjType>
        </SourceObjInfo>
    </SourceInfo>
</EMEvent>
</IncidentURL>

```

```

        <SourceObjSubType>host</SourceObjSubType>
    </SourceObjInfo>
    <TargetInfo>
        <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
        <TargetName>orcsvr1.iwavesoftware.com</TargetName>
        <TargetType>host</TargetType>
        <TargetTypeLabel>Host</TargetTypeLabel>
    <TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
    HOMEPAGE&targetName=orcsvr1.iwavesoftware.com&targetType=host</TargetURL>
        <TargetProperty>
            <Name>Target_Host</Name>
            <Value>orcsvr1.iwavesoftware.com</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Target Version</Name>
            <Value>5.5.0.0</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Line of Business</Name>
            <Value>Software</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Location</Name>
            <Value>Frisco, TX</Value>
        </TargetProperty>
        <TargetProperty>
            <Name>Comment</Name>
            <Value>Testing target properties</Value>
        </TargetProperty>
    </TargetInfo>
</SourceInfo>
    <Message>Memory Utilization is 81.791%, fallen below warning (98) and
    critical (99) thresholds.</Message>

    <EventURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-eve
    nt-console-detailEvent&issueID=B609743F7D2EA971E040020A78012529</EventURL>
        <AutoClose>true</AutoClose>
        <EventCategory>Capacity</EventCategory>
    </SystemAttributes>
    <EventClassSpecificAttributes>
        <StringAttribute>
            <Name>is_thresholdable</Name>
            <Value>1</Value>
        </StringAttribute>
        <StringAttribute>
            <Name>coll_name</Name>
            <Value>LoadLinux</Value>
        </StringAttribute>
        <StringAttribute>
            <Name>is_metric_extension</Name>
            <Value>0</Value>
        </StringAttribute>
        <StringAttribute>
            <Name>metric_column_resbundle</Name>
            <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
        </StringAttribute>
        <StringAttribute>
            <Name>metric_description_resbundle</Name>
            <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
        </StringAttribute>
    </EventClassSpecificAttributes>

```

```
<StringAttribute>
  <Name>unit_resbundle</Name>
  <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
</StringAttribute>
<StringAttribute>
  <Name>cycle_guid</Name>
  <Value>B609743F7D2AA971E040020A78012529</Value>
</StringAttribute>
<StringAttribute>
  <Name>is_remote</Name>
  <Value>0</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_type</Name>
  <Value>0</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_guid</Name>
  <Value>86821B5F0CE858D6E4A7F7390E88B73C</Value>
</StringAttribute>
<StringAttribute>
  <Name>num_keys</Name>
  <Value>0</Value>
</StringAttribute>
<StringAttribute>
  <Name>key_value</Name>
  <Value> </Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_description_nlsid</Name>
</StringAttribute>
<StringAttribute>
  <Name>value</Name>
  <Value>81.791</Value>
</StringAttribute>
<StringAttribute>
  <Name>is_long_running</Name>
  <Value>0</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_group</Name>
  <Value>Load</Value>
</StringAttribute>
<StringAttribute>
  <Name>is_udm</Name>
  <Value>0</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_description</Name>
</StringAttribute>
<StringAttribute>
  <Name>metric_column_nlsid</Name>
  <Value>host_load_memUsedPct</Value>
</StringAttribute>
<StringAttribute>
  <Name>metric_column</Name>
  <Value>memUsedPct</Value>
</StringAttribute>
<StringAttribute>
  <Name>unit_nlsid</Name>
```

```

        <Value>em_sys_standard_percent</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>unit</Name>
        <Value>%</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_group_nlsid</Name>
        <Value>host_load</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_group_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>severity_guid</Name>
        <Value>B60974257B012B09E040020A7801251A</Value>
    </StringAttribute>
</EventClassSpecificAttributes>
</EMEvent>
</EMIncident>

```

## Clear Example

The following example shows the XML format Enterprise Manager generates for HPSM clear operations.

```

<?xml version="1.0" encoding="UTF-8"?>
<EMIncident xmlns="http://xmlns.oracle.com/sysman/connector">
    <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
    <TicketID>IM10258</TicketID>
    <HDUser>iwave</HDUser>
    <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
    <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
    <ReopenTicket>No</ReopenTicket>
    <ConnectorVariable>
        <VariableName>TICKET_ID</VariableName>
        <VariableValue>IM10237</VariableValue>
    </ConnectorVariable>
    <Property>
        <Name>AuthenticationType</Name>
        <Value>HTTPBasicAuthentication</Value>
    </Property>
    <Property>
        <Name>IsNewTargetType</Name>
        <Value>no</Value>
    </Property>
    <SystemAttributes>
        <IncidentID>B6096FBDB6FEC905E040020A780122F7</IncidentID>
        <SourceInfo>
            <SourceObjInfo>
                <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
                <ObjName>orcsvr1.iwavesoftware.com</ObjName>
                <ObjOwner>SYSMAN</ObjOwner>
                <SourceObjType>Targets</SourceObjType>
                <SourceObjSubType>host</SourceObjSubType>
            </SourceObjInfo>
            <TargetInfo>
                <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
                <TargetName>orcsvr1.iwavesoftware.com</TargetName>
            </TargetInfo>
        </SourceInfo>
    </SystemAttributes>

```

```

        <TargetType>host</TargetType>
        <TargetTypeLabel>Host</TargetTypeLabel>

<TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
HOMEPAGE&amp;targetName=orcsvr1.iwavesoftware.com&amp;targetType=host</TargetURL>
    <TargetProperty>
        <Name>Target_Host</Name>
        <Value>orcsvr1.iwavesoftware.com</Value>
    </TargetProperty>
    <TargetProperty>
        <Name>Target Version</Name>
        <Value>5.5.0.0.0</Value>
    </TargetProperty>
    <TargetProperty>
        <Name>Line of Business</Name>
        <Value>Software</Value>
    </TargetProperty>
    <TargetProperty>
        <Name>Location</Name>
        <Value>Frisco, TX</Value>
    </TargetProperty>
    <TargetProperty>
        <Name>Comment</Name>
        <Value>Testing target properties</Value>
    </TargetProperty>
</TargetInfo>
</SourceInfo>

<IncidentURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-
event-console-detailIncident&amp;issueID=B6096FBDB6FEC905E040020A780122F7<
/IncidentURL>
    <AutoClose>true</AutoClose>
    <Owner/>
    <ResolutionState>closed</ResolutionState>
    <Acknowledge>>false</Acknowledge>
    <Escalated>>false</Escalated>
    <EscalationLevel>0</EscalationLevel>
    <Priority>None</Priority>
    <Summary>Memory Utilization is 81.791%, fallen below warning (98) and
        critical (99) thresholds.</Summary>
    <CreationDate>2012-01-10T16:07:54.000-06:00</CreationDate>
    <LastUpdatedDate>2012-01-10T16:11:01.000-06:00</LastUpdatedDate>
    <Category>Capacity</Category>
    <Severity>Clear</Severity>
    <SeverityCode>CLEAR</SeverityCode>
</SystemAttributes>
    <HasEMEvent>true</HasEMEvent>
    <EMEvent>
        <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
        <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
        <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
        <ConnectorVariable>
            <VariableName>TICKET_ID</VariableName>
            <VariableValue>IM10237</VariableValue>
        </ConnectorVariable>
        <Property>
            <Name>AuthenticationType</Name>
            <Value>HTTPBasicAuthentication</Value>
        </Property>
    </EMEvent>
</Property>

```

```

    <Name>IsNewTargetType</Name>
    <Value>no</Value>
  </Property>
  <SystemAttributes>
    <EventClass>metric_alert</EventClass>
    <EventID>B609743F7D32A971E040020A78012529</EventID>
    <SequenceID>B609743F7D2EA971E040020A78012529</SequenceID>
    <ReportedDate>2012-01-10T16:11:00.000-06:00</ReportedDate>
    <DisplayTZ>America/Chicago</DisplayTZ>
    <EventName>Load:memUsedPct</EventName>
    <Severity>Clear</Severity>
    <SeverityCode>CLEAR</SeverityCode>
    <SourceInfo>
      <SourceObjInfo>
        <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
        <ObjName>orcsvr1.iwavesoftware.com</ObjName>
        <ObjOwner>SYSMAN</ObjOwner>
        <SourceObjType>TARGET</SourceObjType>
        <SourceObjSubType>host</SourceObjSubType>
      </SourceObjInfo>
      <TargetInfo>
        <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
        <TargetName>orcsvr1.iwavesoftware.com</TargetName>
        <TargetType>host</TargetType>
        <TargetTypeLabel>Host</TargetTypeLabel>

<TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
HOMEPAGE&targetName=orcsvr1.iwavesoftware.com&targetType=host</TargetURL>
    <TargetProperty>
      <Name>Target_Host</Name>
      <Value>orcsvr1.iwavesoftware.com</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Target Version</Name>
      <Value>5.5.0.0.0</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Line of Business</Name>
      <Value>Software</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Location</Name>
      <Value>Frisco, TX</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Comment</Name>
      <Value>Testing target properties</Value>
    </TargetProperty>
  </TargetInfo>
</SourceInfo>
<Message>Memory Utilization is 81.791%, fallen below warning (98) and
critical (99) thresholds.</Message>

<EventURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-eve
nt-console-detailEvent&issueID=B609743F7D2EA971E040020A78012529</EventURL>
  <AutoClose>true</AutoClose>
  <EventCategory>Capacity</EventCategory>
</SystemAttributes>
<EventClassSpecificAttributes>
  <StringAttribute>

```



```

        <Name>is_thresholdable</Name>
        <Value>1</Value>
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    <StringAttribute>
        <Name>coll_name</Name>
        <Value>LoadLinux</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>is_metric_extension</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_column_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_description_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>unit_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>cycle_guid</Name>
        <Value>B609743F7D2AA971E040020A78012529</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>is_remote</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_type</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_guid</Name>
        <Value>86821B5F0CE858D6E4A7F7390E88B73C</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>num_keys</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>key_value</Name>
        <Value> </Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_description_nlsid</Name>
    </StringAttribute>
    <StringAttribute>
        <Name>value</Name>
        <Value>81.791</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>is_long_running</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_group</Name>

```

```

        <Value>Load</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>is_udm</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_description</Name>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_column_nlsid</Name>
        <Value>host_load_memUsedPct</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_column</Name>
        <Value>memUsedPct</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>unit_nlsid</Name>
        <Value>em__sys__standard_percent</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>unit</Name>
        <Value>%</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_group_nlsid</Name>
        <Value>host_load</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_group_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>severity_guid</Name>
        <Value>B609743F7D30A971E040020A78012529</Value>
    </StringAttribute>
</EventClassSpecificAttributes>
</EMEvent>
</EMIncident>

```

## Reopen Example

The following example shows the XML format Enterprise Manager generates for HPSM reopen operations.

```

<?xml version="1.0" encoding="UTF-8"?>
<EMIncident xmlns="http://xmlns.oracle.com/sysman/connector">
    <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
    <TicketID>IM10257</TicketID>
    <HDUser>iwave</HDUser>
    <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
    <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
    <ReopenTicket>Yes</ReopenTicket>
    <ConnectorVariable>
        <VariableName>TICKET_ID</VariableName>
        <VariableValue>IM10237</VariableValue>
    </ConnectorVariable>
    <Property>
        <Name>AuthenticationType</Name>

```

```

    <Value>HTTPBasicAuthentication</Value>
  </Property>
</Property>
<Property>
  <Name>IsNewTargetType</Name>
  <Value>no</Value>
</Property>
<SystemAttributes>
  <IncidentID>B6096FBDB700C905E040020A780122F7</IncidentID>
  <SourceInfo>
    <SourceObjInfo>
      <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
      <ObjName>orcsvr1.iwavesoftware.com</ObjName>
      <ObjOwner>SYSMAN</ObjOwner>
      <SourceObjType>Targets</SourceObjType>
      <SourceObjSubType>host</SourceObjSubType>
    </SourceObjInfo>
    <TargetInfo>
      <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
      <TargetName>orcsvr1.iwavesoftware.com</TargetName>
      <TargetType>host</TargetType>
      <TargetTypeLabel>Host</TargetTypeLabel>

<TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
  HOMEPAGE&amp;targetName=orcsvr1.iwavesoftware.com&amp;targetType=host</TargetURL>
    <TargetProperty>
      <Name>Target_Host</Name>
      <Value>orcsvr1.iwavesoftware.com</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Target Version</Name>
      <Value>5.5.0.0.0</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Line of Business</Name>
      <Value>Software</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Location</Name>
      <Value>Frisco, TX</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Comment</Name>
      <Value>Testing target properties</Value>
    </TargetProperty>
  </TargetInfo>
</SourceInfo>

<IncidentURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-
  event-console-detailIncident&amp;issueID=B6096FBDB700C905E040020A780122F7
</IncidentURL>
  <AutoClose>true</AutoClose>
  <Owner/>
  <ResolutionState>new</ResolutionState>
  <Acknowledge>>false</Acknowledge>
  <Escalated>>false</Escalated>
  <EscalationLevel>0</EscalationLevel>
  <Priority>None</Priority>
  <Summary>Memory Utilization is 81.65%, crossed warning (44) or critical
    (66) threshold.</Summary>
  <CreationDate>2012-01-10T16:13:04.000-06:00</CreationDate>

```

```

    <LastUpdatedDate>2012-01-10T16:13:04.000-06:00</LastUpdatedDate>
    <Category>Capacity</Category>
    <Severity>Critical</Severity>
    <SeverityCode>CRITICAL</SeverityCode>
  </SystemAttributes>
  <HasEMEvent>true</HasEMEvent>
  <EMEvent>
    <ConnectorGUID>5F8B3F54D2164AA8B4D3701656FF2524</ConnectorGUID>
    <NotificationRuleOwner>SYSMAN</NotificationRuleOwner>
    <NotificationRuleName>HPSM 7.1 Autoclose Rule</NotificationRuleName>
    <ConnectorVariable>
      <VariableName>TICKET_ID</VariableName>
      <VariableValue>IM10237</VariableValue>
    </ConnectorVariable>
    <Property>
      <Name>AuthenticationType</Name>
      <Value>HTTPBasicAuthentication</Value>
    </Property>
    <Property>
      <Name>IsNewTargetType</Name>
      <Value>no</Value>
    </Property>
    <SystemAttributes>
      <EventClass>metric_alert</EventClass>
      <EventID>B609743F16C20220E040020A78012524</EventID>
      <SequenceID>B609743F16C30220E040020A78012524</SequenceID>
      <ReportedDate>2012-01-10T16:13:04.000-06:00</ReportedDate>
      <DisplayTZ>America/Chicago</DisplayTZ>
      <EventName>Load:memUsedPct</EventName>
      <Severity>Critical</Severity>
      <SeverityCode>CRITICAL</SeverityCode>
      <SourceInfo>
        <SourceObjInfo>
          <ObjID>D93A2E4E1622013D74D9534ECB090944</ObjID>
          <ObjName>orcsvr1.iwavesoftware.com</ObjName>
          <ObjOwner>SYSMAN</ObjOwner>
          <SourceObjType>TARGET</SourceObjType>
          <SourceObjSubType>host</SourceObjSubType>
        </SourceObjInfo>
        <TargetInfo>
          <TargetGUID>D93A2E4E1622013D74D9534ECB090944</TargetGUID>
          <TargetName>orcsvr1.iwavesoftware.com</TargetName>
          <TargetType>host</TargetType>
          <TargetTypeLabel>Host</TargetTypeLabel>
        </TargetInfo>
      </SourceInfo>
    </SystemAttributes>
  <TargetURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=TARGET_
  HOMEPAGE&amp;targetName=orcsvr1.iwavesoftware.com&amp;targetType=host</TargetURL>
    <TargetProperty>
      <Name>Target_Host</Name>
      <Value>orcsvr1.iwavesoftware.com</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Target Version</Name>
      <Value>5.5.0.0.0</Value>
    </TargetProperty>
    <TargetProperty>
      <Name>Line of Business</Name>
      <Value>Software</Value>
    </TargetProperty>
    <TargetProperty>

```

```

        <Name>Location</Name>
        <Value>Frisco, TX</Value>
    </TargetProperty>
    <TargetProperty>
        <Name>Comment</Name>
        <Value>Testing target properties</Value>
    </TargetProperty>
</TargetInfo>
</SourceInfo>
<Message>Memory Utilization is 81.65%, crossed warning (44) or
critical (66) threshold.</Message>

<EventURL>https://orcsvr1.iwavesoftware.com:7801/em/redirect?pageType=sdk-core-evt-console-detailEvent&issueID=B609743F16C30220E040020A78012524</EventURL>
    <AutoClose>>true</AutoClose>
    <EventCategory>Capacity</EventCategory>
</SystemAttributes>
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    <StringAttribute>
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        <Value>LoadLinux</Value>
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        <Name>metric_description_resbundle</Name>
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    <StringAttribute>
        <Name>unit_resbundle</Name>
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    </StringAttribute>
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        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_guid</Name>
        <Value>86821B5F0CE858D6E4A7F7390E88B73C</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>num_keys</Name>

```

```
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
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    </StringAttribute>
    <StringAttribute>
        <Name>metric_description_nlsid</Name>
    </StringAttribute>
    <StringAttribute>
        <Name>value</Name>
        <Value>81.65</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>is_long_running</Name>
        <Value>0</Value>
    </StringAttribute>
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        <Name>metric_group</Name>
        <Value>Load</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>is_udm</Name>
        <Value>0</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_description</Name>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_column_nlsid</Name>
        <Value>host_load_memUsedPct</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_column</Name>
        <Value>memUsedPct</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>unit_nlsid</Name>
        <Value>em__sys__standard_percent</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>unit</Name>
        <Value>%</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_group_nlsid</Name>
        <Value>host_load</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>metric_group_resbundle</Name>
        <Value>oracle.sysman.eml.rsc.gen.hostMsg</Value>
    </StringAttribute>
    <StringAttribute>
        <Name>severity_guid</Name>
        <Value>B609743F16BF0220E040020A78012524</Value>
    </StringAttribute>
</EventClassSpecificAttributes>
</EMEvent>
</EMIncident>
```

---

---

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