

Oracle® Enterprise Manager

Installation and Configuration Guide for Siebel Connector

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Oracle Enterprise Manager Installation and Configuration Guide for Siebel Connector, 10g Release 4 (10.2.0.4)

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Preface

This *Connector Installation and Configuration* guide provides the information that you require to install and 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 install and 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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For more information, see the following books in the Oracle Enterprise Manager documentation set:

- *Oracle Enterprise Manager Integration Guide*
- *Oracle Database 2 Day DBA*
- *Oracle Enterprise Manager Concepts*
- *Oracle Enterprise Manager Quick Installation Guide*
- *Oracle Enterprise Manager Grid Control Installation and Basic Configuration*
- *Oracle Enterprise Manager Advanced Configuration*
- *Oracle Enterprise Manager Metric Reference Manual*
- *Oracle Enterprise Manager Command Line Interface*
- *Extending Oracle Enterprise Manager*

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

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Printed documentation is available for sale in the Oracle Store at

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	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.

Introduction to the Connector

The Siebel Connector integrates Siebel Help Desk 8.x with Enterprise Manager. Using this connector, you can create a Siebel HelpDesk request, update an existing service request, or close a service request based on metric alerts in Enterprise Manager. The Siebel Connector integrates Enterprise Manager with Siebel Help Desk through either an HTTP or HTTPS connection.

You can create, update, or close tickets based on only the following types of alerts in Enterprise Manager:

- Metric alerts
- Availability alerts (includes alerts for Up, Down, Blackout Started, Blackout Ended, Agent Unreachable, Agent Unreachable Resolved, Metric Error Detected, and Metric Error Resolved).

The following sections explain various Siebel Connector concepts that you must understand before you start using the Siebel Connector.

- [Auto Ticketing](#)
- [Manual Ticketing](#)
- [Ticket Templates](#)
- [Grace Period](#)

1.1 Auto Ticketing

Whenever an alert is triggered or its state changes in Enterprise Manager, the Siebel Connector can automatically open or update a service request. You can specify the set of alerts for which tickets must be opened and the alert severity for which this should happen.

You can do this by using Notification Rules, the user-defined rules that define the criteria by which notifications should be sent for alerts.

See Also: "Configuring Notifications" in the *Oracle Enterprise Manager Advanced Configuration Guide*

After the ticket is opened, any subsequent update of the alert, such as a change in alert severity, produces an annotation for the ticket. After the alert is cleared (severity is set to Clear), you can optionally close the ticket.

See Also: [Section 4.1, "Automatically Creating Service Requests"](#)

1.2 Manual Ticketing

From the Enterprise Manager console, you can manually open a Siebel HelpDesk service request based on an open alert in Enterprise Manager. The Siebel Connector populates the ticket with details based on the alert and the ticket template selected.

See Also: [Section 4.2, "Manually Creating Service Requests"](#)

1.3 Ticket Templates

Ticket templates are XML transformation style sheets that transform Enterprise Manager alerts to a ticket format before the requests are sent to Siebel HelpDesk. These templates specify how Enterprise Manager alert attributes can populate the fields of a Siebel service request.

In Auto Ticketing, a notification method is created for each registered ticket template. The selected notification method determines which ticket template is used when a notification is sent out to the connector. For manual ticketing, you have to select a ticket template before submitting a request to create the ticket.

See Also: [Chapter 5, "Reading Ticket Templates"](#)

1.4 Grace Period

The grace period provides you with a configuration to prevent the creation of a large number of tickets for frequently reoccurring alerts. For alerts that occur frequently within a relatively short time interval, it is often desirable to open and maintain a ticket that tracks each occurrence of the alert instead of separate tickets each time.

For recurring alerts, the grace period is a time period when reoccurrences of the same alert update (or re-open) an existing ticket for the alert, rather than open a new ticket.

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

Installing and Uninstalling the Connector

This chapter provides the following information for installing or uninstalling the Siebel Connector, as well as switching from one console to the other:

- [Prerequisites](#)
- [Installing the Connector](#)
- [Uninstalling the Connector](#)
- [Registering the Connector Descriptor](#)
- [Registering Ticket Templates](#)
- [Navigating Between Siebel HelpDesk and Enterprise Manager](#)

2.1 Prerequisites

Before using the Siebel Connector, ensure that you meet the following prerequisites:

- Siebel HelpDesk 8.x is installed and configured.
- Siebel HelpDesk Web services are up and running.

2.2 Installing the Connector

Perform the following steps to install the Siebel Connector:

1. Copy the file `EMHelpdesk.jar` to the Oracle Management Service (OMS). In case of multiple OMSs, you have to copy the jar file for all OMSs.
2. Run the following command on all OMSes:

```
emctl extract_jar connector EMHelpdesk.jar Siebel_Connector $ORACLE_HOME
```

Files are extracted from the jar file to the following directory:

```
$ORACLE_HOME/sysman/connector/Siebel_Connector
```

3. Ensure that the following files are extracted:
 - **SiebelDeploy.xml** — Connector Descriptor
 - **SiebelHelpdeskTemplate.xsl** — Ticket Template
 - **CreateResponse.xsl** — Ticket Response Template
 - **EMModel.xml** — Alert Schema

After you install Enterprise Manager, when you access the Enterprise Manager console as a Super Administrator, you can see the Siebel Connector in the Management Connectors. See [Chapter 3, "Configuring the Connector"](#) for instructions.

2.3 Uninstalling the Connector

To uninstall the Siebel Connector, select it in the Management Connectors page, then click **Delete**.

2.4 Registering the Connector Descriptor

After you install the Siebel connector, register the connector descriptor file `SiebelDeploy.xml` to describe the connector metadata and the configuration properties of the connector, such as Web service end points, authentication schema, and ticket URL pattern.

From the Oracle Management Server (OMS) host command window, run the following `emctl` command from the `$ORACLE_HOME/bin` directory:

```
emctl register_connector connector $ORACLE_HOME/sysman/connector/Siebel_Connector/SiebelDeploy.xml host port database_SID username password $ORACLE_HOME
```

Table 2–1 *emctl Parameters*

Parameter	Description
host	Host name of the Enterprise Manager repository.
port	Listener port of the repository.
database sid/ Service Name for RAC DB	Repository database instance ID or service name if you are using RAC database as the repository.
username	Specify SYSMAN.
password	Password for SYSMAN.

2.5 Registering Ticket Templates

Ticket templates need to be registered before they are recognized in Enterprise Manager.

From the Oracle Management Server (OMS) host command window, run the following `emctl` command from the `$ORACLE_HOME/bin` directory:

```
emctl register_ticket_template connector $ORACLE_HOME/sysman/connector/Siebel_Connector/siebelTemplates/SiebelHelpdeskTemplate.xml host port database_SID username password connector_type_name connector_name template_name template_description
```

Table 2–2 *emctl Parameters*

Parameter	Description
host	Host name of the Enterprise Manager repository.
port	Listener port of the repository.
database sid/ Service Name for RAC DB	Repository database instance ID or service name if you are using RAC database as the repository.
username	Specify SYSMAN.
password	Password for SYSMAN.

Table 2–2 (Cont.) emctl Parameters

Parameter	Description
connectorTypeName	Connector type name you define in <code>connectorType.xml</code> . For example, "My Ticketing Connector". The double quotes (") are mandatory.
connectorName	Connector name. This should be the same as the connector type name. For example, "My Ticketing Connector".
templateName	An intuitive name for the ticket template to be displayed in Enterprise Manager.
description	A short description for the ticket template. This description is also displayed in Enterprise Manager.

2.6 Navigating Between Siebel HelpDesk and Enterprise Manager

The following sections explain how to switch from one console to the other.

2.6.1 Navigating from Enterprise Manager to Siebel

1. In Enterprise Manager Grid Control, click the alert message to go to the metric details page for the alert.
2. In the Alert History table, locate the ticket ID link in the Last Comment column.
3. (If not found) Click the icon in the Details column to get more information about the alert.
4. On the page that appears, locate the ticket ID in the Alert Details table.
5. Click the ticket ID link. You are forwarded to the Siebel HelpDesk login page.
6. Provide valid Siebel account details.

The service request associated with this alert is displayed.

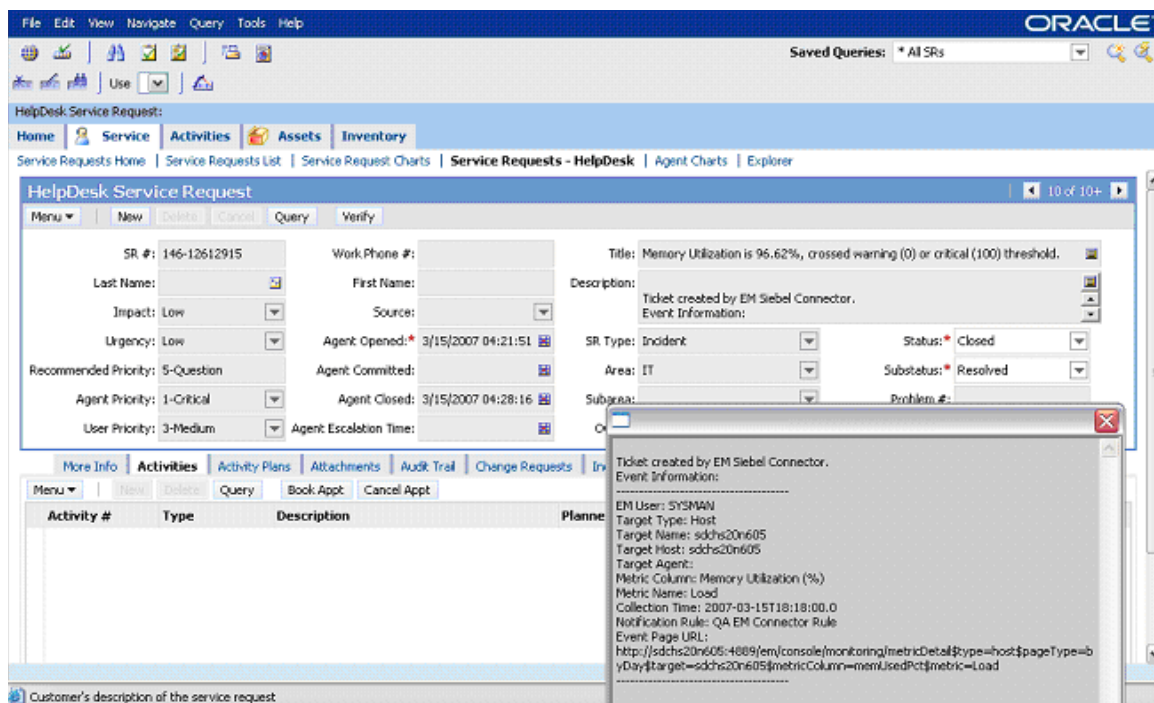
Note: If you do not use Siebel Web console, uncheck the Enable web console option in [Section 3.2.2, "Web Console Settings"](#) so that the ticket ID is shown in plain text. Otherwise, it displays as a link that does not work.

2.6.2 Navigating from Siebel HelpDesk to Enterprise Manager

1. From the HelpDesk Service Request page ([Figure 2–1](#)), go to Description and copy the Event Page URL.
2. Search the URL using a Web browser.
The Enterprise Manager Grid Control login page is displayed.
3. Specify the Enterprise Manager username and password.
You are forwarded to the alert related to this service request.

Note: ■ The Enterprise Manager user whose name you specify should at least have View privileges on the target on which the alert was raised.

Figure 2-1 Alert Details in Siebel HelpDesk Service Request Page



Configuring the Connector

This chapter provides the following information for setting up and configuring the Siebel Connector and related tasks:

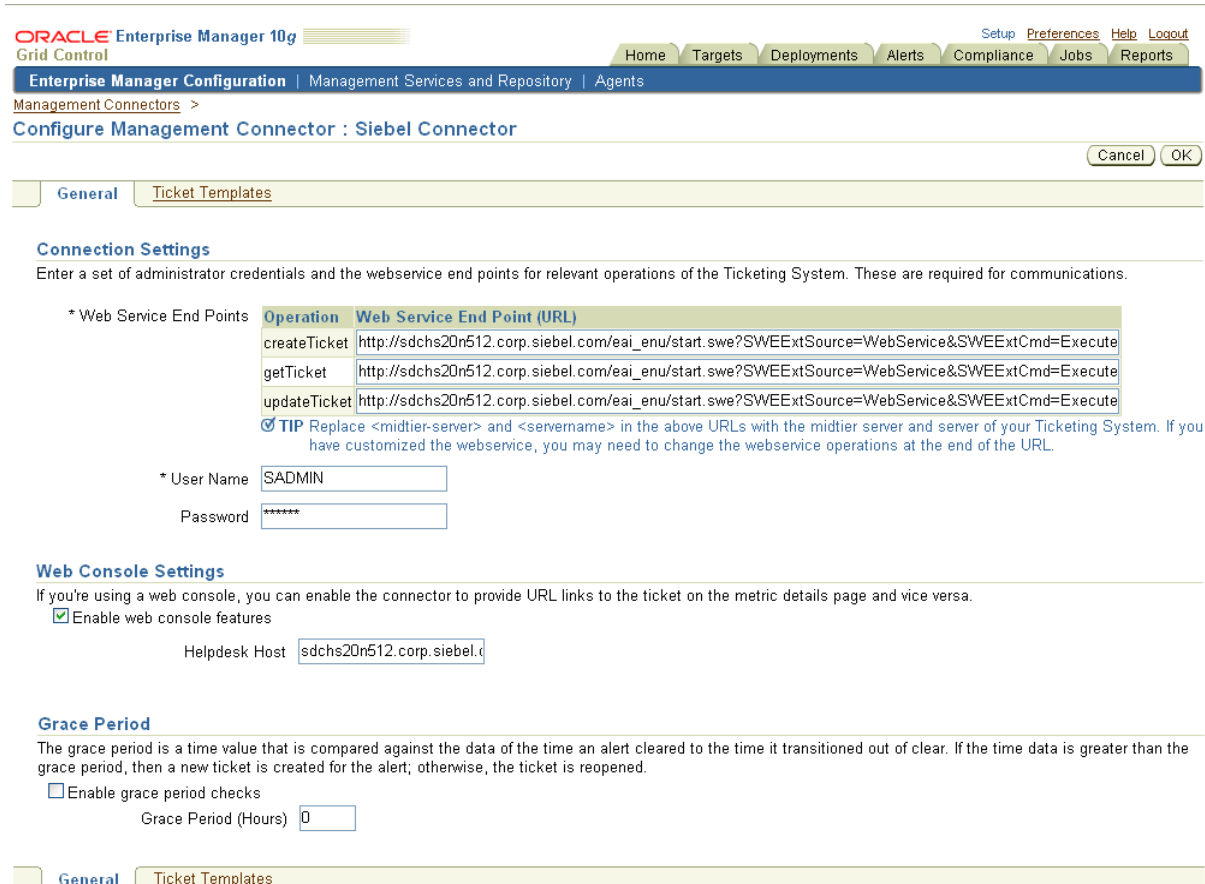
- [Configuring the Connector](#)
- [Providing General Settings](#)
- [Working with Ticket Templates](#)
- [Re-registering Removed Connectors](#)

3.1 Configuring the Connector

Perform the following steps for basic configuration:

1. As Super Administrator, from the Enterprise Manager console, click **Setup**.
The Overview of Setup page appears.
2. Click **Management Connectors** in the left pane.
The Management Connectors page appears. The row for the ticketing connector should appear on this page.
3. Click the **Configure** icon for the connector that you just registered.
The General tab of the Configure Management Connector page appears ([Figure 3-1](#)).

Figure 3–1 Configure Management Connector Page



4. Configure the following:
 - Connection settings
 - Web Service End Points
 - Authentication details
 - Web Console settings
 - Grace Period

See [Section 3.2, "Providing General Settings"](#) for details.

5. In the Configure Management Connector page, go to the Ticket Templates tab ([Figure 3–2](#)) and ensure that ticket templates are successfully loaded.

If you choose HTTPS as the protocol to establish a connection between MOM and Enterprise Manager, see [Chapter 6, "Enabling SSL for HTTPS"](#).

3.2 Providing General Settings

The following sections explain how to provide various configuration details.

3.2.1 Connection Settings

The HelpDesk connector communicates with the Help Desk through their Web services.

- **Web Service End Points** — End points to `createTroubleTicket`, `updateTroubleTicket`, and `getTroubleTicket` Web services exposed by Siebel HelpDesk.
- **Username** — User with the privilege to create, update, and query tickets in Siebel. All service requests created through the connector are generated using this user account.
- **Password** — Password associated with the supplied Siebel user.

3.2.2 Web Console Settings

Web Console settings are required if you want the connector to provide links from Enterprise Manager to the Siebel Help Desk application user interface. These links are the User Interface navigational links from Enterprise Manager to the Siebel Help Desk application user interface.

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

- **Enable web console** — Check this box to enable launching of the Siebel Service Request page within the context from Enterprise Manager.
- **HelpDesk Host**— Siebel HelpDesk host name. Provide the machine name and port details of the Web server that hosts the Siebel Application User Interface (and not the details of Web services or the database server).

3.2.3 Grace Period

You can enable and disable the grace period and configure its value. By default, the grace period is disabled. See "[Grace Period](#)" on page 1-2 for details. This setting applies to all alerts the Siebel Connector processes.

3.3 Working with Ticket Templates

The following sections provide information about viewing, removing, replacing, and adding ticket templates. Use the Configure Management Connector Ticket Templates page ([Figure 3-2](#)) to perform any of the activities described in the following sections.

Figure 3–2 Configure Management Connector Ticket Templates Page

ORACLE Enterprise Manager 10g
Grid Control

Home Targets Deployments Alerts Compliance Jobs Reports Setup Preferences Help Logout

Enterprise Manager Configuration | Management Services and Repository | Agents

Management Connectors >

Configure Management Connector: Siebel Connector

Cancel OK

General Ticket Templates

Ticket templates are XSLT files based upon provided XML schemas of the Enterprise Manager Alert model and the Trouble Ticketing System model. Templates are used to construct tickets in the context of an Enterprise Manager Alert. Templates must be loaded through emctl. This page lists the currently registered templates.

Remove

Select Name	Description
<input checked="" type="radio"/> Test Helpdesk 82 Template	test helpdesk 82 template

General Ticket Templates

Cancel OK

Home | Targets | Deployments | Alerts | Compliance | Jobs | Reports | Setup | Preferences | Help | Logout

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3.3.1 Viewing Template Code

Click a template name to view the code for the template.

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

3.3.2 Removing a Template

To remove a template, do the following:

Important: If the template you delete has a notification rule associated with it, the notification fails.

1. Select the template and click **Remove**.
2. At the prompt, confirm the removal.
3. Before you exit the page, click **OK** for the deletion to take effect.

Note: Unless you click **OK** before you exit, the template is not deleted. The next time you go to the Ticket Template page, the templates reappear.

Though the ticket template is removed from the Enterprise Manager repository, it is still available on OMS in the connector home directory. You can re-register the ticket template later if required.

3.3.3 Replacing Templates

To replace an existing ticket template, do the following:

1. Delete the ticket template.
2. Register the new template using `emctl`.

3.3.4 Adding New Templates

To add templates, you should define new templates and register them using `emctl`.

See Also: ["Customizing Ticket Templates"](#) on page A-1.

3.4 Re-registering Removed Connectors

The Siebel Connector is automatically registered when Enterprise Manager is installed. However, you may remove this connector at some point and then want to subsequently re-register it.

To re-register a connector that has been removed:

1. Run the following command on all Oracle Management Servers:

```
emctl extract_jar connector EMHelpdesk.jar Siebel_Connector $ORACLE_HOME
```

Files are extracted from the jar file to the following directory:

```
$ORACLE_HOME/sysman/connector/Siebel_Connector
```

2. From the Oracle Management Server (OMS) host command window, run the following `emctl` command from the `$ORACLE_HOME/bin` directory:

```
emctl register_connector connector $ORACLE_HOME/sysman/connector/  
Siebel_Connector/SiebelDeploy.xml host port database_SID username password  
$ORACLE_HOME
```

3. Run the following `emctl` command from the same directory:

```
emctl register_ticket_template connector $ORACLE_HOME/sysman/connector/Siebel_  
Connector/siebelTemplates/SiebelHelpdeskTemplate.xml host port database_SID  
username password connector_type_name connector_name template_name template_  
description
```

Note: For multiple Oracle Management Servers, you only need to register the connector once from any of the Oracle Management Servers.

Creating Siebel Service Requests

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

- [Automatically Creating Service Requests](#)
- [Manually Creating Service Requests](#)

4.1 Automatically Creating Service Requests

Perform the following steps to create a ticket automatically:

1. From Enterprise Manager Grid Control, click **Preferences**.
2. In the left pane, under Notification, click **Rules**, then **Create**.
3. In the Create Notification Rule General page, specify the rule name, description, and the targets for which this rule should apply.
4. In the Create Notification Rule Availability page, select the availability states for which you want to create tickets.
5. In the Create Notification Rule Metrics page, select the metrics and their associated alert severities for which you want to create and update tickets.

Ensure that you select all relevant alert severities if you want to update the ticket when the alert severity changes. For example, to open a ticket for a critical alert on the CPU Utilization(%) metric, and the ticket to be updated if the CPU Utilization(%) changes to warning or clear severity, then in the notification rule select `Critical`, `Warning`, or `Clear` severities for the CPU Utilization(%) metric.

6. In the Create Notification Rule Methods page, choose the ticket template from the Advanced Notification Methods table ([Figure 4-1](#)).

Figure 4–1 Advanced Notification Methods Table

ORACLE Enterprise Manager 10g
Grid Control

Setup Preferences Help Logout
Home Targets Deployments Alerts Compliance Jobs Reports

Preferences

Edit Notification Rule: Siebel82ConnectorRule

Cancel OK

General Availability Metrics Policies Jobs **Methods**

E-mail Notification

Send Me E-mail
No E-mail addresses are found. E-mails will not be sent. You can add e-mail addresses on the General page later and edit this rule to have e-mails sent.

Advanced Notification Methods

Name	Type	Description	Assign Method to Rule
SiebelHelpdeskTemplate.xml	Java Callback	This notification method is used by the TTConnector	<input checked="" type="checkbox"/>
Provisioning Job Updater	PL/SQL Procedure	System generated notification method: pl/sql notification for provisioning jobs	<input type="checkbox"/>

General Availability Metrics Policies Jobs **Methods**

Cancel OK

Home | Targets | Deployments | Alerts | Compliance | Jobs | Reports | Setup | **Preferences** | Help | Logout

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In the table, registered ticket templates appear as Java Callback type notification methods under the same name as the ticket template's file name. This ticket template opens tickets for all availability and metric alerts specified in this notification rule.

This makes the ticket templates available for use to open tickets.

See Also: "Configuring Notifications" in *Oracle Enterprise Manager Advanced Configuration Guide*

The following process occurs after you create the notification rule for your alerts:

- A notification is sent to the Siebel Connector when a metric alert that matches your rule triggers.
- The Siebel connector creates/updates a ticket according to the ticket template as set in the notification rule.
- In Enterprise Manager, the alert annotation is updated. A comment is added to the Metric Details page of the alert to indicate that a ticket was created or updated, along with the ticket ID and ticket page URL.

A ticket is updated if there is an existing active ticket for an alert. [Figure 4–2](#) shows the ticket in the Siebel HelpDesk page, and [Figure 4–3](#) shows the alert as it is displayed in Enterprise Manager.

Figure 4-2 Siebel Service Request

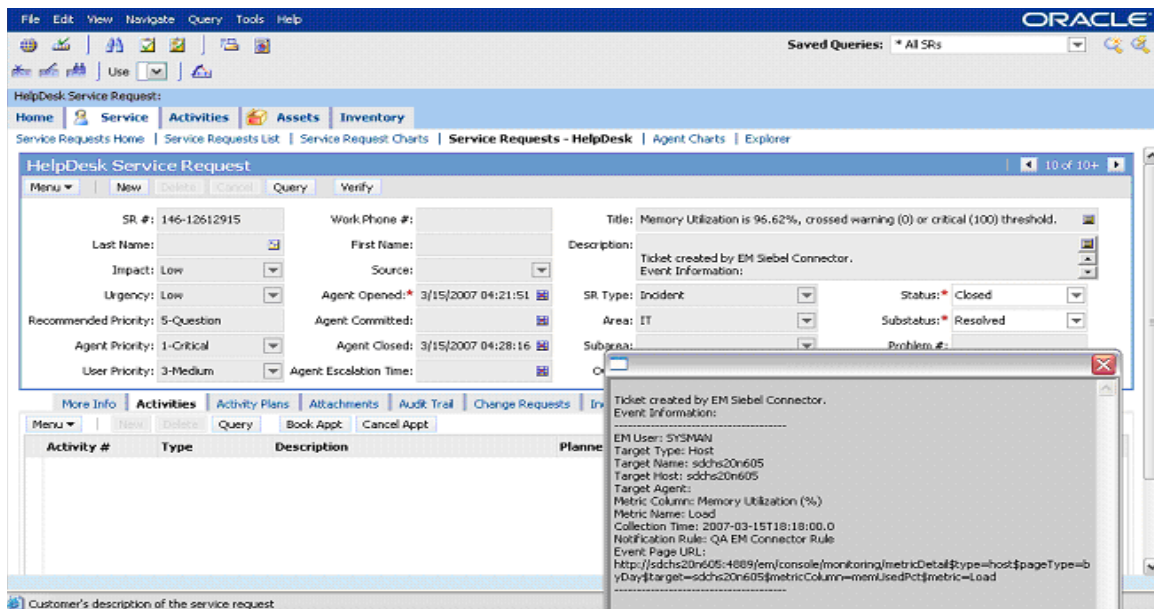
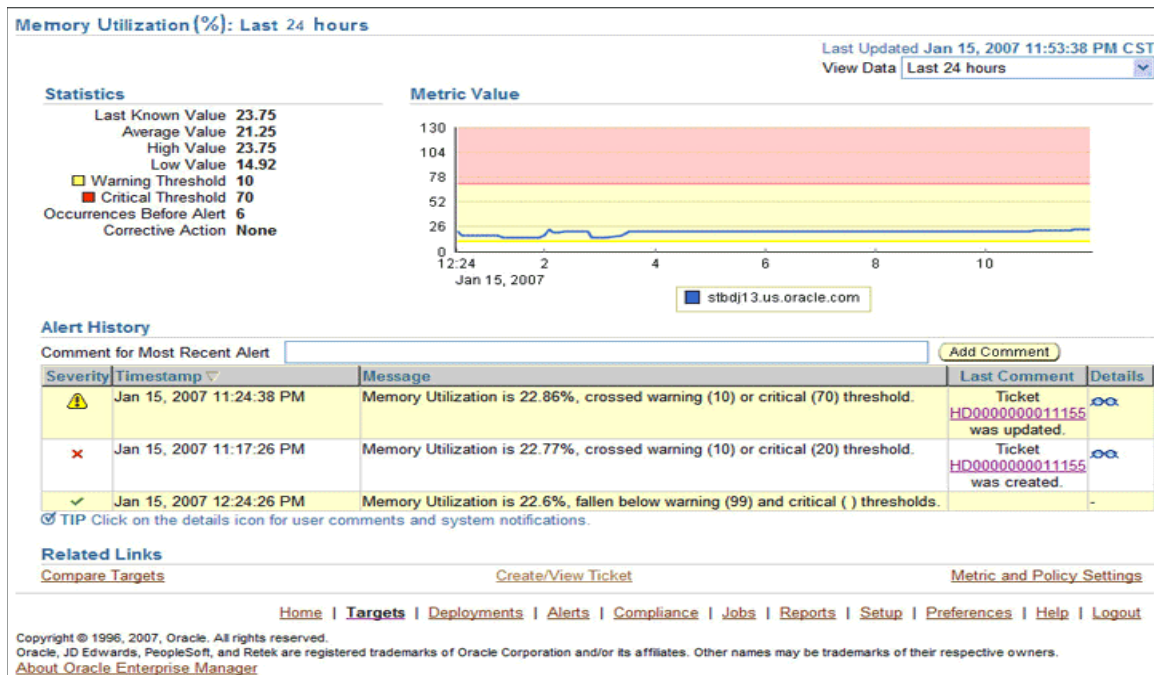


Figure 4-3 Alert as Displayed in Enterprise Manager



4.2 Manually Creating Service Requests

Perform the following steps to manually create a ticket:

1. After a metric alert occurs, go to the associated metric details page for the alert. To access this page, click the alert message in the Enterprise Manager Grid Control (Figure 4-4).

2. Click the **Create/View Ticket** link in the Related Links section.

The Create Ticket page appears if no active ticket exists for the alert.

3. Select a ticket template and then click **Submit** (Figure 4-5).

If you do not see the desired template, you can register one using the `emctl` command. See "Registering Ticket Templates" on page 2-2.

If creating or updating the ticket is successful, the ticket ID appears in the Last Comment column of the Alert History table for the metric alert.

If the Web console settings are configured and enabled, the ticket ID appears as a link to the ticket page in the Siebel Help Desk. If there is no annotation, the ticket creation fails and error information is logged in the file `emoms.log`.

Note: You cannot manually update the ticket using the Siebel Connector. You have to manually update the ticket in the Siebel Help Desk for any subsequent alert change.

Figure 4-4 Metric Details Page

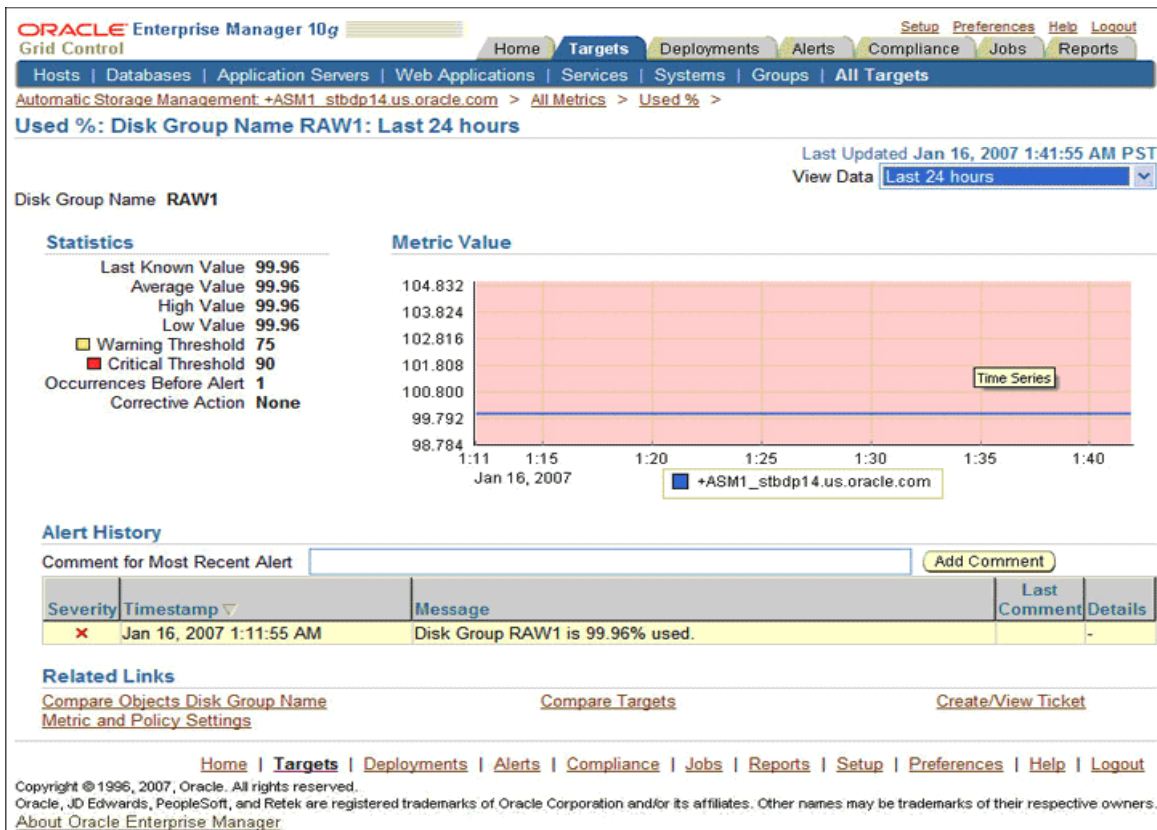


Figure 4-5 Create Ticket Page

ORACLE Enterprise Manager 10g

Grid Control

Home Targets Deployments Alerts Compliance Jobs Reports

Hosts | Databases | Application Servers | Web Applications | Services | Systems | Groups | All Targets

Host: adchs20n605 > All Metrics > MemoryUtilization (%) >

Create Ticket

A ticket will be created for the following alert. Cancel Submit

Target Name: staic05.us.oracle.com
 Target Type: Host
 Metric: Nodeapp Status
 Severity: Warning
 Alert Open Since: Monday, January 15, 2007
 Message: CRS resource ora.staic05.gsd is UNKNOWN on staic05

Ticket Template

Select a ticket template in order to create a ticket in context of this alert.

Search Go

Select Name	Description
<input checked="" type="radio"/> Test_Helpdesk_RD_Template	Test helpdemplate

Cancel Submit

Home | Targets | Deployments | Alerts | Compliance | Jobs | Reports | Setup | Preferences | Help | Logout

Reading Ticket Templates

When the Enterprise Manager connector creates an incident service request record, a data transformation occurs that maps the attributes of the Alert in Enterprise Manager with the attributes of a Service Request on the HelpDesk system. The trouble ticket template and response files specify this mapping. The logical mapping is summarized in [Table 5-1](#). This table will help you to read the Siebel Ticket Template (`SiebelHelpdeskTemplate.xml`).

Table 5-1 Service Request Payload and Enterprise Manager Event Mapping

Service Request Attributes	Enterprise Manager Event Attributes	Data Type	Default Value for Create	Default Value for Update
Id		DTYPE_ID		N/A
SR Number		DTYPE_TEXT		N/A
Status (SR_STAT_ID)		DTYPE_TEXT	Open/Closed	<ul style="list-style-type: none"> ▪ Open if EM's Severity = Clear. ▪ Closed if EM's Severity = Clear
SR Type (SR_CAT_TYPE_CD)		DTYPE_TEXT	Internal	N/A
Service Request Type		DTYPE_TEXT	Internal	N/A
Severity (SR_SEV_CD)	Severity Helpdesk: <ul style="list-style-type: none"> ▪ 1—Critical ▪ 2—High ▪ 3—Medium Enterprise Manager: <ul style="list-style-type: none"> ▪ Critical ▪ Warning ▪ Down 	DTYPE_TEXT		
Abstract	Message. For example, CPU utilization increases from 50% to 95%.	DTYPE_TEXT		N/A
Area (SR_AREA)		DTYPE_TEXT	IT	N/A

Table 5–1 (Cont.) Service Request Payload and Enterprise Manager Event Mapping

Service Request Attributes	Enterprise Manager Event Attributes	Data Type	Default Value for Create	Default Value for Update
Description	<ul style="list-style-type: none"> ■ TargetType: Type of target that this event is associated with. For example, host or database. ■ TargetName: Name of the target that this event is associated with. For example, DB1 or stadc40.us.oracle.com. ■ TargetHost: Name of the host of the target that the event/alert was generated by. ■ TargetAgent: Name of the server hosting the agent that monitors the generated event. ■ MetricColumn: Name of the metric column as it appears on Enterprise Manager Grid Control. ■ MetricName: Name of the metric. For example, CPU utilization or memory usage. ■ KeyValues: Values associated with a key value base event. ■ CollectionTime: Time at which the event occurred. ■ NotificationRuleName: Name of the notification rule that generated the notification during auto-ticketing. ■ Event Page URL: URL for event details page. 	DTYPE_TEXT		N/A

Siebel Ticket Template (SiebelHelpdeskTemplate.xml)

```
<?xml version='1.0' encoding='UTF-8'?>
<xsl:transform version="1.0"
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:ns0="http://xmlns.oracle.com/sysman/connector/tt"
  targetNamespace="http://xmlns.oracle.com/sysman/connector/tt"
  xmlns:ser="http://siebel.com/Service/ServiceReqEMHelpDesk"
  xmlns:data="http://www.siebel.com/xml/ServiceReqIO/Data"
  elementFormDefault="qualified">

  <!--
  This template creates an incident type ticket with default categorization
  (Category: Default, Type:Default, Item:Default), and high priority. On update,
  the description and message fields are updated.
  -->
  <xsl:template match="ns0:EventModel">
    <xsl:choose>
      <xsl:when test="normalize-space(ns0:TicketId) = ''">
        <!-- EDIT THE TAG VALUES BELOW TO CHANGE HOW A TICKET IS FILLED
        DURING TICKET CREATION. REFER TO THE MANUAL
        FOR DESCRIPTION OF THESE HELPDESK SUPPORT DATAFIELDS-->
        <ser:ServiceReqEMHelpDeskInsertAndQuery_Input
          xmlns:data="http://www.siebel.com/xml/ServiceReqIO/Data">
```

```

<data:ListOfServiceReqIO>
  <!--Zero or more repetitions:-->
  <data:ServiceRequest operation="?">
    <data:Abstract><xsl:value-of select="ns0:Message"/></data:Abstract>
    <data:Status>Open</data:Status>
    <data:ServiceRequestType>Internal</data:ServiceRequestType>
    <xsl:choose>
      <xsl:when test="normalize-space(ns0:Severity) = 'Critical'">
        <data:Severity>1-Critical</data:Severity>
      </xsl:when>
      <xsl:when test="normalize-space(ns0:Severity) = 'Down'">
        <data:Severity>2-High</data:Severity>
      </xsl:when>
      <xsl:when test="normalize-space(ns0:Severity) = 'Warning'">
        <data:Severity>3-Medium</data:Severity>
      </xsl:when>
      <xsl:otherwise>
        <data:Severity>5-Question</data:Severity>
      </xsl:otherwise>
    </xsl:choose>
    <data:Area>IT</data:Area>
    <data:Description>
Ticket created by EM Siebel Connector.
Event Information:
-----
Target Type: <xsl:value-of select="ns0:TargetType"/>
Target Name: <xsl:value-of select="ns0:TargetName"/>
Target Host: <xsl:value-of select="ns0:TargetHost"/>
Target Agent: <xsl:value-of select="ns0:TargetAgent"/>
Metric Column: <xsl:value-of select="ns0:MetricColumn"/>
Metric Name: <xsl:value-of select="ns0:MetricName"/>
      <xsl:choose>
        <xsl:when test="normalize-space(ns0:KeyColumn) != ''">
Key Column: <xsl:value-of select="ns0:KeyColumn"/>
Key Values: <xsl:value-of select="ns0:KeyValues"/>
          </xsl:when>
        </xsl:choose>
Collection Time: <xsl:value-of select="ns0:CollectionTime"/>
      <xsl:choose>
        <xsl:when test="normalize-space(ns0:NotificationRuleName) !=
''">
Notification Rule: <xsl:value-of select="ns0:NotificationRuleName"/>
          </xsl:when>
        </xsl:choose>
Event Page URL: <xsl:value-of select="ns0:EventPageURL"/>
-----
      </data:Description>
    </data:ServiceRequest>
  </data:ListOfServiceReqIO>
  <ser:LOVLanguageMode>LIC</ser:LOVLanguageMode>
  <!--Optional:-->
  <ser:ViewMode>All</ser:ViewMode>
</ser:ServiceReqEMHelpDeskInsertAndQuery_Input>
</xsl:when>
<xsl:otherwise>
  <!-- EDIT THE TAG VALUES BELOW TO CHANGE HOW A TICKET IS FILLED
DURING TICKET UPDATE. REFER TO THE MANUAL
FOR DESCRIPTION OF THESE HELPDESK SUPPORT DATAFIELDS-->
  <ser:ServiceReqEMHelpDeskQueryAndUpdate_Input
xmlns:data="http://www.siebel.com/xml/ServiceReqIO/Data">

```

```

<data:ListOfServiceReqio>
  <!--Zero or more repetitions:-->
  <data:ServiceRequest operation="?">
    <data:SRNumber><xsl:value-of select="ns0:TicketId"/></data:SRNumber>
    <xsl:choose>
      <xsl:when test="normalize-space(ns0:Severity) = 'Critical'">
        <data:Severity>1-Critical</data:Severity>
        <data:Status>Open</data:Status>
      </xsl:when>
      <xsl:when test="normalize-space(ns0:Severity) = 'Down'">
        <data:Severity>2-High</data:Severity>
        <data:Status>Open</data:Status>
      </xsl:when>
      <xsl:when test="normalize-space(ns0:Severity) = 'Warning'">
        <data:Severity>3-Medium</data:Severity>
        <data:Status>Open</data:Status>
      </xsl:when>
      <xsl:when test="normalize-space(ns0:Severity) = 'Clear'">
        <data:Status>Closed</data:Status>
      </xsl:when>
      <xsl:otherwise>
        <data:Severity>5-Question</data:Severity>
        <data:Status>Open</data:Status>
      </xsl:otherwise>
    </xsl:choose>
  </data:ServiceRequest>
</data:ListOfServiceReqio>
<ser:LOVLanguageMode>LIC</ser:LOVLanguageMode>
<!--Optional:-->
<ser:ViewMode>All</ser:ViewMode>
</ser:ServiceReqEMHelpDeskQueryAndUpdate_Input>
</xsl:otherwise>
</xsl:choose>
</xsl:template>
</xsl:transform>

```

Enabling SSL for HTTPS

Follow the instructions provided in the following sections if you choose HTTPS as the protocol to establish a connection between Siebel Help Desk and Enterprise Manager.

6.1 Generating a Certificate Request File

Generate a certificate request file for the Siebel Help Desk and send it to the Certificate authority, such as VeriSign.

Note: The certificate request file is dependent on the Web server that Siebel uses.

6.2 Importing the Certificate from the Certificate Authority

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

6.3 Adding Signed Certificates to Wallet Manager

Note: Oracle Wallet Manager is available at `$ORACLE_HOME/bin` on OMS. See the *Oracle Application Server Administrator's Guide* for details.

Do the following on Enterprise Manager:

1. As Super Administrator, create a wallet using the following `orapki` utility command at the OMS host:

```
orapki wallet create -wallet client -auto_login
```

Note: `orapki` is available at `$ORACLE_HOME/bin` on OMS.

2. Add the trusted certificate to the wallet by entering the following command:

```
orapki wallet add -wallet client -trusted_cert -cert  
verisignCert.cer
```

3. To view the content of the wallet, enter the following command:

```
orapki wallet display -wallet client
```

Ensure that `ewallet.p12` is available.

4. In Oracle Wallet Manager, open the client certificate `ewallet.p12`.
5. Go to **Select Trusted Certificates** and select **Operations** on the main menu.
6. Select **Export All Trusted Certificates**.
7. Save the file as `certdb.txt`.
8. Place the file `certdb.txt` in the connector home root directory (`$OMS_HOME/sysman/connector`).

If the file `certdb.txt` already exists in the root directory, open the file and add the contents of your `certdb.txt` to the existing content.

Now Java SSL can use this file for communication between Enterprise Manager and the Siebel server in HTTPS mode.

See Also: For information on creating a wallet, see "Creating and Viewing Oracle Wallets with `orapki`" in the *Oracle Database Advanced Security Administrator's Guide, 10g Release 2 (10.2)*.

Connector Tips

This appendix provides various tips that might help you to use Siebel Connector more effectively.

Recommended Protocol

Oracle recommends that you use HTTPS as the protocol for the communication between Enterprise Manager and Siebel Help Desk.

Use HTTP only if a secure connection is not required and the data can be transferred in clear text between the two systems.

Supported Alerts

This release supports the following types of alerts:

- Metric alerts
- Availability alerts

Notification Failure

Notification is blocked for processing if the notification device is down due to any issues. For instance, the Siebel Help Desk server is down, the Siebel Help Desk configuration on Enterprise Manager is wrong, or the service request is removed in Siebel Help Desk.

Notification failure on one target impacts all other targets of the same target type for which the rule applies. That is, subsequent notifications are blocked until the issue is fixed or the maximum retrials fail.

Note: The maximum retrieval period is one day.

Customizing Ticket Templates

If the Siebel ticket templates do not satisfy your requirements, you can modify them. To do this, Oracle recommends that you use `SiebelHelpdeskTicketTemplate.xml` as the base template. Copy this ticket template to a new file, modify, and register the new ticket template.

For example, to change the mapping or add more severity attributes based on Enterprise Manager Alert's severity, modify the following attributes:

```
<xsl:choose>
  <xsl:when test="normalize-space(ns0:Severity) = 'Critical'">
    <data:Severity>1-Critical</data:Severity>
  </xsl:when>
  <xsl:when test="normalize-space(ns0:Severity) = 'Down'">
    <data:Severity>2-High</data:Severity>
  </xsl:when>
  <xsl:when test="normalize-space(ns0:Severity) = 'Warning'">
    <data:Severity>3-Medium</data:Severity>
  </xsl:when>
  <xsl:otherwise>
    <data:Severity>5-Question</data:Severity>
  </xsl:otherwise>
</xsl:choose>
```

The template is highly customizable. Oracle recommends that only users with advanced knowledge of XSLT make complex changes.

You can use notification rules as a filter to associate proper ticket templates with alerts. You can have as many tickets templates as desired. One notification rule can have only one ticket template.

Customizing the Connector Descriptor

You can customize the connector descriptor. You can modify the URL that navigates from Enterprise Manager to the Siebel application User Interface. This might be required, for instance, when you do a non-English deployment. The default URL to the Siebel application User Interface is for an English language deployment and therefore, for other languages, you have to modify the default URL.

To customize the connector descriptor, do the following:

1. Modify the connector descriptor XML file `SiebelDeploy.xml`.

- a. Modify the bookmark URL.

For instance, in the following sample URL, modify `eai_enu` for a non-English deployment.

```
http://hostname/eai\_enu/start.swe?SWEEExtSource=WebService&SWEEExtCmd=Execute
```

- b. Based on the format of the URL, parameterize the information that you want to configure using the Connector Configuration page. For details, refer to the section "Defining XML and XSL Files" in the *Oracle Enterprise Manager Integration Guide*.
2. Register the new connector descriptor.

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