

Oracle® Enterprise Manager Cloud Control

Managing Oracle Exalytics In-Memory Machine with Oracle
Enterprise Manager

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Preface

This document provides the discovery, monitoring, and management instructions of the Oracle Exalytics In-Memory System and Machine through Oracle Enterprise Manager using the Oracle Fusion Middleware Management plug-in.

Audience

This document is for users who perform administrative and problem-resolution tasks on Oracle Exalytics In-Memory System and Machine.

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Related Documents

For more information, see the following documents in the Oracle Enterprise Manager Cloud Control 12c documentation set:

- *Oracle® Enterprise Manager Cloud Control Administrator's Guide*
- *Oracle® Enterprise Manager Cloud Control Getting Started with Oracle Fusion Middleware Management Plug-in*
- *Oracle® Enterprise Manager System Monitoring Plug-in for Oracle TimesTen In-Memory Database User's Guide*

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.

What's New

The Oracle Fusion Middleware Management plug-in provides a consolidated view of the Exalytics In-Memory System and Machine within Oracle Enterprise Manager, including a consolidated view of all the hardware components and their physical location with indications of status.

This chapter highlights the following significant features and enhancements related to management of the Exalytics In-Memory System and Machine provided by the latest version of the Oracle Fusion Middleware Management plug-in:

- [Supported Hardware and Software Configurations](#)
- [InfiniBand Network Features](#)
- [Advanced Data Visualization Features](#)

Supported Hardware and Software Configurations

As Oracle releases new hardware and software, the Oracle Fusion Middleware Management plug-in is updated, tested, and certified to accommodate the new products, including:

- Oracle Exalytics In-Memory System and Machine hardware:
 - Oracle Exalytics In-Memory Machine X2-4
 - Oracle Exalytics In-Memory Machine X3-4

InfiniBand Network Features

Management of your InfiniBand network through the Oracle Fusion Middleware Management plug-in supports the following environment enhancements:

- Delivers lightning-fast performance to the world's fastest database machine.

Advanced Data Visualization Features

Data generated by your Oracle Exalytics In-Memory Machine can be viewed through Oracle Enterprise Manager, supported by the Oracle Fusion Middleware plug-in:

- Instantly identifies outliers and patterns in large, complex data sets through speed-of-thought visual exploration.

Introduction

Oracle Exalytics is the industry's first engineered system for in-memory analytics that delivers extreme performance for Business Intelligence and Enterprise Performance Management applications. Built using best in class hardware, market-leading business intelligence software and in-memory database technology, Oracle Exalytics is an optimized system that delivers speed of thought analysis with unmatched intelligence, simplicity and manageability.

Through the Oracle Fusion Middleware plug-in, Enterprise Manager Cloud Control 12c enables you to proactively monitor and administer the status, performance, and health of your Exalytics system targets; so, it is more efficient and reacts faster to potential issues.

1.1 Features

The following features are supported:

- Engineered System—hardware and software designed to work together.
- Oracle Business Intelligence Foundation with hardware-specific optimizations.
- Analytic In-Memory Database with Adaptive In-Memory Caching and Columnar Compression.
- Optimized InfiniBand connectivity to Oracle Exadata.
- Advanced data visualization.
- Plug-and-play architecture.

1.2 Supported Hardware

Oracle Exalytics In-Memory System and Machine hardware:

- Oracle Exalytics In-Memory Machine X2-4
- Oracle Exalytics In-Memory Machine X3-4

Discovering Exalytics Targets

This section provides instructions for discovery of the Oracle Exalytics In-Memory System and Machine through Enterprise Manager Cloud Control 12c.

The following sections describe how to discover the Exalytics In-Memory System and Machine and other supported targets:

- [Prerequisites](#).
- [Discovering the Exalytics System Target](#).
- Once you have discovered the Exalytics System target in Enterprise Manager Cloud Control, complete the instructions outlined in [Post Discovery Configuration and Verification](#).

Note: The Oracle TimesTen In-Memory Database is part of most Exalytics systems. See the *Oracle® Enterprise Manager System Monitoring Plug-in for Oracle TimesTen In-Memory Database User's Guide* for complete installation, discovery, and configuration details:

http://docs.oracle.com/cd/E24628_01/timesten.121/e28645/toc.htm

2.1 Prerequisites

Complete the following prerequisites before beginning the discovery process:

- [Create the em-context.info File](#)
- [Prerequisites for Virtualized Exalytics](#)
- [Discover Fusion Middleware Domain](#)

2.1.1 Create the em-context.info File

Before the Exalytics host can be discovered by Enterprise Manager Cloud Control, there are some configuration step that must first be completed and the em-context.info file, which provides Enterprise Manager with the system identifier of your Exalytics System, must be created. To make sure this file is available:

1. Log on to Oracle Integrated Lights Out Manager (ILOM) and select **ILOM Administration**, then **Identification**, and then **System Information**. Ensure that the SP System Identifier value is populated with a unique value, such as Oracle Exalytics X2-2 AK00026925.
2. Log on to the same Oracle Exalytics machine where you extracted the Oracle Exalytics X2-4 Configuration Utilities v 1.0.0.5.

3. As root, update the permissions to make the `configure_for_emcc.sh` script executable:

```
# chmod +x configure_for_emcc.sh
```
4. As root, run the `configure_for_emcc.sh` script to create the file:

```
# ./configure_for_emcc.sh
```
5. Review the output and ensure that the contents of the `/var/exalytics/info/em-context.info` file correctly displays the system identifier for the Oracle Exalytics machine. The system identifier should be identical to the system identifier you saw in Step 1.
6. Once created verify that the file exists in the `/var/exalytics/info` directory. As root, run:

```
# cat /var/exalytics/info/em-context.info
```

The output of this command would look like this:

```
system_identifier = Oracle Exalytics 1229FMJ01K
```

Note: The output from this command will display differently for older Exalytics images.

7. Verify that the agent user has permissions to read the file.

2.1.2 Prerequisites for Virtualized Exalytics

Before proceeding to discovery, verify that the following prerequisites are met for your virtualized Exalytics Machine.

Export NFS Directory

A directory should be NFS exported before it can be mounted on other host. Follow the steps below as the root user:

1. Edit the `exports` file:

```
vi /etc/exports
```
2. Add the following line to the `exports` file:

```
<location given during swlib nfs creation> *(rw, sync)
```
3. Run the following commands

```
service nfs restart
service portmap restart
showmount -e <ip addr of source>
```

The last command (`showmount -e`) shows the location exported.

4. Save the `exports` file.

Other Virtualized Exalytics Machine Prerequisites

For a virtualized Exalytics machine, follow these instructions from the *Oracle® Enterprise Manager Cloud Administration Guide* for:

- Registering the Oracle VM Manager:

http://docs.oracle.com/cd/E24628_01/doc.121/e28814/cloud_iaas_setup.htm#CEGICIFE

- Synchronizing the Oracle VM Manager Targets.

http://docs.oracle.com/cd/E24628_01/doc.121/e28814/cloud_iaas_setup.htm#BABBGACI

- Discovering a Virtual Server.

http://docs.oracle.com/cd/E24628_01/doc.121/e28814/cloud_iaas_setup.htm#CEGGJHAD

- Rediscovering a Virtual Server.

http://docs.oracle.com/cd/E24628_01/doc.121/e28814/cloud_iaas_setup.htm#BABIFBBG

2.1.3 Discover Fusion Middleware Domain

Generally, Oracle Fusion Middleware domains do not remain static. Instead, membership in the domain changes regularly, for example: New Java EE applications are deployed, WebLogic Server instances are created or removed, clusters are added, and so on.

By default, Enterprise Manger Cloud Control is not automatically aware of changes made to the domains, which have been configured as managed targets. However the application does provide the ability to discover and uptake new or modified domain members.

For details about discovering Fusion Middleware domains (including new, modified, and multiple domains), see the "Discovering Middleware Targets" chapter of the *Oracle® Enterprise Manager Cloud Control Getting Started with Oracle Fusion Middleware Management*:

http://docs.oracle.com/cd/E25178_01/install.1111/e24215/fmw_discovery.htm

2.1.3.1 Automatic Discovery

You can enable a pre-defined Cloud Control job named "WebLogic Domain Refresh" to automatically discover new domain members and add them as managed targets.

1. From the **Targets** menu, select **Middleware**.
2. Click on the WebLogic Domain you want to enable the job for in the Middleware home page.
3. In the General region of the page, click the timestamp link next to the **WebLogic Domain Refreshed** property. The Refresh WebLogic Domain dialog opens.
4. Check the **Enable Automatic Refresh** box in the Refresh WebLogic Domain dialog, then click **OK**.

Once enabled, the job will check for new domain members once every 24 hours by default. To change the job settings, including the frequency at which it is run:

1. Click the **Jobs** tab.
2. Click the job title in the Job Activity page.
3. Click **Edit**.

2.1.3.2 Manual Discovery

You can use Cloud Control to check a domain for new or modified members on a periodic basis:

1. From the **Targets** menu, select **Middleware**.
2. Click on the WebLogic Domain you want to enable the job for in the Middleware home page.
3. From either the **Farm** or **WebLogic Domain** menu, select **Refresh WebLogic Domain**. The Refresh WebLogic Domain dialog opens.
4. Click **Continue**. Cloud Control will search the domain for new and modified targets.
5. The Assign Agents page displays the Fusion Middleware targets discovered and the Management Agent assigned to each. Click **Add Targets** to assign Management Agents as listed in the Assign Agents page.

Agents are automatically assigned as follows:

- If a local Agent can be found on the target host, that Agent will be assigned.
- If a local Agent cannot be found on the host, the Agent specified in the Targets page will be assigned.

Note that you can also manually assign Agents to specific targets, if desired.

6. The Saving Target to Agent processing window appears, indicating how many total targets have been added and successfully saved. It will also indicate the number of targets that were unsuccessfully added.
7. Click **Close** in the processing window when finished. The Results page displays the targets and Agent assignments.
8. Click **OK** when finished. There may be a delay before these targets are visible and monitored. All the agents used for monitoring the targets must be up.

2.2 Discovering the Exalytics System Target

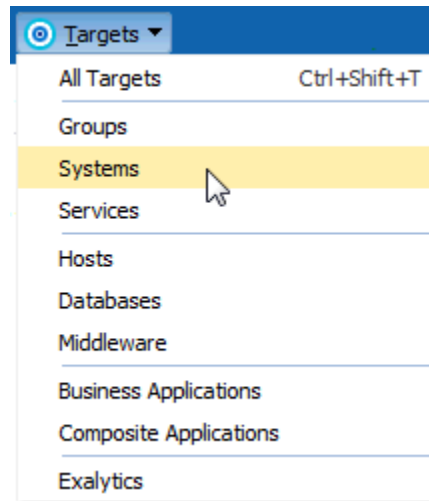
An Exalytics *system* consists of multiple Exalytics *machines* that are clustered. For monitoring, there are two targets in Enterprise Manager:

- The Exalytics Machine target that represents **one** physical machine.
- The Exalytics System target which represents multiple machines that are clustered and need to be monitored as a whole.

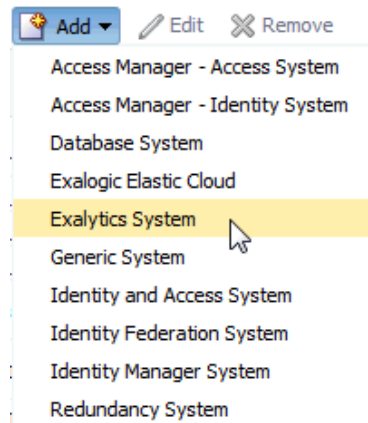
Regardless of the target type to be monitored, you will always select an Exalytics System for discovery - even if there is only one Exalytics Machine.

To discover an Exalytics System target:

1. From the Targets menu, select **Systems** as shown in [Figure 2-1](#):

Figure 2–1 Targets Menu

2. On the Systems page, click **Add** and select **Exalytics System**, as shown in Figure 2–2.

Figure 2–2 Add Exalytics System

3. On the Exalytics System, begin the discovery of the Exalytics System. Click **Add Machine** (+ Add Machine) and provide the following information:
 - Machine Name
 - Agent
 - Deployment Type
 - Host Name
 - Bare Metal/Oracle Virtual Server Username and Password
 - IP Address/Hostname
 - ILOM Credentials Username and Password
4. Click **Next**.
5. A confirmation will appear as the discovery of the Exalytics System progresses. Once complete, click **Close**.
6. Click **Add Targets** to complete the discovery process.

Post Discovery Configuration and Verification

Once the Oracle Exalytics Machine has been discovered through Enterprise Manager Cloud Control 12c, you must complete the following post-discovery configuration:

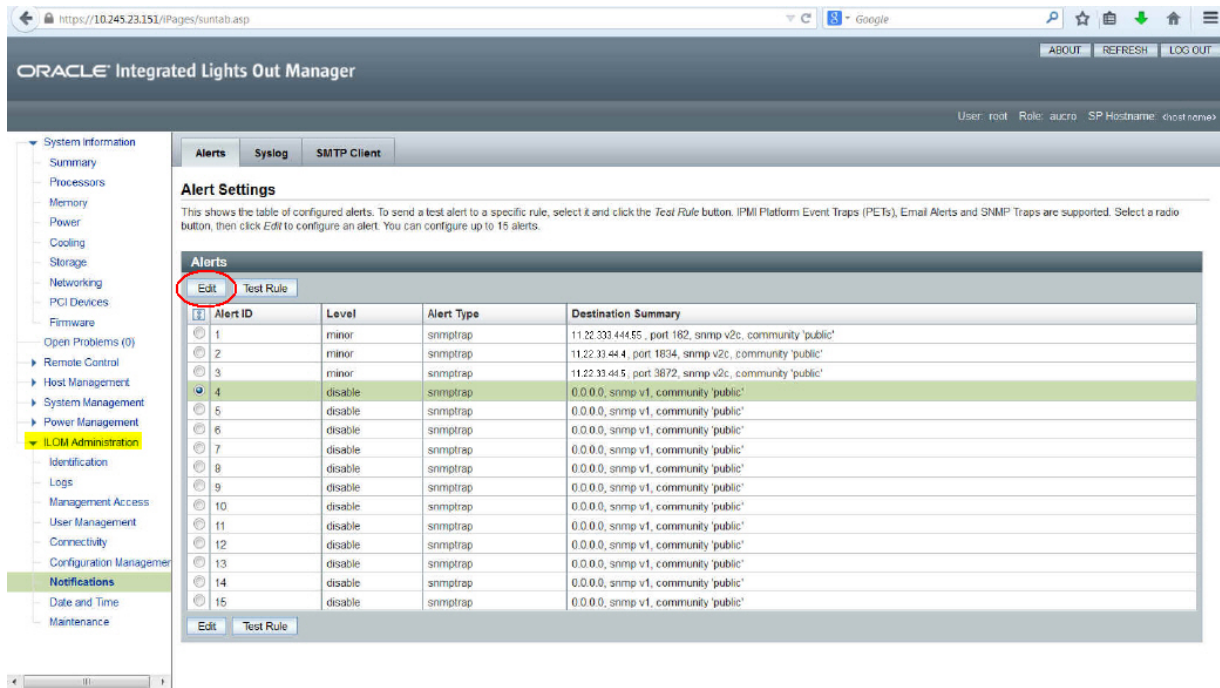
- [Configure the Compute Node ILOM SNMP for Enterprise Manager Monitoring](#)
- [Verify the Compute Node ILOM SNMP](#)

3.1 Configure the Compute Node ILOM SNMP for Enterprise Manager Monitoring

The compute node ILOM targets are responsible for displaying a number of disk failure alerts for their respective compute node that are received as SNMP traps. To configure the ILOM SNMP:

1. Log in to the ILOM console.
2. In the left-hand navigation, select **ILOM Administration**, then select **Notifications**. Select a rule that has a disable level and click **Edit** as shown in [Figure 3-1](#):

Figure 3–1 Creating a New ILOM Alert Rule



- In the Edit pop-up window, enter the following information:
 - Level: select **Minor** from the drop-down menu.
 - Type: select **SNMP Trap** from the drop-down menu.
 - Address: enter the IP address of the host where agent monitoring the ILOM is running.
 - Destination port: enter the agent port number.
 - SNMP Version: select **v2c** from the drop-down menu.
 - Community: enter **public**.

Click **Save** to save the changes, as shown in Figure 3–2:

Figure 3–2 ILOM Alert Rule Settings

Mozilla Firefox
 https://10.245.23.151/iPages/frameWindow.asp?contentTxt=undefined&buttons=Save\$parent.middleFra

Oracle® Integrated Lights Out Manager

To create or modify an Alert, select the alert level and type, then fill in the destination information for the alert type selected.

Level:

Type:

Specify the SNMP trap destination address, port, version, and community or user name. Click Save to complete your action.

Address:
 IP Address or Hostname

Destination Port: Autoselect
 The default is: Autoselect (0)

SNMP Version:

Community Name:

3.2 Verify the Compute Node ILOM SNMP

To verify the ILOM SNMP configuration:

1. Log in to the compute node host as root and run the following command:

```
# ipmitool -I lan -H myhost.mycompany.com -U root -P welcome1 -L OPERATOR
event PCIE5/PRSNT absent assert
```

The results of this command should look like this:

```
PCIE5/PRSNT absent assert
Finding sensor PCIE5/PRSNT... ok
  0 | Pre-Init Time-stamp | Entity Presence #0xa7 | Absent | Asserted
```

2. Refresh the ILOM target page. An incident should appear in the Incidents section. Once it is verified, clear the incident in Cloud Control.

Monitoring an Exalytics System

By monitoring a system using Enterprise Manager, you obtain a complete and up to date overview of the status, availability, performance, and health of the system. Enterprise Manager displays complex target performance data in a simple form, using graphs and pie charts. It also keeps you informed about target metrics crossing their threshold levels, target alerts, and target incidents that require user action.

Using the Exalytics System console, you can do the following tasks:

- [Displaying and Using the Exalytics System Dashboard](#)
- [Viewing the Generic Performance of an Exalytics System](#)
- [Viewing the Members Topology of an Exalytics System](#)
- [Viewing the Routing Topology of an Exalytics System](#)
- [Refreshing an Exalytics System](#)
- [Viewing the Job Activity of an Exalytics System](#)
- [Administering Targets of an Exalytics System](#)

4.1 Displaying and Using the Exalytics System Dashboard

To access the Exalytics System dashboard, from the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.

The Exalytics System Dashboard contains a Hardware tab and a Software tab.

The Hardware tab displays the status information of the Exalytics System hardware, that includes CPU and Memory Utilization, Hardware Overview that displays the ILOM details of the machine(s).

The Hardware tab also displays an Incidents and Problems section that shows alerts for targets that have problems. The table also displays the status of the target, the severity of the problem, the escalation level, and the time when the target was last updated.

The Software tab displays status information including alerts and key performance metrics of the following Fusion Middleware targets that are managed and monitored by the Exalytics System:

- WebLogic domains
- Oracle BI Foundation 11g
- Oracle TimesTen (in-memory database)
- Hosts

Note: These targets are not automatically discovered during an Exalytics discovery process. You need to discover them separately in order for them to be displayed in the dashboard.

By default, the table for each Fusion Middleware component displays the name of the component, the type, the status, incidents, the host the component is running on, and the port. You can add more columns by clicking **View**, selecting **Columns** and then choosing the options that you want displayed as columns in the table.

You can view detailed information about the Exalytics System from the Exalytics System menu, such as performance summary, alert history, target incidents, members topology, routing topology, and job activity. You can also perform management and administrative tasks such as refreshing the system, removing the system, granting target access privileges, and administering target blackouts.

4.2 Viewing the Generic Performance of an Exalytics System

Using the Enterprise Manager Exalytics System console, you can perform the following generic performance tasks:

- [Viewing the Performance Summary of an Exalytics System](#)
- [Viewing the Alert History of an Exalytics System](#)
- [Viewing Target Incidents of an Exalytics System](#)

4.2.1 Viewing the Performance Summary of an Exalytics System

To view the performance summary of the Exalytics system, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.
2. On the Exalytics system home page, click on the **Exalytics System** menu, select **Monitoring**, and then select **Performance Summary**.
3. The following charts are displayed:
 - Average query time (in seconds)
 - Server queries (per second)
 - Status of BI Instance
 - Active Sessions
 - Failed Requests
 - Requests (per minute)

You can change the order of the charts by clicking on the **View** menu, and selecting **Reorder Charts**. This enables you to move a chart up, down, or to remove it.

4. On the Performance Summary page, you can do the following:
 - You can view the performance of the Exalytics summary for the entire day, 2 hours, or for 15 minutes.
 - You can set what you want to be displayed on the chart by clicking the **View** menu and selecting or deselecting the items.

- You can overlay the chart displayed with the chart from the previous chart, or you can overlay it with the performance summary chart of another Exalytics System.
To do this, click on **Overlay**, and then select an option.
- You can view the metric palette by clicking on **View Metric Palette**.

4.2.2 Viewing the Alert History of an Exalytics System

To view the alert history of an Exalytics system, from the Exalytics System menu displayed on the Exalytics system home page, select **Monitoring**, then select **Alert History**.

The Alert History page provides details about target metrics, such as the periods when a particular metric was beyond its critical threshold value, the periods when the metric could not be calculated, and so on. These details help you plan corrective measures for metric-related problems, before any severe damage or prolonged downtime can occur.

The Alert History page contains the following elements:

Table 4–1 Target Alert History

Element	Description
Metric	Parameter related to the performance of the target.
History	Condition of the metric at various times. The condition can have the values Critical, Warning, Clear, and No Data.

4.2.3 Viewing Target Incidents of an Exalytics System

To view the incidents related to the target, from the Exalytics System menu displayed on the target home page, select **Monitoring**, then select **Incident Manager**.

The Incident Manager page provides details about the various events, related to the target, that negatively impact any hardware or software component running on the Exalytics system. These events require user action. The details provided by this section, such as the incident summary, severity, target, target type, and so on, are essential for troubleshooting.

4.3 Viewing the Members Topology of an Exalytics System

To view the members topology of an Exalytics system, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.
2. From the Exalytics System menu displayed on the Exalytics system home page, select **Members**, and then select **Topology**.
3. The Configuration Topology page for the System is displayed.

The topology viewer enables you to understand and visualize your IT environment in a graphical format. The inter-relationships between systems display results such as on what systems does this system rely, what systems will be affected if this system goes down, and how are the members of my system related?

On this page, you can perform the following tasks:

- [Viewing a Configuration Topic](#)
- [Creating a Custom Topology View](#)

4.3.1 Viewing a Configuration Topic

To view a configuration topic, from the **View** list, select any of the following:

- **Uses**

This view helps you determine the targets that the selected target depends on. If a target is having problems, this view can be useful in helping you determine whether its problems have been caused by another target it depends on.
- **Used By**

This view shows you the targets that depend on the selected target. This can be useful, for example, if you are planning on shutting down the target and need to know what other targets will be affected
- **System Members**

This view shows the members of the system.
- **Custom views** that have been defined by end users.

Note: The Uses, Used By, and System Members views are out-of-box topology views. They cannot be modified.

4.3.2 Creating a Custom Topology View

To create a custom topology view, do the following:

1. From the **Customize** menu, select **Create Custom View**.
2. Provide the name and description for the topology and select one of the Initial Contents:
 - **Copy Current View** to create a topology view similar to the one you are viewing.
 - **Create Empty View** to create a topology view that starts with the root node.
3. Choose one of the following expose options:
 - Expose the custom view for all targets of the current target type. For example, if you are creating a topology view for a database target, the new view will be available for all database targets.
 - Expose the custom view for the current target only.

To share the view, click **Share this custom view with other users**.
 - Click **OK**.
4. Reduce the unwanted information in the topology by highlighting the target and selecting **Hide Relationships...** in the **Customize** menu.

You can also display relationships that are not being displayed by selecting a target. From the **Customize** menu, select **Target**, then select **Show More Relationships to Target Type....**
5. Click **OK**.

4.4 Viewing the Routing Topology of an Exalytics System

A topology diagram is an interactive diagram showing Enterprise Manager targets and their statuses, incidents, and other target information, as well as the relationships between targets.

To view the Exalytics Routing Topology page, do the following:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.
2. From the Exalytics System menu displayed on the target home page, select **Routing Topology**.

The Routing Topology page displays middleware targets in a single topology diagram, allowing you to see dependencies among targets and the impact of component failures.

You can use this page to visualize which software components are communicating with each other, and which hardware components they are using in order to understand the system. You can learn which components of a system are impacted by a problem with another component.

The topology graph expresses the relationships between the targets of the Exalytics system. The targets are annotated to indicate status and incidents. Tool tips show additional information about entities and relationships. You can pan and zoom the graph, as in popular map programs, and also expand and collapse desired areas of the graph. The graph can be filtered to show only desired nodes.

4.5 Refreshing an Exalytics System

To refresh an Exalytics System, do the following:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.
2. From the Exalytics System menu displayed on the target home page, select **Refresh Exalytics System**.
3. The Exalytics target discovery page opens.

You can rediscover Exalytics machine targets to add to the Exalytics system, or you can remove existing targets from the system.

4.6 Viewing the Job Activity of an Exalytics System

To view the past, currently running, and scheduled jobs related to a target, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.
2. From the Exalytics System menu displayed on the target home page, select **Job Activity**.
3. The Job Activity page displays target jobs related to target administrative tasks, such as starting the target, stopping the target, target blackouts, and so on.

Use the Job Activity page to search for a particular job and retrieve job details such as the owner, status, scheduled start time, and so on. You can also use the Job Activity page to perform target job administration tasks, such as creating, editing, suspending, and resuming a job.

4.7 Administering Targets of an Exalytics System

You can perform the following administration tasks on a target of an Exalytics system:

- [Administering Target Access Privileges for an Exalytics System](#)
- [Administering Target Blackouts for an Exalytics System](#)
- [Removing an Exalytics System Target](#)

4.7.1 Administering Target Access Privileges for an Exalytics System

To manage the access privileges for a target, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.
2. From the Exalytics System menu displayed on the Exalytics system home page, select **Target Setup**, then select **Administrator Access**.
3. Click **Add** to grant target access privileges to a role or an administrator.

Use the Access page to set target privileges for roles and administrators. The available privileges are View, Operator, and Full.

View only allows you to view the target in the console, whereas Operator allows you to view targets, and perform all administrative actions except deleting targets. Full allows you to view targets, and perform all administrative actions.

4.7.2 Administering Target Blackouts for an Exalytics System

Blackouts suspend data collection on a monitored target and are useful when you want to perform scheduled maintenance tasks on monitored targets.

To administer the blackouts for a target, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.
2. From the Exalytics System menu displayed on the Exalytics system home page, select **Monitoring**, then select **Blackouts**.

Use the Blackouts page to search for existing target blackouts, edit existing blackouts, define new blackouts, and stop blackouts. You can also create and stop blackouts using the Exalytics System menu. To create or stop a blackout, from the Exalytics System menu, select **Control**, then select **Create Blackout** or **End Blackout**, respectively.

4.7.3 Removing an Exalytics System Target

To remove an Exalytics machine target from an Exalytics System, do the following:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, select the Exalytics System that you want to access.
2. On the Exalytics system home page, from the Exalytics System menu, select **Target Setup**, and then **Remove Target**.
3. A warning will be displayed, asking if you want to proceed. Click **Remove**.

Monitoring an Exalytics Machine

By monitoring a target using Enterprise Manager, you obtain a complete and up to date overview of the status, availability, performance, and health of the target. Enterprise Manager displays complex target performance data in a simple form, using graphs and pie charts. It also keeps you informed about target metrics crossing their threshold levels, target alerts, and target incidents that require user action.

Using the Exalytics Machine console, you can do the following tasks:

- [Displaying and Using the Exalytics Machine Homepage](#)
- [Viewing the Generic Performance of an Exalytics Machine](#)
- [Viewing the Members Topology of an Exalytics Machine](#)
- [Viewing the vCPU Consumption Report for an Exalytics Machine](#)
- [Managing License Editions for an Exalytics Machine](#)
- [Viewing the Job Activity of an Exalytics Machine](#)
- [Viewing the Collected Configuration of an Exalytics Machine](#)
- [Administering the Exalytics Machine Target](#)

5.1 Displaying and Using the Exalytics Machine Homepage

To view the Exalytics Machine homepage, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.

The Exalytics Machine home page displays the summary of the functioning of the Exalytics target. It shows the general information of the target, the overview of incidents and problems, the status of the target, the compliance summary, jobs activity, target blackouts, and the number of configuration changes.

You can view more detailed information of the target by clicking on the Exalytics Machine menu and selecting the option that you want to view, such as target alert history, target incidents, members topology, vCPU consumption report, job activity and collected configuration. You can also manage and administer tasks such as administering target access privileges, administering target blackouts, and removing the target.

The Exalytics Machine homepage also contains a **Personalize Page** button on the top right corner. This enables you to customize the homepage by adding, removing, or configuring regions. You can also change the layout of the page.

5.2 Viewing the Generic Performance of an Exalytics Machine

Using the Enterprise Manager Exalytics System console, you can perform the following generic performance tasks:

- [Viewing the Target Alert History of an Exalytics Machine](#)
- [Viewing the Target Incidents of an Exalytics Machine](#)

5.2.1 Viewing the Target Alert History of an Exalytics Machine

To view the alert history of an Exalytics machine, do the following:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. From the Exalytics Machine menu displayed on the Exalytics machine home page, select **Monitoring**, then select **Alert History**.

from the Exalytics Machine menu displayed on the Exalytics machine home page, select **Monitoring**, then select **Alert History**.

The Alert History page provides details about target metrics, such as the periods when a particular metric exceeds its critical threshold value, the periods when the metric could not be calculated, and so on. These details help you plan corrective measures for metric-related problems, before any severe damage or prolonged downtime can occur.

The Alert History page contains the following elements:

Table 5–1 Target Alert History

Element	Description
Metric	Parameter related to the performance of the target.
History	Condition of the metric at various times. The condition can have the values Critical, Warning, Clear, and No Data.

5.2.2 Viewing the Target Incidents of an Exalytics Machine

To view the incidents related to the target, navigate to the Incidents section, by following these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. From the Exalytics Machine menu displayed on the target home page, select **Monitoring**, then select **Incident Manager**.

The Incident Manager page provides details about the various events, related to the target, that negatively impact any hardware and software components running on the Exalytics machine. These events require user action. The details provided by this section, such as the incident summary, severity, target, target type, and so on, are essential for troubleshooting.

5.3 Viewing the Members Topology of an Exalytics Machine

To view the members topology of an Exalytics machine, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. From the Exalytics Machine menu displayed on the Exalytics machine target home page, select **Members**, and then select **Topology**.
4. The Configuration Topology page for the System is displayed.

The topology viewer enables you to understand and visualize your IT environment in a graphical format. The inter-relationships between systems are used to answer questions such as:

- On what targets does this target rely?
- What targets will be affected if this system goes down?
- How are the members of my target related?

On this page, you can perform the following tasks:

- [Viewing a Configuration Topic](#)
- [Creating a Custom Topology View](#)

5.3.1 Viewing a Configuration Topic

To view a configuration topic, from the **View** list, select any of the following:

- **Uses**

This view helps you determine the targets that the selected target depends on. If a target is having problems, this view can be useful in helping you determine whether its problems have been caused by another target it depends on.

- **Used By**

This view shows you the targets that depend on the selected target. This can be useful, for example, if you are planning on shutting down the target and need to know what other targets will be affected

- **System Members**

This view shows the members of the system.

- **Custom views** that have been defined by end users.

Note: The Uses, Used By, and System Members views are out-of-box topology views. They cannot be modified.

5.3.2 Creating a Custom Topology View

To create a custom topology view, do the following:

1. From the **Customize** menu, select **Create Custom View**.
2. Provide the name and description for the topology and select one of the Initial Contents:
 - **Copy Current View** to create a topology view similar to the one you are viewing.
 - **Create Empty View** to create a topology view that starts with the root node.
3. Choose one of the following expose options:
 - Expose the custom view for all targets of the current target type. For example, if you are creating a topology view for a database target, the new view will be available for all database targets.
 - Expose the custom view for the current target only.
To share the view, click **Share this custom view with other users**.
 - Click **OK**.
4. Reduce the unwanted information in the topology by highlighting the target and selecting **Hide Relationships...** in the **Customize** menu.
You can also display relationships that are not being displayed by selecting a target. From the **Customize** menu, select **Target**, then select **Show More Relationships to Target Type....**
5. Click **OK**.

5.4 Viewing the vCPU Consumption Report for an Exalytics Machine

To navigate to the Consumption Report page, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. On the Exalytics machine home page, click on the **Exalytics Machine** menu, select **Resource Utilization**, and then select **Consumption Report (All Exalytics)**.

Note: You can view the Consumption Report page only for virtual Exalytics machine targets.

You can perform the following tasks on the vCPU Consumption page:

- [Viewing the vCPU Consumption Report](#)
- [Viewing the Resource Consumption Trend](#)
- [Exporting the vCPU Consumption Report](#)

5.4.1 Viewing the vCPU Consumption Report

To view the vCPU Consumption Report for the software components running on an Exalytics Machine, do the following:

1. On the vCPU Consumption page, select one of the time periods in the Time Period drop-down list.

Note: When you select a time period, the Product table and Details table refreshes automatically for the chosen time period.

2. From the Product list, select the product or the products that you want to view the consumption report for. By default all the products are selected.
3. From the Product table, select a Product you want to view the consumption report for.

Note: When you select a product, the Details table refreshes automatically to display the Consumption Report for the product.

4. The Details table displays the consumption details for the product or products that you have selected.

You can add more details as columns to the Details table by clicking **View**, selecting **Columns**, and then selecting the items you want to be displayed. You can select which columns you want to make visible and which columns to hide by clicking **Manage Columns**.

By default, the Details table displays the collection time and the number of total vCPUs consumed. Expand the collection time, and host name, to view all the following details:

- Collection time of the point when vCPU was collected
- Host name of the host on which software is running
- The Exalytics machine name
- The number of total vCPUs consumed by the software or the target running at that time
- The target name
- The target type
- The owner of the target

5.4.2 Viewing the Resource Consumption Trend

To view the resource consumption trend for an Exalytics machine target, do the following:

1. On the vCPU Consumption page, from the Product drop-down list, select the product you want to view the resource consumption trend for.

Select **All** if you want to view the resource consumption trend for all the targets.

Note: When you make a selection from the Product drop-down list, the Product table and the Details table automatically refreshes to display the details for the product or products that you have selected.

2. From the Time Period drop-down list, select the time period for which you want to view the resource consumption trend.
3. Click on **View Trends**.
4. The Resource Consumption Trend window opens.
If you selected All products, then the graphical representation of the resource consumption for all the products will be displayed. You can choose to view trends for individual products as well, by clicking on the Product drop-down list, and selecting the product.
5. You can also choose to view the resource consumption trend in a table format by clicking **Table View**.
On the Table view page, you can customize the details you want to view in the table by clicking **View**.
6. Click **OK** to close the Resource Consumption trend window.

5.4.3 Exporting the vCPU Consumption Report

To export the vCPU consumption report for an Exalytics machine target, do the following:

1. On the vCPU Consumption page, select the following:
 - **Time Period**
Select a time period for which you want to view the vCPU consumption report for.
 - **View**
Select **Product**.
 - **Product**
Select the products you want to view the vCPU consumption report for.
Select **All** if you want to view the vCPU consumption report for all the products.
2. Click **Export**.
3. On the Opening License dialog box, select the program you want to open the file with. Microsoft Office Excel is the default program. Click **OK**.

5.5 Managing License Editions for an Exalytics Machine

To navigate to the Consumption Report page, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.

3. On the Exalytics machine home page, click on the **Exalytics Machine** menu, select **Resource Utilization**, and then select **Consumption Report (All Exalytics)**.

Note: You can view the Consumption Report page only for virtual Exalytics machine targets.

You can perform the following tasks related to managing license editions on the vCPU Consumption page:

- [Adding a License Edition to an Exalytics Machine Target](#)
- [Creating a New License Edition for an Exalytics Machine](#)

5.5.1 Adding a License Edition to an Exalytics Machine Target

To add a license edition to a target, do the following:

1. On the vCPU Consumption page, click **Manage License Edition**.
2. In the Manage License Edition dialog box, expand the Search icon. Enter details of the target you want to add a license edition to. Click **Search**.
3. Select the target from the Target table, and then click **Set License Edition**.

Note: To view more details of the table, click **View**, and then select all the items you want to view as columns in the target table.

4. Click **Done**.

5.5.2 Creating a New License Edition for an Exalytics Machine

To create a new license edition for an Exalytics machine target, do the following:

1. On the vCPU Consumption page, from the View list, select **License Edition**.
2. Click **Manage License Edition**.
3. On the Manage License Edition page, select the target you want to create a new license for, and then click **Set License Edition**.
4. In the Set License Edition box, you will see a list of licenses that the target already has.

Click **Add**.

5. Enter the name of the new license you want to add to the target.

Click **OK**.

5.6 Viewing the Job Activity of an Exalytics Machine

To view the past, currently running, and scheduled jobs related to a target, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.

2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. From the Exalytics Machine menu displayed on the target home page, select **Job Activity**.
4. The Job Activity page displays target jobs related to target administrative tasks, such as starting the target, stopping the target, target blackouts, and so on.
5. The Job Activity page displays target jobs related to target administrative tasks, such as starting the target, stopping the target, target blackouts, and so on.

5.7 Viewing the Collected Configuration of an Exalytics Machine

To view the collected configuration data of an Exalytics machine target, do the following:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. From the Exalytics machine menu displayed on the Exalytics machine target home page, select **Configuration** and **Last Collected**.
4. The **Latest Configuration** page contains the following configuration data of the target:
 - Configuration items and properties
 - System configuration data as well as all system members and their configuration data
 - System and target relationships (immediate, member of, uses, used by, and so forth)
 - Custom configuration collection data

The browser window consists of left and right panes. The left pane is a tree hierarchy. The right pane consists of tabs that display information in tables. As you navigate in the tree, your selection dictates the contents in the right pane. Depending on the selection, tabs appear containing data such as properties and values, relationships, a hierarchical structure of a system and its members, and file contents in both a parsed and raw text format.

You can take any of several actions as you view a configuration in the browser. These actions are available from the **Actions** menu above the tabs. The tree hierarchy in the left pane also has context menus available.

5.8 Administering the Exalytics Machine Target

You can perform the following administration tasks on the Exalytics machine target:

- [Viewing the Target Monitoring Configuration of an Exalytics Machine](#)
- [Administering Target Access Privileges for an Exalytics Machine](#)
- [Administering Target Blackouts for an Exalytics Machine](#)
- [Removing an Exalytics Machine Target](#)

5.8.1 Viewing the Target Monitoring Configuration of an Exalytics Machine

To view the monitoring configuration details for a particular target, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. From the Exalytics Machine menu displayed on the target home page, select **Target Setup**, then select **Monitoring Configuration**.

The Monitoring Configuration page provides information about instance properties of the target, which provide internal details about target monitoring.

5.8.2 Administering Target Access Privileges for an Exalytics Machine

To manage the access privileges for a target, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. From the Exalytics Machine menu displayed on the target home page, select **Target Setup**, then select **Administrator Access**.
4. Click **Add** to grant target access privileges to a role or an administrator.

Use the Access page to set target privileges for roles and administrators. The available privileges are View, Operator, and Full.

View only allows you to view the target in the console, whereas Operator allows you to view targets, and perform all administrative actions except deleting targets. Full allows you to view targets, and perform all administrative actions.

5.8.3 Administering Target Blackouts for an Exalytics Machine

Blackouts suspend data collection on a monitored target and are useful when you want to perform scheduled maintenance tasks on monitored targets.

To administer the blackouts for a target, follow these steps:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. From the Exalytics Machine menu displayed on the target home page, select **Monitoring**, then select **Blackouts**.

Use the Blackouts page to search for existing target blackouts, edit existing blackouts, define new blackouts, and stop blackouts. You can also create and stop blackouts using the Exalytics Machine menu. To create or stop a blackout, from the Exalytics System menu, select **Control**, then select **Create Blackout** or **End Blackout**, respectively.

5.8.4 Removing an Exalytics Machine Target

To remove an Exalytics machine target from an Exalytics System, do the following:

1. From the **Targets** menu, select **Exalytics**. On the Systems page, click on the expansion button of the Exalytics System that contains the Exalytics target that you want to access. A list of Exalytics targets is displayed.
2. Select the Exalytics target that you want. This takes you to the Exalytics Machine home page.
3. On the Exalytics system home page, select an Exalytics machine target.
4. On the Exalytics machine home page, from the Exalytics Machine menu, select **Target Setup**, and then **Remove. Target...**
5. A warning will be displayed, asking if you want to proceed. Click **Remove**.

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