



OMi Management Pack for Oracle WebLogic

Software Version: 2.00

Operations Manager i for Linux and Windows® operating systems

User Guide

Document Release Date: September 2017

Software Release Date: September 2017



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Chapter 1: OMi Management Pack for Oracle WebLogic

The OMi Management Pack for Oracle WebLogic (OMi MP for Oracle WebLogic) works with Operations Manager i (OMi) and enables you to monitor primary and advanced areas of your WebLogic Application Server environment and the underlying infrastructure. It includes Indicators - Health Indicators (HIs), Event Type Indicators (ETIs), and Correlation Rules that analyze different events that occur in your WebLogic Application Server, and report the health status of the WebLogic Application Server Environment. It also includes out-of-the-box Management Templates for monitoring the availability, health, and performance of WebLogic Application Server. These Management Templates consists of a wide range of Aspects which enable monitoring of primary and advanced server areas, as well as critical infrastructure elements in your WebLogic Application Server environment. The Management Templates can be deployed by administrators for monitoring your WebLogic Application Server.

The Management Templates can also be customized by Subject Matter Experts (SMEs) and developers to suit different monitoring requirements.

OMi MP for Oracle WebLogic provides the following salient features:

- WebLogic Application Server instance based deployment and configuration
- Supports Operations Agent and Agentless monitoring of WebLogic Application Server instances

Deployment Scenarios

This section provides information about deploying OMi MP for Oracle WebLogic on different WebLogic Server configurations. OMi MP for Oracle WebLogic can be used to monitor the following configurations:

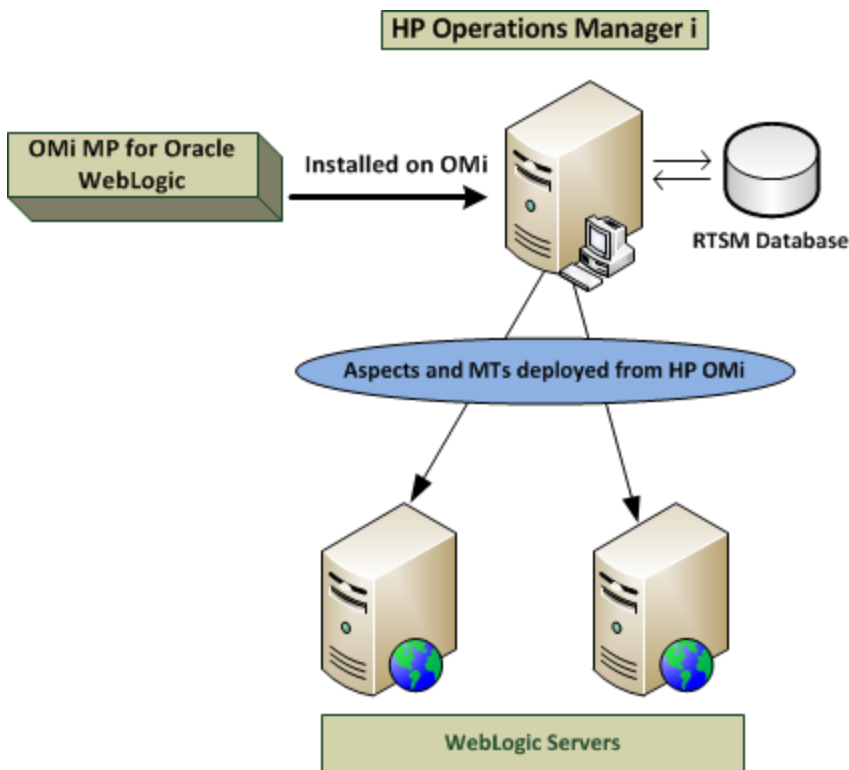
- Single Domain
- Cluster
- Secure configurations with LDAP or SSL authentication
- High Availability Environment (Hardware Cluster)

WebLogic Application Servers in a Standard Environment

WebLogic Standard environment consists of standalone WebLogic Servers monitored by a management server. To deploy OMi MP for Oracle WebLogic in a standard environment, follow these steps:

1. You must add the nodes you want to monitor to the OMi 10.x Console. For more information, see ["Task 1: Adding Nodes to OMi Console"](#).
2. Deploy the WebLogic Discovery Aspect to discover WebLogic Application Server CIs on the managed nodes. For more information, see ["Task 4: Deploying Weblogic Discovery Aspect"](#).
3. Identify and deploy WebLogic Management Template as per your monitoring requirement. For more information, see ["Task 6a: Identifying and Deploying WebLogic Management Templates"](#).

The following figure shows a typical deployment scenario where the OMi MP for Oracle WebLogic is deployed on WebLogic Servers in Standard Non-cluster environment:



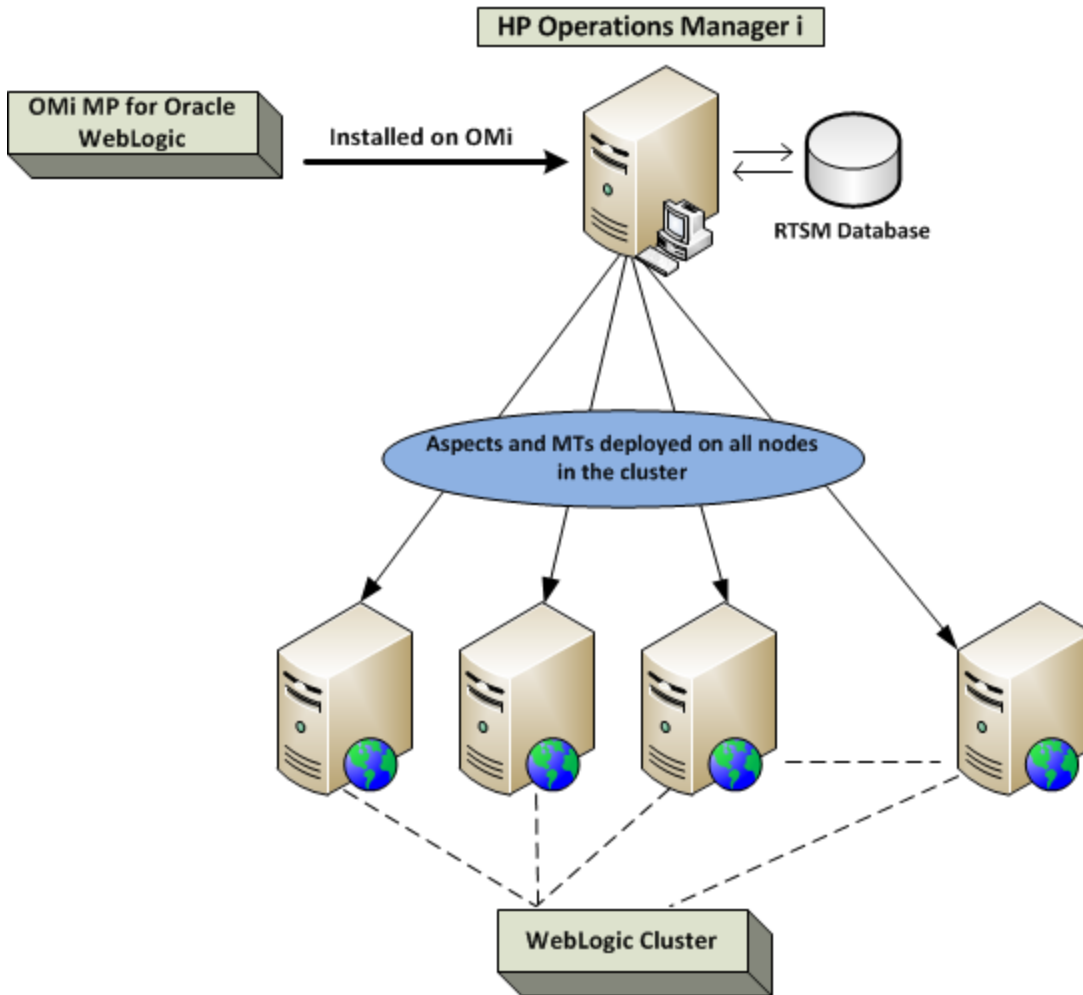
WebLogic Application Servers in Cluster Environment

WebLogic cluster environment consists of different WebLogic server instances connected to each other operating simultaneously to provide high availability and scalability. To deploy OMi MP for Oracle WebLogic in WebLogic cluster environment, follow these steps:

Note: OMi MP for Oracle WebLogic must be deployed on all WebLogic Application Servers in the WebLogic cluster environment you want to monitor.

1. You must add the nodes you want to monitor to the OMi 10.x Console. For more information, see ["Task 1: Adding Nodes to OMi Console"](#).
2. Deploy the WebLogic Discovery Aspect to discover WebLogic CIs on the managed nodes in the cluster. For more information, see ["Task 4: Deploying Weblogic Discovery Aspect"](#).
3. Deploy Extensive WebLogic Management Template on all nodes in the cluster you want to monitor. For more information, see ["Task 6a: Identifying and Deploying WebLogic Management Templates"](#).

The following figure shows a typical deployment example where the OMi MP for Oracle WebLogic is deployed in WebLogic Server cluster:




Note: To verify discovery for cluster environment, in the **View Explorer** of **Event Perspective**, select the **J2EE_Deployment** view.




WebLogic Application Servers Using LDAP or SSL Authentication Providers


WebLogic Application Servers can be configured using authentication providers like Secure Sockets Layer (SSL) and Lightweight Directory Access Protocol (LDAP) to provide a secure and stable server environment. To deploy OMi MP for Oracle WebLogic on WebLogic Application Servers using SSL and LDAP authentication, follow these steps:

1. You must add the nodes you want to monitor to the OMi 10.x Console. For more information, see ["Task 1: Adding Nodes to OMi Console"](#).
2. Deploy the WebLogic Discovery Aspect to discover WebLogic Application Server CIs on the managed nodes:
 - a. Open the Management Templates & Aspects pane:

On OMi 10.x, click **Administration > Monitoring > Management Templates and Aspects**
 - b. In the Configuration Folders pane:

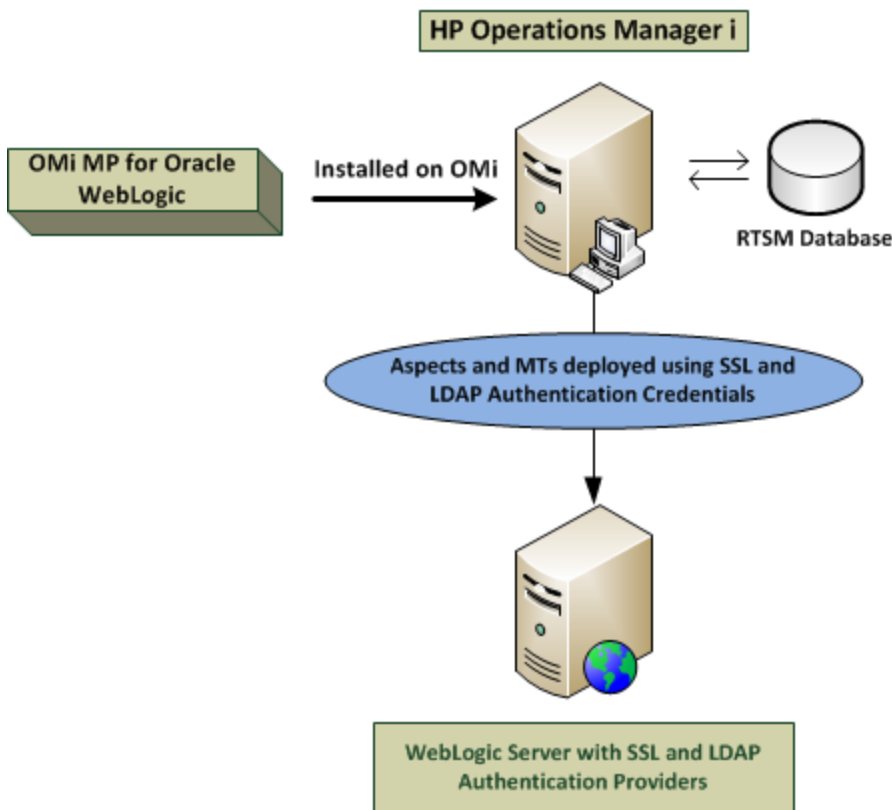
Click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Aspects**.
 - c. In the WebLogic Aspects folder, click the **Weblogic Discovery** Aspect, and then click  to open the Assign and Deploy Wizard.
 - d. In the **Configuration Item** tab, click the configuration item to which you want to deploy the Discovery Aspect and then click **Next**.

The **Required Parameters** tab opens.
 - e. In the **Required Parameters** tab, you must specify the mandatory parameters, Username and Password.
 - i. Select the **Weblogic Username** parameter in the list, and then click . The Edit Parameter: Weblogic Username dialog box opens.
 - ii. Click **Value**, specify your LDAP username depending on the type of authentication, and then click **OK**.
 - iii. Select the **Weblogic Password** parameter in the list, and then click . The Edit Parameter: Weblogic Password dialog box opens.
 - iv. Click **Value**, specify your LDAP password depending on the type of authentication, and then click **OK**.
 - f. Click **Next** to go to **Parameter Summary** tab on OMi 10.x. To change the default values of the parameters, you can select the parameter and then click . The Edit Parameter dialog box opens. Click **Value**, specify the value, and then click **OK**.

Note: In the **Parameter Summary** tab, you can override the default values of any parameter. You can specify a value for each parameter at the Aspect level. By default, parameters defined as expert parameters are not shown. To show expert parameters, click  **Show Expert Parameters**.

- g. Click **Next**.
- h. (Optional). If you do not want to enable the assignment immediately, clear the **Enable Assignment(s)** check box on OMi and . You can then enable the assignment later using the Assignments and Tuning manager.
- i. Click **Finish**.

The following figure shows a typical deployment example where the OMi MP for Oracle WebLogic is deployed on WebLogic Servers using SSL or LDAP Authentication Providers:



WebLogic Application Servers in High Availability Environment

To deploy OMi MP for Oracle WebLogic in high availability environment, follow these steps:

1. You must add the nodes you want to monitor to the OMi 10.x Console. For more information, see ["Task 1: Adding Nodes to OMi Console"](#).

2. Deploy the WebLogic Discovery Aspect to discover WebLogic Application Server CIs on the managed nodes. For more information, see ["Task 4: Deploying Weblogic Discovery Aspect"](#).
3. Identify and deploy Weblogic Management Template as per your monitoring requirement. For more information, see ["Task 6a: Identifying and Deploying WebLogic Management Templates"](#).
4. Create the OMi MP for Oracle WebLogic monitoring configuration file. To create the clustered application configuration file for your WebLogic environment, follow these steps:
 - a. Use the following syntax to create the `WebLogic.apminfo.xml` file:

Note: OMi MP for Oracle WebLogic uses a monitoring configuration file `WebLogic.apminfo.xml` that works in conjunction with the clustered application configuration file. The `WebLogic.apminfo.xml` file lists all the WebLogic Management Templates on the managed node so that you can disable or enable these templates as appropriate, for inactive and active managed nodes.

```
<?xml version="1.0"?>
<APMApplicationConfiguration>
<Application>
<Name> ... </Name>
<Template> ... </Template>
<StartCommand>Weblogic_Perl Weblogic_Config.pl</StartCommand>
<StopCommand>Weblogic_Perl Weblogic_Config.pl stopMonitoring</StopCommand>
</Application>
</APMApplicationConfiguration>
```

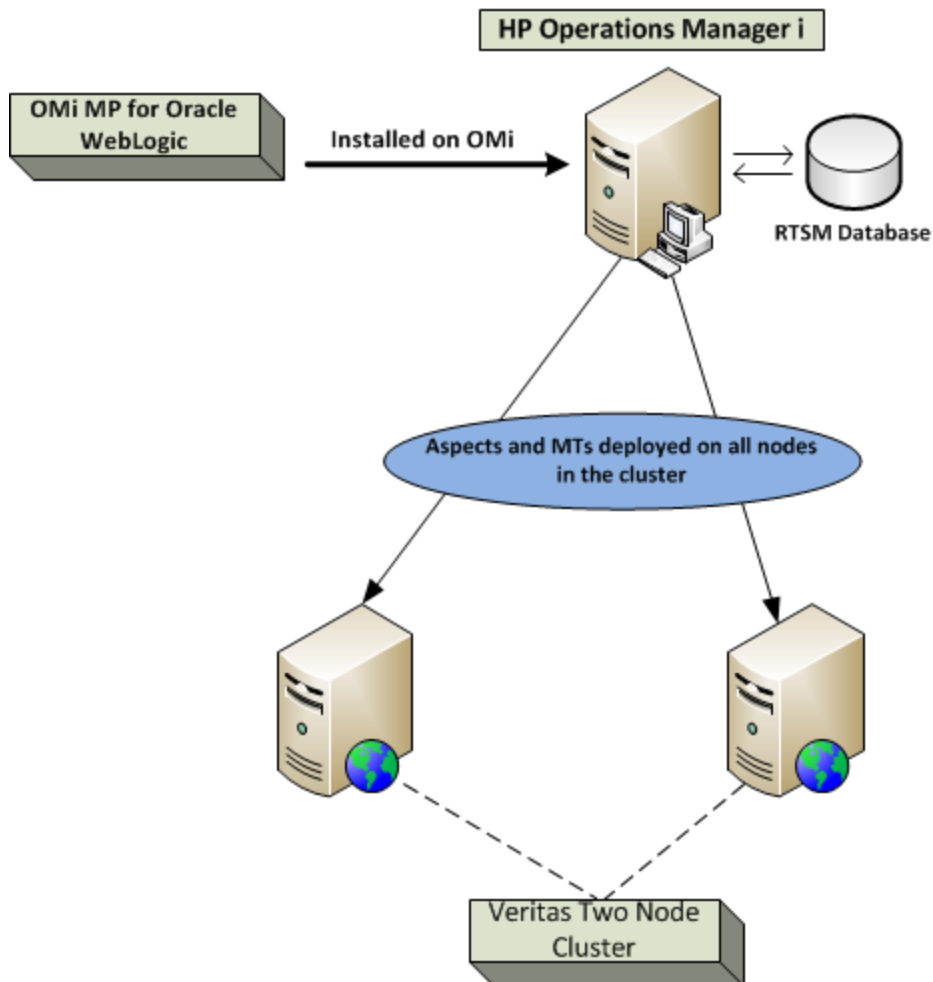
- b. Type the **namespace_name** within the `<Name></Name>` tag.
 - c. For HTTPS agent save it in the `%OVADATADIR%/bin/instrumentation/conf` directory.
5. Create the clustered application configuration file. To create the clustered application configuration file `apminfo.xml` follow these steps:
 - a. Use a text editor to create the file. The syntax is:

```
<?xml version="1.0" ?>
<APMClusterConfiguration>
<Application>
<Name>namespace_name</Name>
<Instance>
```

```
<Name><Instance Name></Name>  
<Package><Package Name></Package>  
</Instance>  
<Application>  
</APMClusterConfiguration>
```

- b. Type **namespace_name** within the <Name></Name> tag.
- c. Save the apminfo.xml file in the %OVADATADIR%/conf/conf directory for HTTPS Agent.

The following figure shows a typical deployment example where the OMi MP for Oracle WebLogic is deployed in Veritas Two Node Cluster:



Dependent Management Packs

The Weblogic Management Pack is dependent on the following Management Pack:

- Infrastructure
- Oracle


Chapter 2: Getting Started

The following section provides step-by-step information about deploying out of the box components of OMi Management Pack for Oracle WebLogic on OMi.

Task 1: Adding Nodes to OMi Console

Note: If the Node already exists in RTSM, you can skip this step and proceed to Task 2.

Before you begin monitoring, you need to add the nodes to the OMi console.

1. Open the Monitored Nodes manager from the Operations Management Administration:
Click **Administration > Setup and maintenance > Monitored Nodes**
2. In the Node Views pane, click **Predefined Node Filter > Monitored Nodes** and then click  and then select **Computer > Windows or Unix**. The Create New Monitored Nodes dialog box appears.
3. Specify the Primary DNS Name, IP Address, Operating System, and Processor Architecture of the node and click **OK**.

Task 2: Checking the Topology Synchronization Settings


Note: It is recommended to check the Topology Synchronization settings if a Node or a CI is monitored by HP Operations Manager.

1. Open the **Infrastructure Settings** from the Operations Management Administration:
Click **Administration > Setup and Maintenance > Infrastructure Settings**
2. In the Infrastructure Settings manager, select **Applications > Operations Management**.
3. In the Operations Management - HPOM Topology Synchronization Settings, Topology Sync contain the packages that are used for topology synchronization. Make sure you have -

default;nodegroups;operations-agent;HPOprSys;HPOprJEE along with other Topology Sync packages.

Task 3: Enabling the Enrichment Rules

The Enrichment Rules must be enabled to reconcile more than one j2eedomain CIs with the same name as a single CI entity. To enable the enrichment rules, follow these steps:

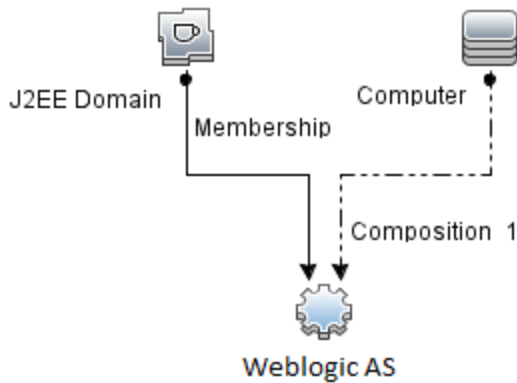
1. Open the Enrichment Manager:
Click **Administration > RTSM Administration > Modeling > Enrichment Manager**
2. In the Enrichment Rules pane, select **SoftwareElementDisplayLabelForNewHost** from the list.
3. Right-click and select **Properties**. The Enrichment Rule Properties window appears.
4. Click **Next**.
5. Select **Rule is Active**.
6. Click **Finish**.
7. In the Enrichment Rules pane, click  to save the changes.
8. In the Enrichment Rules pane, click **Root > Operations Management > J2EE Application Servers**.
9. Select **WebLogicJ2EEDomainReconciliation** and repeat steps 3 to 7.

Task 4: Deploying Weblogic Discovery Aspect

The Weblogic Discovery aspect enables you to discover WebLogic Server instances in your environment. To discover the WebLogic Application Server Configuration Items (CIs) on the added managed nodes, you must deploy the Weblogic Discovery aspect to a Computer CI.

The Weblogic Discovery aspect deployment discovers the CIs of the following CI types (CITs):

- j2eedomain
- weblogicas




To deploy the Weblogic Discovery aspect, follow these steps:

1. Open the Management Templates & Aspects pane:


Click **Administration > Monitoring > Management Templates and Aspects**

2. In the Configuration Folders pane:


Click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Aspects**

3. In the Aspects folder, click **Weblogic Discovery** aspect, and then click  to open the Assign and Deploy Wizard.
4. In the Configuration Item page, click the configuration item to which you want to deploy the Discovery Aspect and then click **Next**.

The **Required Parameters** tab opens and a message appears stating that there are no parameters that require editing for this Assignment.

5. In the **Required Parameters** tab, click **Next** to go to **Parameter Summary**.
6. (Optional). In the **Parameter Summary** tab, to change the default values of the parameters, you can select the parameter and then click . The **Edit Parameter** dialog box opens. Click **Value**, specify the value, and then click **OK**.

Note: In the **Parameter Summary** tab, you can override the default values of any parameter.

You can specify a value for each parameter at the Aspect level. By default, parameters defined as expert parameters are not shown. To show expert parameters, click .

Hide/Unhide Expert Parameters.

7. Click **Next**.

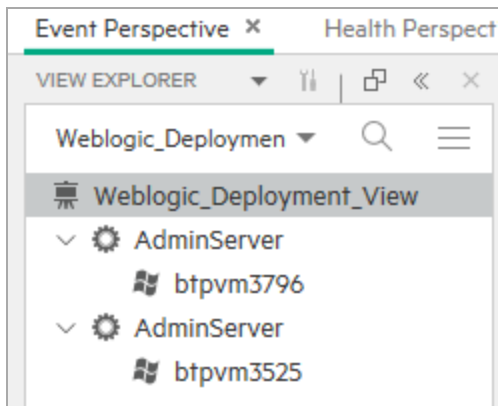
8. *(Optional)*. If you do not want to enable the assignment immediately, clear the **Enable Assignment(s)** check box. You can then enable the assignment later using the Assignments & Tuning pane.
9. Click **Finish**.

Note: After the WebLogic Discovery Aspect is deployed, a message stating the Assignment and deployment jobs created appears. To check the status of the deployment jobs, go to **Administration > Monitoring > Deployment Jobs**.

Task 5: Verifying Discovery

After you deploy the Discovery Aspect, you must verify if the CIs are populated in the View Explorer. To verify the CIs populated, follow these steps:

1. Open the Event Perspective pane:
On OMi 10.x, click **Workspaces > Operations Console > Event Perspective**.
2. In the View Explorer, select **Weblogic_Deployment_View** view from the drop-down list to see the associated CIs.



Task 6: Deploying the WebLogic Management Templates or WebLogic Aspects

If you are using **Monitoring Automation for Composite Applications** license, you can either deploy WebLogic Management Templates to the j2eedomain CI or WebLogic Aspects to the weblogicas CIs. For more information about deploying WebLogic Management Templates, go to "[Task 6a: Identifying and Deploying WebLogic Management Templates](#)". For more information about deploying WebLogic Aspects, go to "[Task 6b: Deploying WebLogic Aspects](#)".

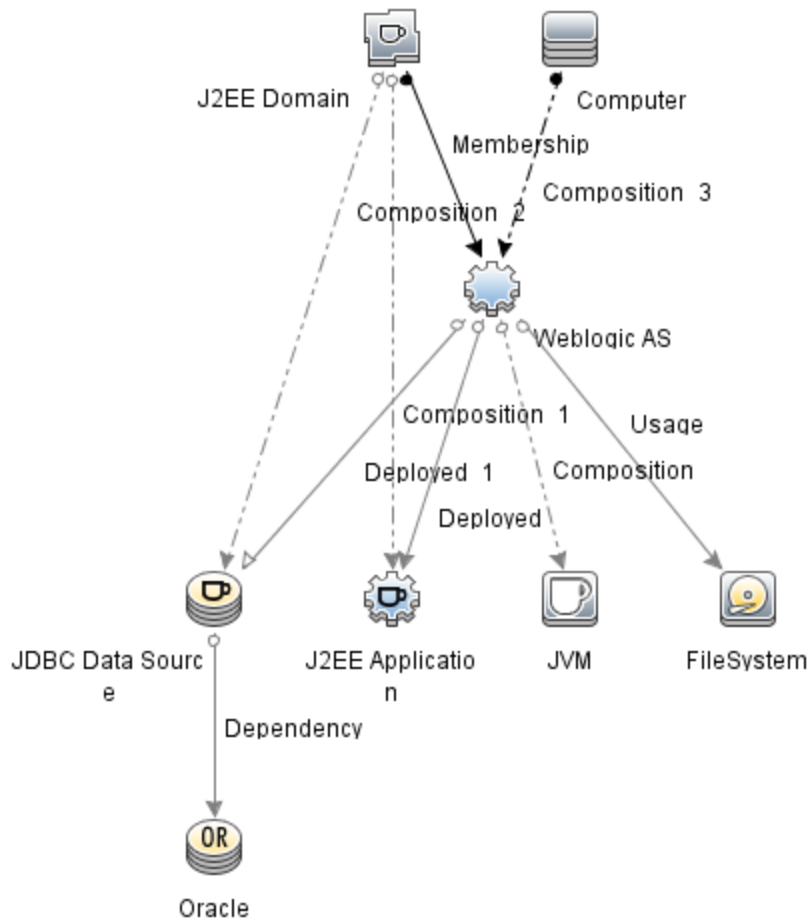
If you are using **Monitoring Automation for Servers** license, you can deploy WebLogic Aspects. For more information about deploying WebLogic Aspects, go to "[Task 4: Deploying Weblogic Discovery Aspect](#)".

Task 6a: Identifying and Deploying WebLogic Management Templates

Before deploying the WebLogic Management Templates, you must deploy Weblogic Discovery Aspect. For more information, see "[Task 4: Deploying Weblogic Discovery Aspect](#)".

The WebLogic Management Template discovers the CIs of the following CITs and completes the topology as shown in the following figure:

- JVM
- J2EE Application
- JDBC Data Source



You can identify the WebLogic Management Template suitable for your environment by following these recommendations:

- If you want to monitor primary components of WebLogic Application Server like server status, JVM, JDBC, EJB, Servlets, and Server logs along with critical Infrastructure components (CPU, Memory, and Disk), you can deploy Essential Weblogic Management Template.
- If you want to monitor the basic components along with the advanced components of WebLogic Application Server like Transactions, Cluster status, Cache usage, Threads, Server Logs and Infrastructure components (CPU, Memory, Disk), you can deploy Extensive Weblogic Management Template.
- If you want to monitor the advanced components of WebLogic Server Applications, along with Oracle database components (Basic Query, Memory), and Infrastructure components, you can deploy Extensive Weblogic and Database Management Template.
- If you want to monitor the primary components of your WebLogic Application Server along with

critical infrastructure areas of CPU, Memory, Disk, including WebLogic Application Server Port and Application URL availability (monitored using Weblogic Agentless Aspect), you can deploy Hybrid Weblogic Management Template.



To deploy the WebLogic Management Templates other than Extensive Weblogic and Database Management Template, follow these steps. For details about deploying Extensive Weblogic and Database Management Template, see *Deploying Extensive Weblogic and Database Management Template* in the *Online Help*.

1. Open the Management Templates and Aspects manager:

Click **Administration > Monitoring > Management Templates & Aspects**


2. In the Configuration Folders pane:

Click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates**

3. In the WebLogic Management Templates folder, click the Management Template that you want to deploy, and then click . The Assign and Deploy wizard opens.
4. In the **Configuration Item** tab, click the WebLogic Domain CI to which you want to assign the Management Template, and then click **Next**. You can select multiple items by holding down the **CTRL** or **SHIFT** key while selecting them. Click **Next** to accept the CIs and go to **Required Parameters** tab.
5. In the **Required Parameters** tab, you must specify the values of mandatory Parameters, **Username** and **Password**. To specify the values of the parameters, you can select the parameter and then click . The Edit Parameter dialog box opens. Click **Value**, specify the value, and then click **OK**.

Note: The credentials given during the deployment of WebLogic Aspects should have required privileges. For more information, see [User Privileges](#).

6. Click **Next** to go to **Parameter Summary** tab.
7. (Optional). In the **Parameter Summary** tab, you can edit the values.

To change the default values of the parameters, you can select the parameter and then click . The Edit Parameter dialog box opens. Click **Value**, specify the value, and then click **OK**.

Note: In the **Parameter Summary** tab, you can override the default values of any parameter. You can specify a value for each parameter at the Management Template level. By default,

parameters defined as expert parameters are not shown. To show expert parameters, click



Hide/Unhide Expert Parameters.

Note: For SSL configurations, you must specify value for **Weblogic KeyStore Path** and **Weblogic Passphrase Password** parameters.

8. Click **Next**.
9. *(Optional)*. If you do not want to enable the assignment immediately, clear the **Enable Assignment(s)** check box. You can then enable the assignment later using the Assignments & Tuning pane.
10. Click **Finish**.

Task 6b: Deploying WebLogic Aspects


Before deploying the WebLogic Aspects, you must deploy the Weblogic Base Aspect to discover the CIs of the following CITs:

- JVM
- J2EE Application
- JDBC Data Source

To deploy the Weblogic Base Aspects, follow these steps:


1. Open the Management Templates and Aspects pane:
Click **Administration > Monitoring > Management Templates and Aspects**
2. In the Configuration Folders pane:
Click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Aspects > Weblogic Base**
3. In the Weblogic Aspects folder, click **Weblogic Base**, and then click . The Assign and Deploy Wizard opens.
4. In the **Configuration Item** tab, select the WebLogic CI and then click **Next**. You can select multiple items by holding down the **CTRL** or **SHIFT** key while selecting them. Click **Next** to accept the CIs and go to **Required Parameters** tab.


Note: If you want to deploy Aspects to Node Cls, select **Show All Cls of Type Node**.

5. In the **Required Parameters** tab, you must specify the values of mandatory Parameters, **Username** and **Password**. To specify the values of the parameters, you can select the parameter and then click . The Edit Parameter dialog box opens. Click **Value**, specify the value, and then click **OK**.

Note: The credentials given during the deployment of a Management Template should have required privileges. For more information, see [User Privileges](#).

6. Click **Next** to go to **Parameter Summary** tab.
7. *(Optional)*. In the **Parameter Summary** tab, you can edit the values.

To change the default values of the parameters, you can select the parameter and then click . The Edit Parameter dialog box opens. Click **Value**, specify the value, and then click **OK**.


Note: In the **Parameter Summary** tab, you can override the default values of any parameter. You can specify a value for each parameter at the Management Template level. By default, parameters defined as expert parameters are not shown. To show expert parameters, click  **Hide/Unhide Expert Parameters**.

Note: For SSL configurations, you must specify value for **Weblogic KeyStore Path** and **Weblogic Passphrase Password** parameters.


8. Click **Next**.
9. *(Optional)*. If you do not want to enable the assignment immediately, clear the **Enable Assignment(s)** check box. You can then enable the assignment later using the Assignments & Tuning pane.
10. Click **Finish**.

To deploy the remaining Weblogic Aspects, follow these steps:


1. Open the Management Templates & Aspects pane:
Click **Administration > Monitoring > Management Templates & Aspects**
2. In the Configuration Folders pane:
Click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Aspects**

3. In the Aspects folder, click the WebLogic Aspect that you want to deploy, and then click . The Assign and Deploy wizard opens.
4. In the **Configuration Item** tab, click the CI to which you want to assign the Weblogic Aspect, and then click **Next**. You can select multiple items by holding down the **CTRL** or **SHIFT** key while selecting them. Click **Next** to accept the CIs and go to **Required Parameters**.

Note: If you want to deploy Aspects to Node CIs, select **Show All CIs of Type Node**.

5. In the **Required Parameters** tab, you must specify the values of mandatory Parameters, **Username** and **Password**. To specify the values of the parameters, you can select the parameter and then click . The Edit Parameter dialog box opens. Click **Value**, specify the value, and then click **OK**.

Note: The credentials given during the deployment of WebLogic Aspects should have required privileges. For more information, see [User Privileges](#).

6. Click **Next** to go to **Parameter Summary** tab.
7. In the **Parameter Summary** tab, you can override the default value of any parameter. You can specify a value for each parameter at the Management Template level. By default, parameters defined as expert parameters are not shown. To show expert parameters, click  **Hide/Unhide Expert Parameters**.
8. Click **Next**.
9. *(Optional)*. If you do not want to enable the assignment immediately, clear the **Enable Assignment(s)** check box. You can then enable the assignment later using the Assignments & Tuning pane.
10. Click **Finish**.

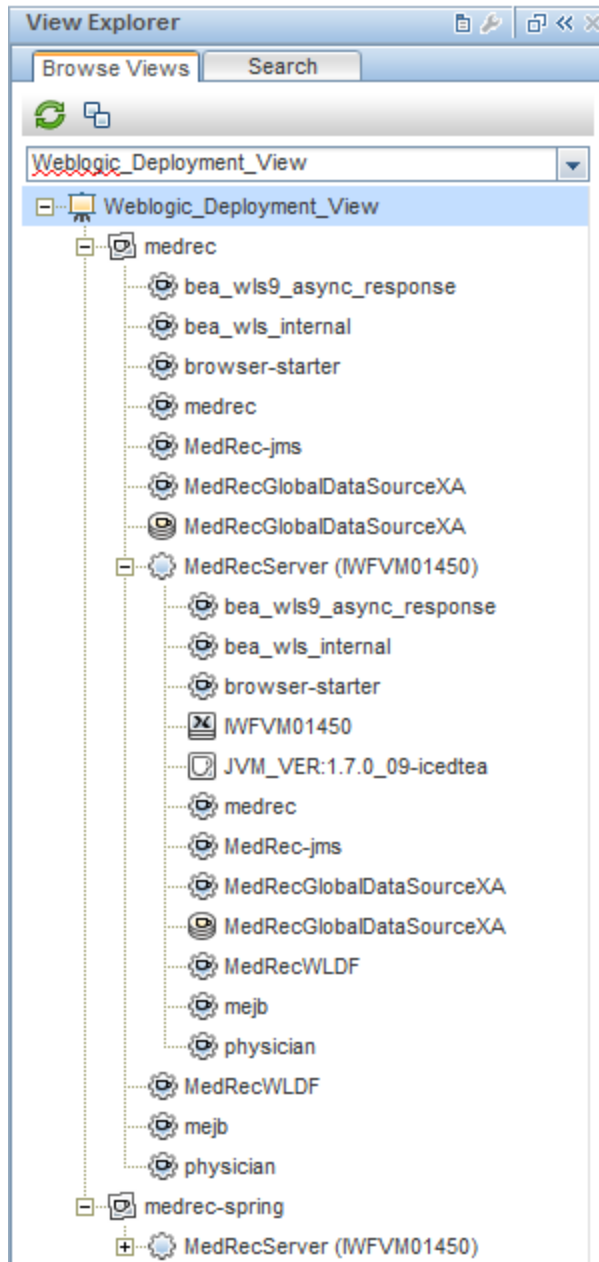
Task 7: Verifying Discovery for Extended Topology

After you deploy the Weblogic Management Templates or Weblogic Base aspect, you can verify if the CIs are populated in the View Explorer.

To view the CIs in the View Explorer, follow these steps:

1. In the OMi Console, click **Applications > Operations Management > Event Perspective**.

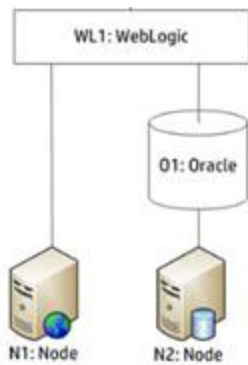
- In the View Explorer, select **Weblogic_Deployment_View** from the drop-down list. You can see the extended topology comprising CIs associated with the **Weblogic_Deployment_View** as shown in the following figure.



Composite Applications

This section provides information about monitoring Composite Application that includes WebLogic Application Server, Oracle Database and its infrastructure.

Consider an enterprise environment topology for an instance of Composite Application as shown in the following figure that consists of WebLogic server, Oracle Database and Nodes connected to WebLogic Server and Oracle Database. To monitor WebLogic Application Servers, Oracle instances, and infrastructure elements you must deploy Extensive Weblogic and Database Management Template.



Monitor Composite Application



To monitor an instance of a composite application, follow these steps:

1. Perform [Task 1](#) to [Task 7](#) in Getting Started.
2. Deploying Extensive Weblogic and Database Management Template

Before deploying the WebLogic Management Templates, you must deploy the WebLogic Discovery Aspect. For more information, see "[Task 1: Adding Nodes to OMi Console](#)".


The WebLogic Management Template discovers the CIs of the following CITs and completes the topology as shown in the following figure:

- JVM
- Application Servers
- JDBC and underlying databases
- Oracle

- a. Open the Management Templates and Aspects manager:
Click **Administration > Monitoring > Management Templates & Aspects**
- b. In the Configuration Folders pane:
Click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates > Extensive Weblogic and Database Management Template**
- c. Click **Extensive Weblogic and Database Management Template** and then click  to open Assign and Deploy wizard.
- d. In the **Configuration Item** tab, click the WebLogic Domain CI to which you want to assign the Management Template, and then click **Next**. You can select multiple items by holding down the **CTRL** or **SHIFT** key while selecting them.
- e. In the **Required Parameters** tab, you must specify the values of mandatory parameters, **Username** and **Password**. To specify the values of the parameters, you can select the parameter and then click . The Edit Parameter dialog box opens. Click **Value**, specify the value, and then click **OK**.

Note: You must specify all the values of the parameters to be able to continue the configuration process.

- f. In the **Parameter Summary** you can change default values of the parameters.

Note: In the **Parameter Summary**, you can override the default values of any parameter. You can specify a value for each parameter at the Management Template level. By default, parameters defined as expert parameters are not shown. To show expert parameters, click  **Show Expert Parameters**.

- g. Click **Next**.
- h. (Optional). If you do not want to enable the assignment immediately, clear the **Enable Assignment(s)** check box. You can then enable the assignment later using the Assignments & Tuning pane.
- i. Click **Finish**.

Note: The credentials given during the deployment of a Management Template should have required privileges for OMi MP for Oracle WebLogic to collect data. For more information see the section *User Privileges* in the *OMi MP for Oracle WebLogic Installation Guide*.

After you deploy the Extensive Weblogic and Database Management Template, the WebLogic Aspects gets deployed on the WebLogic Application Server CIs, Infrastructure Aspects are deployed on the Node CIs, and the Oracle Aspects are deployed on the Oracle CIs related to JDBC data source. This ensures the composite application is monitored from a single deployment.

After you deploy the Weblogic Management Templates or Weblogic Base Aspect, you can verify if the CIs are populated in the View Explorer.

To view the CIs in the View Explorer, follow these steps:

- a. Open Event Perspective pane:

Click **Workspaces > Operation Console > Event Perspective**.

- b. In the View Explorer, select **J2EE_Database_Deployment** from the drop-down list. You can see the extended topology comprising CIs associated with the **J2EE_Database_Deployment**.

Chapter 3: Components

The OMi MP for Oracle WebLogic includes the following components for monitoring WebLogic Application Servers in your environment:

- "Weblogic Management Templates"
- "WebLogic Aspects"
- "Parameters"
- "Configuration Items and Configuration Item Types"
- "Run-time Service Model Views"
- Event Type Indicators (ETIs)
- Health Indicators (HIs)
- Topology Based Event Correlation (TBEC) Rules
- "Operations Orchestration (OO) Flows"
- "HI Assignment"
- "KPI Assignment"
- "Performance Dashboard"
- "Tools"

Weblogic Management Templates

The WebLogic Management Templates provide a complete management solution for monitoring the health and performance of Weblogic servers in your environment.

By default, OMi MP for Oracle WebLogic comprises four sets of Management Templates with predefined set of Aspects. You can deploy the out-of-the-box Management Templates or can customize the Management Templates based on your monitoring requirements. You can also create Management Templates using the WebLogic Aspects to monitor the WebLogic servers in your environment.

Overview

OMi MP for Weblogic comprises the following Weblogic Management Templates:

- ["Essential Weblogic Management Template"](#)
- ["Extensive Weblogic Management Template"](#)
- ["Extensive Weblogic and Database Management Template"](#)
- ["Hybrid Weblogic Management Template"](#)

How to Access Management Template

1. Open Management Templates & Aspects pane:
Click **Administration > Monitoring > Management Templates & Aspects**.
2. Click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates**.


Tasks

How to Deploy Weblogic Management Templates

For more information about deploying WebLogic Management Templates, see ["Task 5a: Identifying and Deploying WebLogic Management Templates"](#).

How to Automatically Assign WebLogic Management Templates and Weblogic Aspects

To automatically assign WebLogic Management Templates or WebLogic Aspects, you must specify the required privileges.

1. Go to the Auto-Assignment screen - (**Administration > Monitoring > Assignments & Tuning**).
The screen consists of the Auto-Assignment pane at the top, and a parameter list at the bottom.
2. From Browse Views, select the WebLogic view containing the CIs for which you want to create an automatic assignment.
3. Click  **New Assignment** in the toolbar of the Auto-Assignment pane and select the appropriate option. The Create Auto-Assignment wizard is shown.
4. In Select Configuration Object, click the Weblogic Management Template or Aspect that you want

to automatically assign to all CIs with a CI type appearing in the selected view.

Note: The list shows only the management templates that have a root CI type that appears in the view that you selected or, in case an Aspect is auto-assigned, compatible Aspects.

The latest version of the Management Template or Aspect that you want to assign is selected by default. If required, select a different version in column **Version**.


Click **Next** to go to **Required Parameters**.

5. This step lists all mandatory parameters in the management template that do not yet have a value. As they are mandatory, however, all listed parameters must be given a value before the management template can be deployed.

If all required values are specified, you can choose one of the following actions:

- Click **Finish** to assign the configuration object to the selected CI and close the wizard or dialog.
- Click **Next** to go to **Parameter Summary**, where you can override the default value of any parameter, including those that are not required.

Note: To access step Configure Options, click **Next** in this step, and **Next** again in **Parameter Summary**.

To change a parameter, double-click it, or select it in the list and click  **Edit**.

- For standard parameters, the Edit Parameter dialog opens.


Click **Value**, specify the value, and then click **OK**.

- For instance parameters, the Edit Instance Parameter dialog opens.

Add instance values, and then for each instance value, specify dependent parameter values.

After you specify the instances and dependent parameter values, click **OK**.

6. (Optional). In **Parameter Summary**, specify a value for each parameter that needs to be monitored against a different value than the default value.

To change a parameter, double-click it, or select it in the list and click  **Edit**.


- For standard parameters, the Edit Parameter dialog opens.

Click **Value**, specify the value, and then click **OK**.

7. (Optional). In step Configuration Options, clear the **Activate Auto-Assignment Rule** check box if you do not want to activate the assignment rule immediately.

8. Click **Finish** to save the changes and close the wizard. The assignment rule is added to the list of auto-assignment rules.

How to Deploy an Assignment Report for a WebLogic Management Template

1. Select the Management Template you want to create the report.
2. Click  **Generate Assignment Report** in the Management Templates & Aspects pane. The pre configured *Assignment Report* is displayed.

You can display additional types of reports from the **Assignments & Tuning** pane.

Essential Weblogic Management Template

The Essential Weblogic Management Template monitors the primary components of your Weblogic server along with critical infrastructure areas of CPU, Memory, and Disk.

How to Access Essential Weblogic Management Template

1. Open Management Templates & Aspects pane:
Click **Administration > Monitoring > Management Templates & Aspects**.
2. In the Configuration Folder pane, click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates > Essential Weblogic Management Template**.

User Interface Reference

Management Template - General

Provides an overview of the attributes of the Management Template.

UI Element	Description
Name	Essential Weblogic Management Template.
Description	The description of the Management Template.
ID	A unique identifier for GUI version of the Management Template.
Version ID	A unique identifier for this version of the Management Template.

UI Element	Description
Version	The current version of the Management Template. In this instance, the version of the Management Template is 1.1.
Change Log	The text that describes what is new or modified in this version of the Management Template.

Management Template - Topology View

Provides an overview of the CI type you want to assign to the Management Template.

UI Element	Description
Topology View	Weblogic_Deployment_View is the topology view for Essential WebLogic Management Template. It contains the CI types that you want to manage using the Management Template.
CI Type	The type of CIs managed by Essential WebLogic Management Template. This is the type of CI to which the Management Template can be assigned. The Essential WebLogic Management Template contains WebLogic Application Server CI Types.

Management Template - Aspects

The Essential WebLogic Management Template consists of the following Aspects.

- WebLogic Base
- Weblogic EJB Performance
- WebLogic JDBC Connection Pool Status
- WebLogic JVM Heap Memory
- WebLogic Server Status
- WebLogic Servlet Performance

The Essential WebLogic Management Template consists of the following Infrastructure Aspects to monitor Infrastructure elements:

Resource Bottleneck Diagnosis

The Resource Bottleneck Diagnosis Aspect identifies congestion and bottleneck conditions for system resources like the CPU, memory, network, and disk. CPU bottleneck monitoring is based on global CPU utilization and load average (Run Queue Length). Memory bottleneck monitoring is based on memory utilization, free memory available, and memory swap out rate. File system monitoring is based on space utilization level for busiest file system on the node. Network monitoring is based on Packet collision rate, packet error rate, and outbound queue length.

System Fault Analysis

The System Fault Analysis Aspect monitors the kernel log file, boot log file, and event log file for critical error conditions and instructions.

System Infrastructure Discovery

The System Infrastructure Discovery Aspect discovers and gathers information regarding the system resources, operating system, and applications on a managed node.

Extensive Weblogic Management Template

The Extensive Weblogic Management Template monitors advanced components of your WebLogic server along with basic components of Infrastructure and Oracle Database.

How to Access Extensive Weblogic Management Template

1. Open Management Templates & Aspects pane:
Click **Administration > Monitoring > Management Templates & Aspects**.
2. In the Configuration Folder pane, click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates > Extensive Weblogic Management Template**.

User Interface Reference

Management Template - General

Provides an overview of the attributes of the Management Template.

UI Element	Description
Name	Extensive Weblogic Management Template.
Description	The description of the Management Template.
ID	A unique identifier for GUI version of the Management Template.
Version ID	A unique identifier for this version of the Management Template.
Version	The current version of the Management Template. In this instance, the version of the Management Template is 1.1.
Change	The text that describes what is new or modified in this version of the Management

UI Element	Description
Log	Template.

Management Template - Topology View

Provides an overview of the CI type you want to assign to the Management Template.

UI Element	Description
Topology View	Weblogic_Deployment_View is the topology view for Extensive WebLogic Management Template. It contains the CI types that you want to manage using the Management Template.
CI Type	The type of CIs managed by Extensive WebLogic Management Template. This is the type of CI to which the Management Template can be assigned. The Extensive WebLogic Management Template contains WebLogic Application Server CI Types.

Management Template - Aspects

The Extensive WebLogic Management Template consists of the following Aspects:

- WebLogic Authentication
- WebLogic Base
- WebLogic Cache Usage
- WebLogic Cluster Status
- WebLogic EJB Performance
- WebLogic JCA Statistics
- WebLogic JDBC Connection Pool Status
- WebLogic JMS Performance
- WebLogic JVM Heap Memory
- WebLogic Server Status
- WebLogic Servlet Performance
- WebLogic Thread Status
- WebLogic Transactions
- WebLogic Web Application Status

The Extensive WebLogic Management Template consists of the following Infrastructure Aspects to monitor Infrastructure elements:

Bandwidth Utilization and Network IOPS

The Bandwidth Utilization and Network IOPS Aspect monitors IO operations, and performance of the systems in the network. It monitors the network I/O operations and performance based on the bandwidth used, outbound queue length and average bytes transferred per second.

CPU Performance

The CPU Performance Aspect monitors the overall CPU performance like the CPU utilization percentage and spike in CPU usage. Individual CPU performance monitoring is based on total CPU utilization, CPU utilization in user mode, CPU utilization in system mode and interrupt rate.

Memory and Swap Utilization

The Memory and Swap Utilization Aspect monitors memory performance of the system. Memory performance monitoring is based on Memory utilization (in percentage), Swap space utilization (in percentage), Free memory available (in MBs) and Free swap space available (in MBs).

Remote Disk Space Utilization

The Remote Disk Space Utilization Aspect monitors space utilization of remote disk.

Resource Bottleneck Diagnosis

The Resource Bottleneck Diagnosis Aspect identifies congestion and bottleneck conditions for system resources like the CPU, memory, network, and disk. CPU bottleneck monitoring is based on global CPU utilization and load average (Run Queue Length). Memory bottleneck monitoring is based on memory utilization, free memory available, and memory swap out rate. File system monitoring is based on space utilization level for busiest file system on the node. Network monitoring is based on Packet collision rate, packet error rate, and outbound queue length.

Space Availability and Disk IOPS

The Space Availability and Disk IOPS Aspect monitors the disk IO operations and space utilization of the system.

System Fault Analysis

The System Fault Analysis Aspect monitors the kernel log file, boot log file, and event log file for critical error conditions and instructions.

System Infrastructure Discovery

The System Infrastructure Discovery Aspect discovers and gathers information regarding the system resources, operating system, and applications on a managed node.

Extensive Weblogic and Database Management Template

The Extensive Weblogic and Database Management Template monitors components of your WebLogic server along with basic components of Infrastructure and Oracle Database.

How to Access Extensive Weblogic and Database Management Template

1. Open Management Templates & Aspects pane:
Click **Administration > Monitoring > Management Templates & Aspects**.
2. In the Configuration Folder pane, click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates > Extensive Weblogic and Database Management Template**.

User Interface Reference

Management Template - General

Provides an overview of the attributes of the Management Template.

UI Element	Description
Name	Extensive WebLogic and Database Management Template
Description	The description of the Management Template.
ID	A unique identifier for GUI version of the Management Template.
Version ID	A unique identifier for this version of the Management Template.
Version	The current version of the Management Template. In this instance, the version of the Management Template is 1.1.
Change Log	The text that describes what is new or modified in this version of the Management Template.

Management Template - Topology View

Provides an overview of the CI type you want to assign to the Management Template.

UI Element	Description
Topology View	Weblogic_Deployment_View is the topology view for Extensive WebLogic and Database Management Template. It contains the CI types that you want to manage using the Management Template.
CI Type	The type of CIs managed by Extensive WebLogic and Database Management Template. This is the type of CI to which the Management Template can be assigned. The Extensive WebLogic and Database Management Template contains WebLogic Application Server CI Types.

Management Template - Aspects

The Extensive WebLogic and Database Management Template consists of the following Aspects:

- WebLogic Authentication
- WebLogic Base
- WebLogic Cache Usage
- WebLogic Cluster Status
- WebLogic EJB Performance
- WebLogic JCA Statistics
- WebLogic JDBC Connection Pool Status
- WebLogic JMS Performance
- WebLogic JVM Heap Memory
- WebLogic Server Status
- WebLogic Servlet Performance
- WebLogic Thread Status
- WebLogic Transactions
- WebLogic Web Application Status

The Extensive WebLogic and Database Management Template consists of the following Infrastructure Aspects to monitor Infrastructure elements:

Bandwidth Utilization and Network IOPS

The Bandwidth Utilization and Network IOPS Aspect monitors IO operations, and performance of the systems in the network. It monitors the network I/O operations and performance based on the bandwidth used, outbound queue length and average bytes transferred per second.

CPU Performance

The CPU Performance Aspect monitors the overall CPU performance like the CPU utilization percentage and spike in CPU usage. Individual CPU performance monitoring is based on total CPU utilization, CPU utilization in user mode, CPU utilization in system mode and interrupt rate.

Memory and Swap Utilization

The Memory and Swap Utilization Aspect monitors memory performance of the system. Memory performance monitoring is based on Memory utilization (in percentage), Swap space utilization (in percentage), Free memory available (in MBs) and Free swap space available (in MBs).

Remote Disk Space Utilization

The Remote Disk Space Utilization Aspect monitors space utilization of remote disk.

Resource Bottleneck Diagnosis

The Resource Bottleneck Diagnosis Aspect identifies congestion and bottleneck conditions for system resources like the CPU, memory, network, and disk. CPU bottleneck monitoring is based on global CPU utilization and load average (Run Queue Length). Memory bottleneck monitoring is based on memory utilization, free memory available, and memory swap out rate. File system monitoring is based on space utilization level for busiest file system on the node. Network monitoring is based on Packet collision rate, packet error rate, and outbound queue length.

Space Availability and Disk IOPS

The Space Availability and Disk IOPS Aspect monitors the disk IO operations and space utilization of the system.

System Fault Analysis

The System Fault Analysis Aspect monitors the kernel log file, boot log file, and event log file for critical error conditions and instructions.

System Infrastructure Discovery

The System Infrastructure Discovery Aspect discovers and gathers information regarding the system resources, operating system, and applications on a managed node.

The Extensive WebLogic and Database Management Template consists of the following Oracle Aspects to monitor Oracle components:

Basic Oracle Locks and Latches

This Aspect monitors the consumption of Oracle locks (in percentage) and also checks the usage of the counters - session wait lock count and latch count. This is a basic type of Aspect.

Basic Oracle Memory Performance

This Aspect monitors the Oracle memory units - BufferCache, Shared Pool, and Library Cache. This is

a Basic type of Aspect.

Basic Oracle Query Performance

This Aspect monitors the performance of Oracle queries by checking the Oracle metrics - Elapsed time and CPU time. This is a basic type of Aspect.

Basic Oracle Segment Space

This Aspect monitors the units of database storage - segments and extents. This is a basic type of Aspect.

Oracle Archive Health

This Aspect monitors the Oracle device space, archive frequency rate, and redo logs that are not archived.

Oracle Database Availability

This Aspect monitors the Oracle database connection status, processes, and logons.

Oracle Discovery

This Aspect discovers the Oracle, RAC, and ASM instances.

Oracle IO Performance

This Aspect monitors the physical and logical read rate of Oracle instances.

Oracle Tablespace Health

The Oracle Tablespace aspect monitors the Oracle Table space status, free space, datafile status, freespace, and segments.

Oracle Transactions

This Aspect monitors the Oracle transactions percentage, commit rate, and open cursor. This is an advanced version of Basic Oracle Transactions aspect.

Hybrid Weblogic Management Template

The Hybrid Weblogic Management Template monitors the primary components of your WebLogic server along with critical infrastructure areas of CPU, Memory, Disk, and also includes Agentless WebLogic Aspect to monitor WebLogic Application Server Port and Application URL availability.

How to Access Hybrid Weblogic Management Template

1. Open Management Templates & Aspects pane:

Click **Administration > Monitoring > Management Templates & Aspects**.

2. In the Configuration Folder pane, click **Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates > Hybrid Weblogic Management Template**.

User Interface Reference

Management Template - General

Provides an overview of the attributes of the Management Template.

UI Element	Description
Name	Hybrid Weblogic Management Template
Description	The description of the Management Template.
ID	A unique identifier for GUI version of the Management Template.
Version ID	A unique identifier for this version of the Management Template.
Version	The current version of the Management Template. In this instance, the version of the Management Template is 1.1.
Change Log	The text that describes what is new or modified in this version of the Management Template.

Management Template - Topology View

Provides an overview of the CI type you want to assign to the Management Template.

UI Element	Description
Topology View	Weblogic_Deployment_View is the topology view for Hybrid WebLogic Management Template. It contains the CI types that you want to manage using the Management Template.
CI Type	The type of CIs managed by Hybrid WebLogic Management Template. This is the type of CI to which the Management Template can be assigned. The Hybrid WebLogic Management Template contains WebLogic Application Server CI Types.

Management Template - Aspects

The Hybrid WebLogic Management Template consists of the following Aspects:

- WebLogic Availability (Agentless)
- WebLogic Base
- WebLogic EJB Performance
- WebLogic JDBC Connection Pool Status
- WebLogic JVM Heap Memory
- WebLogic Server Status
- WebLogic Servlet Performance

The Hybrid WebLogic Management Template consists of the following Infrastructure Aspects to monitor Infrastructure elements:

Resource Bottleneck Diagnosis

The Resource Bottleneck Diagnosis Aspect identifies congestion and bottleneck conditions for system resources like the CPU, memory, network, and disk. CPU bottleneck monitoring is based on global CPU utilization and load average (Run Queue Length). Memory bottleneck monitoring is based on memory utilization, free memory available, and memory swap out rate. Filesystem monitoring is based on space utilization level for busiest file system on the node. Network monitoring is based on Packet collision rate, packet error rate, and outbound queue length.

System Fault Analysis

The System Fault Analysis Aspect monitors the kernel log file, boot log file, and event log file for critical error conditions and instructions.

System Infrastructure Discovery

The System Infrastructure Discovery Aspect discovers and gathers information regarding the system resources, operating system, and applications on a managed node.

WebLogic Aspects

WebLogic Aspects are used to monitor different basic and advanced components of the WebLogic Application Servers in your environment.

Tasks

How to access WebLogic Aspects

Click **Administration > Monitoring > Management Templates & Aspects > Configuration Folders > Application Server Management > Oracle WebLogic Management > Aspects**.





How to Deploy WebLogic Aspects




For more information about deploying WebLogic Aspects, see "[Task 6b: Deploying WebLogic Aspects](#)".





How to Create WebLogic Aspects



To create WebLogic Aspects, follow these steps:

1. Open the Management Templates & Aspects pane:


Click **Administration > Monitoring > Management Templates & Aspects > Configuration Folders > Application Server Management > Oracle WebLogic Management > Aspects**.
2. In the Configuration Folders pane, click the configuration folder in which you want to create the new aspect. If you need to create a new configuration folder, click .
3. In the Management Templates & Aspects pane, click , and then click . The Create Aspect wizard opens.
4. In the **General** tab, type a unique **Name** for the new Aspect. Click **Next**.
5. Each aspect enables you to manage one feature or characteristic of one or more types of configuration item. In the CI Types page, select one or more **Available CI Type(s)** to which this Aspect can be assigned, and then click  to add them to the list of assigned CITs. (Press **CTRL** to several CITs.)

Click **Next**.
6. In the Instrumentation page, click  to add instrumentation to the Aspect. The Add Instrumentation dialog box opens, which enables you to select the instrumentation that you want to add. Click **Next**.
7. *(Optional)*. In the Aspects page, click , and then click the  **Add Existing Aspect**. The Add Existing Aspect dialog box opens, which enables you to select an existing aspect that you want to nest within this aspect. Click an aspect, and then click **OK**. Click **Next**.

8. If suitable Aspects do not exist, click , and then click  **Add New Aspect** to create them from here.
9. In the Policy Templates page, click . The Add Policy Template to Aspect dialog box opens. Select the policy templates that you want to add, and then click **OK**. (Press **CTRL** to select several policy templates.)
10. If no suitable policy templates exist:
 - a. Click  and then select **Add New Policy Template**. The Select New Policy Template dialog box opens.
 - b. Select a **Management Template** policy template from the **Type** drop-down list. Click **OK**.
 - c. In the Policy Related Information window, specify the **Name** and click **OK**. The policy template is added to the list of existing policy templates.
11. In the Policy Templates page, select the Version of the policy templates that you want to add.


Note: Each modification to a policy template is stored in the database as a separate version. Aspects contain specific versions of policy templates. If a new version of a policy template becomes available later, you have to update the Aspect to include the latest version, if that is what you want.
12. (*Optional*). In the Policy Templates page, click the policy template to which you want to add a deployment condition, click , and then click  **Edit Deployment Condition**. The Edit Deployment Condition dialog box opens, which enables you to specify deployment conditions for the selected policy template. Set the condition and then click **OK**. Click **Next**.
13. In the Parameters page, you see a list of all the parameters from the policy templates that you added to this Aspect.

To combine parameters:

- a. Press **CTRL** and click the parameters that you want to combine.
- b. Click . The Edit/Combine Parameters dialog box opens.
- c. Type a **Name** for the combined parameters.
- d. (*Optional*). Specify a **Description**, **DefaultValue**, and whether the combined parameter is **ReadOnly**, an **ExpertSetting**, or **Hidden**.

Read Only prevents changes to the parameter value when the Aspect is assigned to a CI. Hidden also prevents changes, but additionally makes the parameter invisible. You can choose whether to show expert settings when you make an assignment.

- e. You can set either a specific default value, or you can click **From CI Attribute** and then browse for a CI attribute. When you specify a CI attribute, Operations Management sets the parameter value automatically during deployment of the policy templates, using the actual value of this attribute from the CI. You can also set conditional parameter values here.
- f. Click **OK**.

You can also edit the parameters without combining them, to override the defaults in the policy template. Click one parameter, and then click . The Edit/Combine Parameters dialog box opens.

- 14. In the Create Aspect wizard, click **Finish** to save the Aspect and close the wizard. The new Aspect appears in the Management Templates & Aspects pane.

List of WebLogic Aspects

Each Weblogic Aspect comprises of policy templates, instrumentation, and parameters for monitoring the health and performance of the WebLogic Application Servers.

User Interface Reference

General	Provides an overview of the general attributes of the WebLogic Aspects.
CI Type	The type of configuration items that the Aspect can be assigned to. This is the type of CI to which the Aspect can be assigned. The WebLogic Aspects contain the Computer, Node, Cluster, CI types.
Instrumentation	Provides a single package which contains the binaries for discovery, collection, and data logging.
Aspects	Provides an overview of any Aspects that the WebLogic Aspect contains. The WebLogic Base Aspect is part of all the other Aspects.
Policy Templates	Provides an overview of the policy templates that the WebLogic Aspect contain. You can expand each item in the list to see more details about the policy template.

The OMi MP for Oracle WebLogic comprises of the following WebLogic Aspects:

Weblogic Authentication

Monitors Weblogic Server Login attempts and failures.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_InvalidLoginAttemptsCount	ServerSessions:High, ServerSessions:Normal	Number of invalid login attempts	Measurement Threshold

Weblogic Availability (Agentless)

Monitors Weblogic Application Server Port and Application URL availability using Agentless Monitoring Capabilities.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_Application_Server_Port_Availability (:Weblogic_Application_Server_Availability)	NA	Weblogic_Application_Server_Port_Availability	SiteScope
weblogicas	Weblogic_Application_URL_Availability (:Weblogic_Application_Server_Availability)	NA	Weblogic_Application_URL_Availability	SiteScope

Weblogic Base

Base Aspect for Monitoring Weblogic Server contains config, message, scheduler and logger policies.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_MPLog	NA	Monitors the Weblogic Perl, Discovery and Collector Log files	LogFile Entry
weblogicas	Weblogic_LogTemplate	NA	Monitors the Weblogic Application Server Logfiles	LogFile Entry

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_Discovery	NA	Weblogic Discovery Policy discovers Weblogic Server Domains, Clusters, Application Servers along with deployed applications, jdbc datasources.	Service Auto-Discovery
weblogicas	Weblogic_Medium	NA	Runs the Weblogic collector/analyzer every MEDIUM schedule	Scheduled Task
weblogicas	Weblogic_VeryHigh	NA	Runs the Weblogic collector/analyzer every VERYHIGH schedule	Scheduled Task
weblogicas	Weblogic_Low	NA	Runs the Weblogic collector/analyzer every LOW schedule	Scheduled Task
weblogicas	Weblogic_High	NA	Runs the Weblogic collector/analyzer every HIGH schedule	Scheduled Task
weblogicas	Weblogic_Configuration	NA	Weblogic_Configuration	ConfigFile
weblogicas	Weblogic_Messages	NA	WebLogic Message Interceptor	Open Message Interface

Weblogic Cache Usage

Monitors Weblogic Server XML Cache usage.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_StandbyThreadCount	ThreadPoolAvailability:Low, ThreadPoolAvailability:Normal	Number of threads in the standby pool	Measurement Threshold
weblogicas	Weblogic_XMLCacheMemorySize	ConnectionsInUse:High, ConnectionsInUse:Normal	Weblogic_XMLCacheMemorySize	ConfigFile
weblogicas	Weblogic_RequestMaxWaitTime	ThreadRequestServiceTime:High, ThreadRequestServiceTime:Normal	Maximum time a request had to wait for a thread	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
weblogiccas	Weblogic_DeferredRequestsCount	DeferredThreadRequests:High, DeferredThreadRequests:Normal	Number of deferred requests	Measurement Threshold
weblogiccas	Weblogic_PendingRequestPercentage	ThreadRequestsPending:High, ThreadRequestsPending:Normal	Percentage of requests pending	Measurement Threshold
weblogiccas	Weblogic_XMLCacheDiskSize	ConnectionsInUse:High, ConnectionsInUse:Normal	Weblogic_XMLCacheDiskSize	ConfigFile
weblogiccas	Weblogic_PendingRequestCount	ThreadRequestsPending:High, ThreadRequestsPending:Normal	Number of pending requests	Measurement Threshold
weblogiccas	Weblogic_RequestWaitTimeforThread	ThreadRequestWaitTime:High, ThreadRequestWaitTime:Normal	Request wait time for a thread	Measurement Threshold

Weblogic Cluster Status

Monitors Weblogic Server Cluster Environment.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogiccas	Weblogic_ClusterOutMessageFailureRate	ClusterIncomingMessageFailureRate:High, ClusterIncomingMessageFailureRate:Normal	Number of multicast messages from cluster lost by server per minute	Measurement Threshold
weblogiccas	Weblogic_ClusterInMessageFailureRate	ClusterOutgoingMessageFailureRate:High,	Number of	Measurement

CI Type	Policy Template	Indicator	Description	Policy Type
	eRate	ClusterOutgoingMessageFailureRate:Normal	multicast messages to cluster that were re-sent per minute	Threshold
weblogiccas	Weblogic_ClusterHealthStatus	ClusterHealth:Poor, ClusterHealth:Normal	Health of the cluster	Measurement Threshold

Weblogic Discovery

Discovers Weblogic Server Instances.

CI Type	Policy Template	Indicator	Description	Policy Type
host_node	Weblogic_MPLog	NA	Monitors the Weblogic Perl, Discovery and Collector Log files	LogFile Entry
host_node	Weblogic_Discovery	NA	Weblogic Discovery Policy discovers Weblogic Server Domains, Clusters, Application Servers along with deployed applications, jdbc datasources.	Service Auto-Discovery
host_node	Weblogic_Messages	NA	WebLogic Message Interceptor	Open Message Interface

Weblogic EJB Performance

Monitors Weblogic Server EJB transactions, pool status.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogiccas	Weblogic_EJBDestroyedTotalCount	EJB:Warning, EJB:Normal	Total	Measurement

CI Type	Policy Template	Indicator	Description	Policy Type
			number of times a bean instance from the pool was destroyed due to a non-application Exception being thrown from it	Threshold
weblogic	Weblogic_NumberEJBTransactionRollbackRate	EJBTransactionRollbackRate:High, EJBTransactionRollbackRate:Normal	Number of EJB transactions rolled back per second	Measurement Threshold
weblogic	Weblogic_EJBTimeoutCount	EJBTimeoutRate:High, EJBTimeoutRate:Normal	Number of times a client timed out waiting for an EJB bean per minute	Measurement Threshold
weblogic	Weblogic_EJBPoolWaitCount	EJBFreePoolWaitRate:High, EJBFreePoolWaitRate:Normal	Number of times no EJB beans were available from the free pool (drill down) per minute	Measurement Threshold
weblogic	Weblogic_	EJBPerformance:Low,	EJB	Measurement

CI Type	Policy Template	Indicator	Description	Policy Type
cas	EJBTransactionThroughputRate	EJBPerformance:Normal	Transaction Throughput Rate	ent Threshold
weblogiccas	Weblogic_SumOfEJBMissedCountRate	EJBTimeoutRate:High, EJBTimeoutRate:Normal	Number of times a failed attempt was made to get an instance from the free pool	Measurement Threshold
weblogiccas	Weblogic_EJBTransactionRollBackRate	EJBTransactionRollbackRate:High, EJBTransactionRollbackRate:Normal	EJB Transaction Rollback Rate	Measurement Threshold
weblogiccas	Weblogic_EJBTransactionsCount	EJBPerformance:Low, EJBPerformance:Normal	Number of EJB transactions per second	Measurement Threshold
weblogiccas	Weblogic_EJBBeanUnavailableCount	EJB:Warning, EJB:Normal	Number of times no EJB beans were available from the free pool per minute	Measurement Threshold
weblogiccas	Weblogic_EJBTimeoutRate	EJBTimeoutRate:High, EJBTimeoutRate:Normal	Number of times a client timed out waiting for an EJB bean	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
			(drill down) per minute	
weblogiccas	Weblogic_EJBCacheHitPercentage	EJBPerformance:Low, EJBPerformance:Normal	Percentage of EJBs in the cache in use	Measurement Threshold
weblogiccas	Weblogic_EJBMissedCountRate	EJBMissedCountRate:High, EJBMissedCountRate:Normal	Number of times a failed attempt was made to get an instance from the free pool per minute	Measurement Threshold

Weblogic GridLink Datasource

Monitors Weblogic GridLink Datasource

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_GridLinkCurrCapacity	GridLink:High, GridLink:Normal	The current count of JDBC connections in the connection pool in the data source for this instance	Measurement Threshold
weblogicas	Weblogic_GridLinkConnectionsTotalCount	GridLink:High, GridLink:Normal	The	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
		al	cumulative total number of database connections created in this instance since the data source was deployed	
weblogicas	Weblogic_GridLinkNumUnavailable	GridLink:High, GridLink:Normal	The number of database connections that are currently unavailable in this instance	Measurement Threshold
weblogicas	Weblogic_GridLinkState	GridLink:High, GridLink:Normal	The current state of the instance within the data source.	Measurement Threshold
weblogicas	Weblogic_GridLinkReserveRequestCount	GridLink:High, GridLink:Normal	The cumulative, running count of requests for a connection from this instance.	Measurement Threshold
weblogicas	Weblogic_GridLinkCurrentWeight	GridLink:High, GridLink:Normal	The current weight of the instance	Measurement Threshold
weblogicas	Weblogic_GridLinkActiveConnectionsCurrentCou	GridLink:High, GridLink:Norm	The number of	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
	nt	al	connections currently in use by applications	
weblogicas	Weblogic_GridLinkNumAvailable	GridLink:High, GridLink:Normal	The number of database connections currently available (not in use) in this data source for this instance	Measurement Threshold

Weblogic JCA Statistics

Monitors Weblogic Server JCA Status.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_JCAConnectionsUtilizationPct	ConnectionsInUse:High, ConnectionsInUse:Normal	Percentage utilization of available JCA connections in connection pool	Measurement Threshold
weblogicas	Weblogic_ConnectionsRejectedTotalCount	ConnectionsInUse:High, ConnectionsInUse:Normal	Weblogic_ConnectionsRejectedTotalCount	Measurement Threshold
weblogicas	Weblogic_ConnectionsDestroyedByErrorTotalCount	ConnectionsInUse:High, ConnectionsInUse:Normal	Weblogic_ConnectionsDestroyedByErrorTotalCount	Measurement Threshold
weblogicas	Weblogic_NumWaitersCurrentCount	ConnectionsInUse:High, ConnectionsInUse:Normal	Weblogic_NumWaitersCurrentCount	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_RequestsWaitingForConnection	JDBCConnectionPoolWaitCount:High, JDBCConnectionPoolWaitCount:Normal	Number of clients waiting for a connection from connection pools	Measurement Threshold
weblogicas	Weblogic_WaitSecondsHighCount	TransactionTime:High, TransactionTime:Normal	The longest connection reserve wait time in seconds	Measurement Threshold

Weblogic JDBC Connection Pool Status

Monitors Weblogic Server JDBC connection availability and connection pools.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_ConnectionDelayTime	DataSourceConnectionPoolAvailability:Low, DataSourceConnectionPoolAvailability:Normal	JDBC connection pool connection delay, in milliseconds	Measurement Threshold
weblogicas	Weblogic_JDBCConnectionLeakRate	DataSourceLeakedConnectionsRate:High, DataSourceLeakedConnectionsRate:Normal	Rate of leaked connections for the JDBC connection pool	Measurement Threshold
weblogicas	Weblogic_JDBCConnectionPoolThroughputRate	NA	Number of clients serviced by connection pool per	ConfigFile

CI Type	Policy Template	Indicator	Description	Policy Type
			second.	
weblogiccas	Weblogic_FailuresToReconnectCount	DataSourceConnectionPoolAvailability:Low, DataSourceConnectionPoolAvailability:Normal	The number of times that the data source attempted to refresh a database connection and failed	Measurement Threshold
weblogiccas	Weblogic_JDBCConnectionPoolUtilization	DataSourceConnectionPoolUtilization:High, DataSourceConnectionPoolUtilization:Normal	Percentage utilization of available JDBC connections in connection pool	Measurement Threshold
weblogiccas	Weblogic_SumJDBCConnectionLeakRate	NA	Number of unclosed JDBC connections and JDBC connections that have exceeded their maximum idle times in the connection pool	ConfigFile

CI Type	Policy Template	Indicator	Description	Policy Type
			per minute.	

Weblogic JDK GC Performance

Monitors JDK Total GC Count and Total GC Time.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogic as	Weblogic_JMXConfiguration	NA	This policy is to configure JMX Credentials for JDK GC Connection.	ConfigFile
weblogic as	Weblogic_JDKGCScheduler	NA	Runs the Weblogic JDK GC Count	Scheduled Task
weblogic as	Weblogic_JDKGarbageCollectionCount	TotalGarbageCollectionCount: High	JDK Total Garbage Collection Count	Measurement Threshold
weblogic as	Weblogic_JDKGarbageCollectionTime	TotalGarbageCollectionTime: High	JDK Total Garbage Collection Time	Measurement Threshold

Weblogic JMS Performance

Monitors Weblogic Server JMS utilization and Performance.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogic as	Weblogic_JMSSThruMessageRate	NA	Number of messages passed through the JMS server per second.	ConfigFile
weblogic as	Weblogic_JMSMessagesThresholdTime	JMS:Warning, JMS:Normal	The amount of time at which the server threshold condition was satisfied, based on the number of messages	Measurement Threshold
weblogic as	Weblogic_JMSSThruByteRate	NA	Number of bytes passed through the JMS server per second.	ConfigFile
weblogic as	Weblogic_JMSUtilizationByBytesPercentage	JMSSThruUtilization:High, JMSSThruUtilization:Normal	Percentage of the JMS server filled, based on total bytes	Measurement Threshold
weblogic as	Weblogic_JMSBytesThresholdTimePercentage	JMS:Warning, JMS:Normal	The amount of time at which the server threshold condition was	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
			satisfied, based on total bytes	
weblogic as	Weblogic_JMSUtilizationByMessagesPercentage	JMServerUtilization:High, JMServerUtilization:Normal	Percentage of the JMS server queue utilization, based on the number of messages	Measurement Threshold

Weblogic JVM Heap Memory

Monitors Weblogic Server JVM Parameters.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogic as	Weblogic_GarbageCollectionThread	TotalNumberOfThreads:High, TotalNumberOfThreads:Normal	Total Garbage Collection Threads	Measurement Threshold
weblogic as	Weblogic_ProcessorsAverageLoad	AllProcessorsAverageLoad:High, AllProcessorsAverageLoad:Normal	All Processors Average Load	Measurement Threshold
weblogic as	Weblogic_GarbageCollectionCount	TotalGarbageCollectionCount:High, TotalGarbageCollectionCount:Normal	Total Garbage Collection Count	Measurement Threshold
weblogic as	Weblogic_JVMHeapUsage	JVMMemoryUtilization:High, JVMMemoryUtilization:Normal	Percentage of heap space used in the JVM	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_JVMHeapFreeMemory	NA	JVM Heap Free Memory in kilobytes.	ConfigFile
weblogicas	Weblogic_GarbageCollectionTime	TotalGarbageCollectionTime:High, TotalGarbageCollectionTime:Normal	Total Garbage Collection Time	Measurement Threshold

Weblogic Server Status

Monitors Weblogic Server availability and Performance.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogicas	Weblogic_ServerStatusScheduler	NA	Triggers WebLogic ServerStatus metric collection	Scheduled Task
weblogicas	Weblogic_ServerStatus_Configuration	NA	This policy is to configure custom values for each server status.	ConfigFile
weblogicas	Weblogic_ServerStatus	ServerStatus:Unavailable, ServerStatus:Available	Status of a server, monitors whether running or not	Measurement Threshold

Weblogic Servlet Performance

Monitors Weblogic Server Servlet sessions of web applications.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogic as	Weblogic_SocketTrafficRate	NA	Number of socket connections opened per second.	ConfigFile
weblogic as	Weblogic_ServletAverageExecutionTime	ServletPerformance:Low, ServletPerformance:Normal	Average execution time for a servlet in milliseconds	Measurement Threshold
weblogic as	Weblogic_ExecutionQueueThroughputRate	NA	Number of requests serviced by an execute queue per second.	ConfigFile
weblogic as	Weblogic_ExecuteQMetricMonitors	ExecuteQueueWaitCount:High, ExecuteQueueWaitCount:Normal	The metric monitors an execute queue and its associated thread pool for each server. This metric particularly monitors the number of client requests waiting to be serviced	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
weblogic as	Weblogic_ ExecuteQThreadsInUse	ThreadPoolUtilization:High, ThreadPoolUtilization:Normal	Percentage of threads in use for a servers execute queue. For Weblogic Server version 9.x and 10.x, there is only one execute queue	Measurement Threshold
weblogic as	Weblogic_ ServletRequestRate	ServletRequests:High, ServletRequests:Normal	Number of requests for a servlet per second	Measurement Threshold

Weblogic Thread Status

Monitors Weblogic Server Thread Status.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogic as	Weblogic_ ThreadPoolOverloadCondition	ThreadPoolUtilization:High, ThreadPoolUtilization:Normal	Indicates an Overload Condition on General Thread pool	Measurement Threshold
weblogic as	Weblogic_ RequestWaitTimeforThread	ThreadRequestWaitTime:High, ThreadRequestWaitTime:Normal	Request wait time for a thread	Measurement Threshold

Weblogic Transactions

Monitors Weblogic Server Transactions activities.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogiccas	Weblogic_TransactionTimeErrorRollbackPercentage	TransactionTimeoutErrors:High, TransactionTimeoutErrors:Normal	Percentage of transactions rolled back due to a timeout error	Measurement Threshold
weblogiccas	Weblogic_TransactionRollbackPercentage	TransactionsRolledBack:High, TransactionsRolledBack:Normal	Percentage of transactions rolled back, based on the total	Measurement Threshold
weblogiccas	Weblogic_TransactionResErrorRollbackPercentage	TransactionResourceErrors:High, TransactionResourceErrors:Normal	Percentage of transactions rolled back due to resource error	Measurement Threshold
weblogiccas	Weblogic_TransactionAppErrorRollbackPercentage	TransactionApplicationErrors:High, TransactionApplicationErrors:Normal	Percentage of transactions rolled back due to an application error	Measurement Threshold

CI Type	Policy Template	Indicator	Description	Policy Type
weblogiccas	Weblogic_ TransactionHeuristicsTotalCount	JTA:Warning, JTA:Normal	Number of transactions returning a heuristic decision	Measurement Threshold
weblogiccas	Weblogic_ TransactionAverageTime	TransactionTime:High, TransactionTime:Normal	Average commit time for transactions	Measurement Threshold
weblogiccas	Weblogic_ TransactionThroughputRate	NA	Number of transactions processed per second.	ConfigFile
weblogiccas	Weblogic_ TransactionSystemErrorRollbackPercentage	TransactionSystemErrors:High, TransactionSystemErrors:Normal	Percentage of transactions rolled back due to system error	Measurement Threshold
weblogiccas	Weblogic_ TransactionCapacityUtilizationPct	TransactionCapacityUtilization:High, TransactionCapacityUtilization:Normal	Percentage utilization of transaction capacity	Measurement Threshold

Weblogic Web Application Status

Monitors Weblogic Server deployed Web Applications availability.

CI Type	Policy Template	Indicator	Description	Policy Type
weblogics	Weblogic_WebApplicationSessionsCount	HTTPSessions:High, HTTPSessions:Normal	Number of open sessions for a Web application	Measurement Threshold
weblogics	Weblogic_WebApplicationHitRate	NA	Number of open sessions for a web application per second.	ConfigFile

Parameters

Parameters are variables that are an integral component of WebLogic Management Templates, Aspects, and Policy Templates. Each parameter corresponds to a variable. Parameters contain default values that are used for monitoring different components of WebLogic Application Server. You can also modify the values of the variables to suit your monitoring requirements.

For information on types of parameter, see "[List of Parameters](#)" below.

List of Parameters

Parameter	Parameter Type	Description	Default Values
Weblogic Server Home	Instance	WebLogic server instance.	NA
Weblogic JAVA Home	Optional	WebLogic JAVA Home.	
Weblogic Username	Mandatory	WebLogic Username with Admin privileges to collect management data.	
Weblogic Password	Mandatory	Password for WebLogic Server Username.	
Weblogic KeyStore	Optional	WebLogic KeyStore Path.	

Path			
Weblogic Passphrase Password	Optional	WebLogic Passphrase.	
Weblogic Protocol for JMX Collection (t3/t3s)	Optional	WebLogic Protocol for JMX Collection (t3/t3s).	
Weblogic Domains XML File Path Location	Dependent	WebLogic Domains XML File Path Location.	
Weblogic Application Server Port Number	Optional	WebLogic Application Server Port Number.	
Application instance	Optional	Weblogic Server Application instance for which data needs to be fetched.	CI Name
Frequency of Weblogic MP Log Template	Optional	Frequency for monitoring Weblogic_MPLog files with defined patterns (in seconds).	30 Seconds
Frequency of Weblogic Log Template	Optional	Frequency for monitoring Weblogic Log Template with defined patterns (in seconds).	30 Seconds
Frequency of VeryHigh Scheduler	Optional	Frequency for the scheduler which is expected to run on very short interval (in minutes).	5 Minutes
Frequency of High Scheduler	Optional	Frequency for the scheduler which is expected to run on short interval (in minutes).	15 Minutes
Frequency of Medium Scheduler	Optional	Frequency for the scheduler which is expected to run on medium interval (in hours).	1 Hour
Frequency of Low Scheduler	Optional	Frequency for the scheduler which is expected to run on long interval (in hours).	24 Hours

Tuning Parameters

You can edit the parameters of the WebLogic Management Templates and Aspects that are already deployed to the WebLogic Application Server CIs.

1. Open the Assignments & Tuning pane:
Click **Administration > Monitoring > Assignments & Tuning**.
2. In the **Browse Views** tab, select the **Weblogic_Deployment_View** that contains the WebLogic Application Server CI for which you want to tune parameters. Alternatively, you can use the **Search** tab to find a CI.
3. In the list of WebLogic Application Server CIs, click a CI. The Assignments pane shows details of existing assignments for the CI.
4. Click the assignment for which you want to tune parameters. The Details of Assignment pane shows the current parameter values.
5. In the Assignment Details pane, change the parameters:
 - a. (*Optional*). By default, the list shows only mandatory parameters..
 - b. Select a parameter in the list, and then click .
 - i. For standard parameters, the Edit Parameter dialog box opens.
Click **Value**, specify the value, and then click **OK**.
 - ii. For instance parameters, the Edit Instance Parameter dialog box opens.
Change the instance values if necessary, and then for each instance value, change dependent parameter values. After you change the instances and dependent parameter values, click **OK**.
6. In the Details of Assignment pane, click **Save Changes**. Operations Management deploys the new parameter values to the relevant HP Operations Agent.

Configuration Items and Configuration Item Types

Configuration Items (CIs) are components that have to be managed to deliver an IT Service. CIs typically include IT services, hardware, and software.

Configuration Item Types (CITs) describes the type of a CI and its attributes. The Weblogic CIs that are discovered in an environment are grouped under the CITs. OMi MP for Oracle WebLogic comprises the following CITs:

- WebLogic AS

Run-time Service Model Views

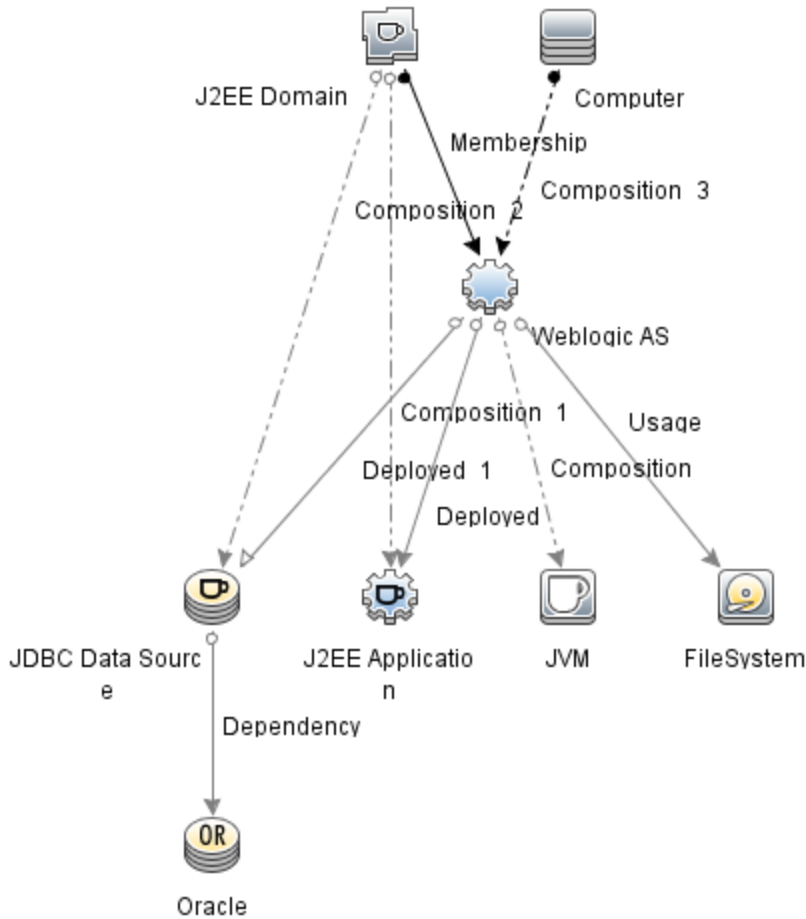
A View enables you to build and visualize a subset of the overall Run-time Service Model (RTSM) model. The Views for OMi MP for Oracle WebLogic enables you to visualize the topology of WebLogic Server environment that you want to monitor. The Views for OMi MP for Oracle WebLogic can be used to view and manage the Event Perspective and Health Perspective of the WebLogic Application Server CIs discovered using WebLogic Discovery Aspect. You can also use Views for assigning and tuning the OMi MP for Oracle WebLogic in the WebLogic Application Server environment.

How to Access RTSM Views

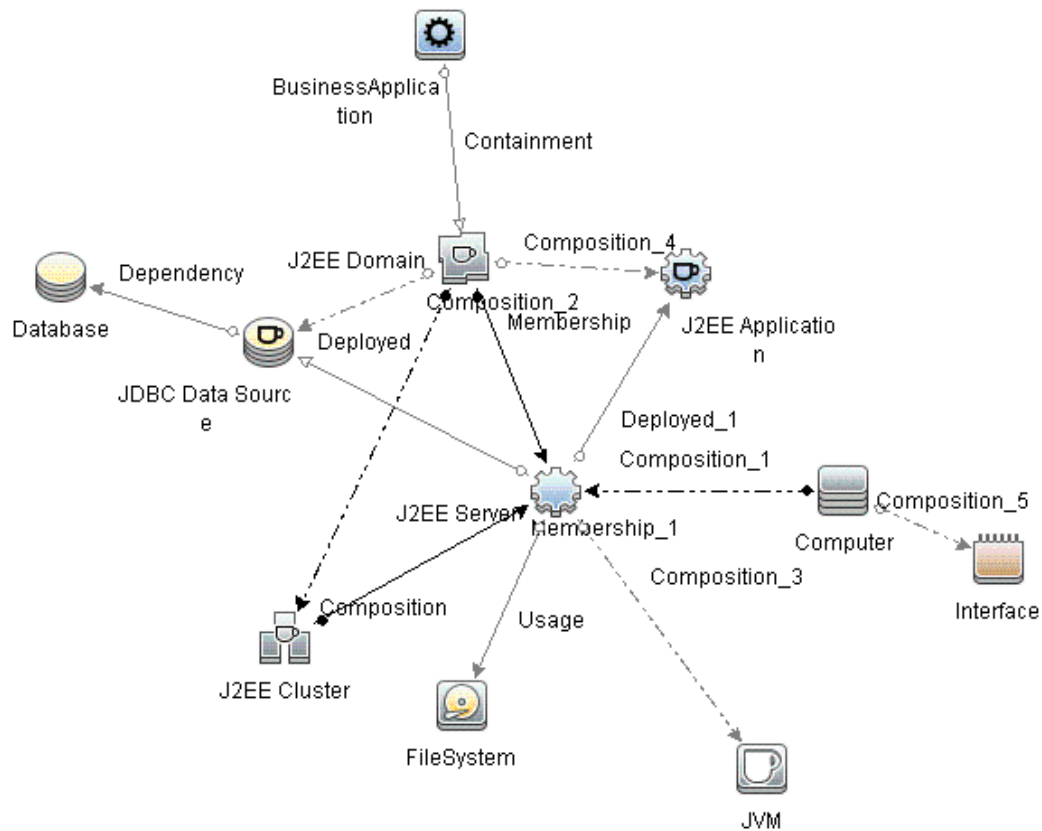
1. Open the Modeling Studio pane:
Click **Administration > RTSM Administration > Modeling > Modeling Studio**.
2. Click **Resource Type** as Views.
3. Click **Operations Management > J2EE Application Server**.

By default, OMi MP for Oracle WebLogic contains the following Views:

- **Weblogic_Deployment_View:** This view refers to J2EE Application, J2EE Domain, JDBC Data Source, Computer, and Oracle CITS. The Weblogic_Deployment_View enables you to visualize the Event and Health perspectives of the WebLogic Application Server CIs in the environment. You can also use the Weblogic_Deployment_View for assigning and tuning the OMi MP for Oracle WebLogic deployment in the WebLogic Application Server environment. In addition, you can use this view for monitoring WebLogic Application Servers, Oracle instances, and infrastructure elements as composite application. The following image shows the relationship among the CI Types.



- **J2EE_Deployment:** This view refers to the J2EE Cluster, J2EE Domain, JDBC Data Source, J2EE Application, Database, and Computer CI types. The J2EE_Deployment view enables you to visualize the Event and Health perspectives of the WebLogic Application Server CIs that you monitor. You can use the J2EE_Deployment view for visualizing events that are specific to the monitored WebLogic Application Servers. You can also use the J2EE_Deployment view for assigning and tuning the OMi MP for Oracle WebLogic deployment in the WebLogic Application Server environment. The following image shows the relationship among the CI Types.



- J2EE_Network_Deployment_View:** This view refers to the J2EE Cluster, J2EE Domain, J2EE Server, JDBC Data Source, J2EE Application, Database, and File System CI types. The J2EE_Network_Deployment_View enables you to visualize the components of an associated network along with the monitored WebLogic Application Server CIs in your environment. The following image shows the relationship among the CI Types.

Event Type Indicators (ETIs)

ETIs are categorization of events based on the type of occurrence. The OMi MP for Oracle WebLogic includes the following ETIs to monitor WebLogic-related events:

To access

Select **Administration > Service Health > CI Status Calculation > Health-and Event TypeIndicators**

CI Type	ETI	Description	Value/Severity
j2eeserver	Total Garbage Collection Time	Total time taken for garbage collection	Normal/NORMAL, High/MAJOR
j2eeserver	Thread Requests Pending	Requests that are pending because they are waiting for an available thread.	Normal/NORMAL, High/MAJOR
j2eeserver	Execute Queue Wait Count	The number of client requests waiting to be serviced by the Execute Queue.	Normal/NORMAL, High/MAJOR
j2eeserver	EJB Concurrent Lives	The average number of bean objects in the pool.	Normal/NORMAL, High/MAJOR
j2eeapplication	EJB Concurrent Lives	The average number of bean objects in the pool.	Normal/NORMAL, High/MAJOR
jdbcdatasource	DataSource ConnectionPool Failures	The number of failed attempts to refresh a connection in the connection pool.	Normal/NORMAL, Critical/CRITICAL
j2eeserver	Server Sessions	The number of sessions opened to this server.	Normal/NORMAL, High/MAJOR
jdbcdatasource	DataSource Connection Waiters	The average number of threads waiting for a connection from the connection pool.	Normal/NORMAL, High/MAJOR
j2eeserver	Servlet Requests	Number of incoming requests to the servlet	Normal/NORMAL, High/MAJOR
j2eeapplication	Servlet Requests	Number of incoming requests to the servlet.	Normal/NORMAL, High/MAJOR
j2eeserver	JMS Active Connection Count	Number of active JMS connections	Normal/NORMAL, High/MAJOR
j2eeserver	HTTP Sessions	Number of open servlet sessions	Normal/NORMAL,

CI Type	ETI	Description	Value/Severity
			High/MAJOR
jvm	Total Garbage Collection Count	Number of times Garbage Collector has run.	Normal/NORMAL, High/MAJOR
jdbcdatasource	JDBC Active Connection Count	Active JDBC connections	Normal/NORMAL, High/MAJOR
jvm	Total Garbage Collection Time	Total time taken for garbage collection.	Normal/NORMAL, High/MAJOR
j2eeapplication	HTTP Sessions	Number of open servlet sessions.	Normal/NORMAL, High/MAJOR
j2eeserver	JDBC Active Connection Count	Active JDBC connections	Normal/NORMAL, High/MAJOR
j2eeserver	Total Number Of Threads	Total number of threads spawned for garbage collection	Normal/NORMAL, High/MAJOR
j2eeserver	DataSource Connection Waiters	The average number of threads waiting for a connection from the connection pool.	Normal/NORMAL, High/MAJOR
jvm	Total Number Of Threads	Total number of threads spawned for garbage collection.	Normal/NORMAL, High/MAJOR
j2eeserver	Total Garbage Collection Count	Number of times Garbage Collector has run	Normal/NORMAL, High/MAJOR

Health Indicators (HIs)

HIs analyze the events that occur in WebLogic CIs and report the health of the WebLogic CIs. The OMI MP for Oracle WebLogic includes the following HIs to monitor the WebLogic-related events:

To access

Select **Administration > Service Health > CI Status Calculation > Health-and Event TypeIndicators**

CI Type	HI	Description	Value/Severity
j2eeserver	EJB Timeout Rate	The number of times per minute a client timed out waiting for an EJB	Normal/NORMAL, High/MAJOR

CI Type	HI	Description	Value/Severity
j2eeserver	Servlet Performance	The performance statistics such as execution time etc	Normal/NORMAL, Low/MAJOR
j2eeserver	Transaction Capacity Utilization	The number of simultaneous in-progress transactions.	Normal/NORMAL, High/MAJOR
j2eeapplication	EJB Timeout Rate	The number of times per minute a client timed out waiting for an EJB.	Normal/NORMAL, High/MAJOR
j2eeserver	Connections In Use	Number of JDBC connections in use currently	Normal/NORMAL, High/MAJOR
file_system	Disk Usage Level	Disk Usage Level	NearCapacity/MAJOR, Normal/NORMAL, Low/WARNING
interface	Interface Discard Rate	Indicates high output discard rate, based on the reported change in the number of output packets on the interface and the discarded packet count. Packets may be discarded because of a variety of issues, including receive buffer overflows, congestion, or system specific issues.	Normal/NORMAL, High/MAJOR
interface	Interface Utilization	Indicates network utilization, based on the interface speed, and the reported change in the number of output bytes on the interface. The exact MIB values queried varies based on the speed of the interface and whether the system supports the high speed counters for interfaces.	Normal/NORMAL, HigherThanNormal/WARNING, LowerThanNormal/WARNING, MuchHigherThanNormal/WARNING, MuchLowerThanNormal/WARNING, High/MAJOR, Low/MAJOR, None/CRITICAL

CI Type	HI	Description	Value/Severity
j2eeserver	EJB Transaction Rollback Rate	Number of EJB Transaction Rolled back in unit time	Normal/NORMAL, High/MAJOR
j2eeserver	Heap Size Current	Amount of heap in use.	Normal/NORMAL, High/MAJOR
j2eeserver	Thread Request Wait Time	The time (in milliseconds) a request had to wait for a thread.	Normal/NORMAL, High/MAJOR
jdbcdatasource	JDBC Connection Pool Wait Count	The number of clients waiting for a jdbc connection.	Normal/NORMAL, High/MAJOR
j2eeserver	Http Server Active Connections	Number of connections currently open	Normal/NORMAL, High/MAJOR
j2eecluster	Cluster Outgoing Message Failure Rate	The number of multicast messages to the cluster that were resent.	Normal/NORMAL, High/MAJOR
host_node	Memory Usage Level	Memory usage level for the system NearCapacity - most memory is used up Normal - enough memory is available for efficient functioning of system and applications Low - A lot of memory is free on system indicating wastage	Normal/NORMAL, NearCapacity/MAJOR, Low/WARNING, MuchHigherThanNormal/CRITICAL, LowerThanNormal/MAJOR, MuchLowerThanNormal/CRITICAL, HigherThanNormal/MAJOR, Critical/CRITICAL, Warning/WARNING
j2eeserver	Thread Hung Rate	The rate at which the threads are declared hung.	Normal/NORMAL, High/MAJOR
j2eeapplication	Servlet Performance	The performance statistics such as execution time etc.	Normal/NORMAL, Low/MAJOR
j2eecluster	Cluster Health	Cluster Health in terms of performance.	Normal/NORMAL, Poor/MAJOR

CI Type	HI	Description	Value/Severity
jvm	JVM Memory Utilization	The percentage of heap size utilized.	Normal/NORMAL, High/MAJOR
jdbcdatasource	DataSource ConnectionPool Availability	DataSource ConnectionPool Availability	Normal/NORMAL, Low/MAJOR
jdbcdatasource	DataSource ConnectionPool Performance	DataSource ConnectionPool Performance	Normal/NORMAL, Low/MAJOR
j2eeserver	Servlets Loaded	The number of servlets currently loaded for a web application.	Normal/NORMAL, High/MAJOR
jvm	All Processors Average Load	Average load on all the processors on the system.	Normal/NORMAL, High/MAJOR
business_application	Real User Sessions Availability	Calculates the sessions availability	OK/NORMAL, Critical/CRITICAL, Minor/MINOR, Unknown/UNKNOWN, Informational/INFORMATIONAL
j2eeserver	Oracle Web Cache Average Latency Current Interval	Average latency for 10 second intervals to process requests for Oracle Web Cache	Normal/NORMAL, High/MAJOR
j2eeserver	Transaction Time	Time taken to complete a transaction.	Normal/NORMAL, High/MAJOR
j2eeserver	Transactions Rolled Back	Number/Percentage of Transactions rolled back due to system, resource or other errors	Normal/NORMAL, High/MAJOR
j2eeserver	DataSource Connection Pool Utilization	DataSource Connection Pool Utilization	Normal/NORMAL, High/MAJOR
j2eeserver	JMS Server Utilization	The JMS Server queue utilization.	Normal/NORMAL, High/MAJOR
j2eeserver	Thread Pool Utilization	The number of threads utilized in the server to execute tasks.	Normal/NORMAL, High/CRITICAL

CI Type	HI	Description	Value/Severity
j2eeserver	Deferred Thread Requests	The number of requests that were denied a thread for execution because of the max-threads-constraint constraint.	Normal/NORMAL, High/MAJOR
j2eeapplication	EJB Transaction Rollback Rate	Number of EJB Transaction Rolled back in unit time.	Normal/NORMAL, High/MAJOR
j2eeserver	Transaction Start Rate	The number of transactions that were begun per second.	Normal/NORMAL, High/MAJOR
j2eeserver	EJB Free Pool Wait Rate	The number of times per minute no EJBs were available from the free pool	Normal/NORMAL, High/MAJOR
j2eeserver	DataSource Connection Pool Failures	The number of failed attempts to refresh a connection in the connection pool.	Normal/NORMAL, Critical/CRITICAL
j2eeserver	Http Request Average Service Time	Average time required to service an HTTP request.	Normal/NORMAL, High/MAJOR
j2eeserver	EJB Performance	The performance statistics namely cache utilization etc	Normal/NORMAL, Low/MAJOR
j2eeserver	Server Status	Shows the server status in terms of availability.	Available/NORMAL, Unavailable/CRITICAL
jdbcdatasource	DataSource Leaked Connections Rate	The rate of new leaked JDBC connections.	Normal/NORMAL, High/MAJOR
j2eeserver	Oracle Web Cache Average Latency Since Start	Average number of seconds to process requests for Oracle Web Cache since the application Web server started.	Normal/NORMAL, High/MAJOR

CI Type	HI	Description	Value/Severity
j2eeserver	Transaction Application Errors	Transaction errors due to application errors.	Normal/NORMAL, High/MAJOR
j2eecluster	Cluster Incoming Message Failure Rate	The number of multicast messages from the cluster that were lost.	Normal/NORMAL, High/MAJOR
j2eecluster	Cluster Status	Cluster Status in terms of availability.	Started/NORMAL, PartialStop/MAJOR, Stopped/CRITICAL
j2eeserver	DataSource Connection Pool Performance	DataSource ConnectionPool Performance	Normal/NORMAL, Low/MAJOR
j2eeapplication	EJB Free Pool Wait Rate	The number of times per minute no EJBs were available from the free pool.	Normal/NORMAL, High/MAJOR
host_node	CPU Load	Indicates if the system is undergoing heavy processing load.	Normal/NORMAL, Constrained/WARNING, Warning/WARNING, Busy/MINOR, Overloaded/MAJOR, Bottlenecked/CRITICAL, Critical/CRITICAL
j2eeserver	DataSource Connection Pool Availability	Availability of JDBC connections in the connection pool	Normal/NORMAL, Low/MAJOR
j2eeserver	Transaction Timeout Rate	The number of transactions that timed out per second.	Normal/NORMAL, High/MAJOR
business_application	Real User Sessions Performance	Calculates the sessions performance	OK/NORMAL, Critical/CRITICAL, Minor/MINOR, Unknown/UNKNOWN, Informational/INFORMATIONAL
j2eeserver	EJB Missed Count Rate	The total number of times a failed attempt was made to get an instance from the free	Normal/NORMAL, High/MAJOR

CI Type	HI	Description	Value/Severity
		pool	
j2eeserver	Transaction Rollback Rate	Number/Percentage of Transactions rolled back due to system, resource or other errors	Normal/NORMAL, High/MAJOR
j2eeserver	Thread Request Service Time	Time a request had to wait for a thread.	Normal/NORMAL, High/MAJOR
j2eeserver	JDBC Connection Pool Wait Count	The number of clients waiting for a jdbc connection	Normal/NORMAL, High/MAJOR
j2eeapplication	EJB Transaction Throughput Rate	Number of EJBs Transactions completed in unit time.	Normal/NORMAL, High/MAJOR
j2eeserver	Application Server Load	Load on the application server.	Normal/NORMAL, High/MAJOR
j2eeserver	Active Sockets Count	Number of HTTP socket connections opened to the server.	Normal/NORMAL, High/MAJOR
j2eeserver	Http Server Connection Time	Total time spent servicing HTTP connections	Normal/NORMAL, High/MAJOR
jvm	Heap Free Current	Amount of free heap available.	Normal/NORMAL, Low/MAJOR
j2eeapplication	EJB Missed Count Rate	The total number of times a failed attempt was made to get an instance from the free pool.	Normal/NORMAL, High/MAJOR
j2eeserver	Transaction Commit Rate	The number of transactions that were committed per second.	Normal/NORMAL, High/MAJOR
jdbcdatasource	Connections In Use	Number of JDBC connections in use currently.	Normal/NORMAL, High/MAJOR
j2eeserver	Http Server Active Request	Child servers currently in the request	Normal/NORMAL, High/MAJOR

CI Type	HI	Description	Value/Severity
		processing phase.	
jvm	Heap Size Current	Amount of heap in use.	Normal/NORMAL, High/MAJOR
j2eeserver	Transaction Timeout Errors	Transaction errors caused due to transaction timeout.	Normal/NORMAL, High/MAJOR
j2eedomain	Domain Status	Domain Status in terms of availability	Normal/NORMAL, Poor/MAJOR
j2eeserver	Thread Pool Availability	The availability of the threads in the Thread Pool.	Normal/NORMAL, Low/MINOR
j2eeserver	All Processors Average Load	Average load on all the processors on the system	Normal/NORMAL, High/MAJOR
j2eeserver	EJB Utilization	The utilization of the EJB pool	High/MAJOR, Normal/NORMAL
j2eeserver	Http Request Total Service Time	Total time required to service HTTP requests.	Normal/NORMAL, High/MAJOR
j2eeserver	Heap Free Current	Amount of free heap available.	Normal/NORMAL, Low/MAJOR
interface	Interface Communication Status	This incident indicates that the interface is not responding to polls	Available/NORMAL, Unavailable/CRITICAL
j2eeserver	Transaction Resource Errors	Transaction errors caused due to system resource errors.	Normal/NORMAL, High/MAJOR
jdbcdatasource	DataSource ConnectionPool Utilization	DataSource ConnectionPool Utilization	Normal/NORMAL, High/MAJOR
j2eeapplication	EJB Performance	The performance statistics namely cache utilization etc.	Normal/NORMAL, Low/MAJOR
j2eeserver	JVM Memory Utilization	The percentage of heap size utilized	Normal/NORMAL, High/MAJOR
j2eeapplication	EJB Utilization	The utilization of the	Normal/NORMAL,

CI Type	HI	Description	Value/Severity
		EJB pool.	High/MAJOR
j2eeserver	Transaction System Errors	Transaction errors caused due to system errors.	Normal/NORMAL, High/MAJOR

Topology Based Event Correlation (TBEC) Rules

The OMi MP for Oracle WebLogic includes the following rules to correlate WebLogic-related events:

For more information on how the correlation rules work, see the *Operations Manager i Concepts Guide*.

To access

Select **Administration > Event Processing > Correlation > Topology-Based EventCorrelation**

J2EE::J2EE Cluster:Cluster Health >> Synthetic User Transaction Performance

Description: J2EE Cluster Health Impacts Synthetic User Transaction Performance		
Cause		
CIT: J2eeCluster	ETI: Cluster Health	Value: Poor
Symptom		
CIT: BusinessApplication	ETI: Synthetic User Transaction Performance event	Value: Critical

J2EE::J2EE Server:Transaction Resource Errors >> Transactions Rolled Back

Description: J2EE Server Transaction Resource Errors Impacts Transactions Rolled Back		
Cause		
CIT: J2EE Server	ETI: Transaction Resource Errors	Value: High
Symptom		
CIT: J2EE Server	ETI: Transactions Rolled Back	Value: High

J2EE::J2EE Server:EJB Performance >> EJB Free Pool Wait Rate & EJB Missed Count Rate & Servlet Performance

Description: EJB Performance Impacts EJB Free Pool Wait Rate & EJB Missed Count Rate & Servlet Performance		
Cause		
CIT: J2EE Server	ETI: EJB Performance	Value: Low
Symptom 1		
CIT: J2EE Server	ETI:Servlet Performance	Value: Low
Symptom 2		
CIT: J2eeApplication	ETI:EJB Missed Count Rate	Value: High
Symptom 3		
CIT: J2eeApplication	ETI:Servlet Performance	Value: Low
Symptom 4		
CIT: J2EE Server	ETI:EJB Free Pool Wait Rate	Value: High
Symptom 5		
CIT: J2eeApplication	ETI:EJB Free Pool Wait Rate	Value: High
Symptom 6		
CIT: J2EE Server	ETI:EJB Missed Count Rate	Value: High

J2EE::Computer:CPU Load >> Synthetic User Transaction Performance

Description: Computer CPU Load Impacts Synthetic User Transaction Performance		
Cause		
CIT: Computer	ETI: CPU Load	Value: Overloaded
Symptom		
CIT: BusinessApplication	ETI:Synthetic User Transaction Performance event	Value: Critical

J2EE::J2EE Cluster:Cluster Status >> Real User Transaction Availability & Real User Sessions Availability

Description: J2EE Cluster Status Impacts Real User Transaction Availability & Real User Sessions Availability		
Cause		
CIT: J2eeCluster	ETI: Cluster Status	Value: Stopped

Description: J2EE Cluster Status Impacts Real User Transaction Availability & Real User Sessions Availability		
Symptom 1		
CIT: BusinessApplication	ETI:Real User Transaction Availability event	Value: Critical
Symptom 2		
CIT: BusinessApplication	ETI:Real User Sessions Availability	Value: Critical

J2EE::File System:Disk Usage Level >> Server Status & Transaction Resource Errors & Transaction System Errors

Description: File System Disk Usage Level Impacts Server Status & Transaction Resource Errors & Transaction System Errors		
Cause		
CIT: FileSystem	ETI: Disk Usage Level	Value: Near Capacity
Symptom 1		
CIT: J2EE Server	ETI:Transaction System Errors	Value: High
Symptom 2		
CIT: J2EE Server	ETI:Server Status	Value: Unavailable
Symptom 3		
CIT: J2EE Server	ETI:Transaction Resource Errors	Value: High

J2EE::JVM:JVM Memory Utilization >> Real User Transaction Performance & Real User Sessions Performance

Description: JVM Memory Utilization Impacts Real User Transaction Performance & Real User Sessions Performance		
Cause		
CIT: JVM	ETI: JVM Memory Utilization	Value: High
Symptom 1		
CIT: BusinessApplication	ETI:Real User Transaction Performance event	Value: Critical
Symptom 2		

Description: JVM Memory Utilization Impacts Real User Transaction Performance & Real User Sessions Performance

CIT: BusinessApplication	ETI:Real User Sessions Performance	Value: Critical
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J2EE::J2EE Application:EJB Free Pool Wait Rate >> Servlet Performance**Description: EJB Free Pool Wait Rate Impacts Servlet Performance**

Cause

CIT: J2eeApplication	ETI: EJB Free Pool Wait Rate	Value: High
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Symptom 1

CIT: J2eeApplication	ETI:Servlet Performance	Value: Low
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Symptom 2

CIT: J2EE Server	ETI:Servlet Performance	Value: Low
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J2EE::Network Interface:Interface Utilization >> Real User Transaction Performance & Real User Sessions Performance**Description: Network Interface Utilization Impacts Real User Transaction Performance & Real User Sessions Performance**

Cause

CIT: Interface	ETI: Interface Utilization	Value: Higher Than Normal
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Symptom 1

CIT: BusinessApplication	ETI:Real User Transaction Performance event	Value: Critical
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Symptom 2

CIT: BusinessApplication	ETI:Real User Sessions Performance	Value: Critical
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J2EE::J2EE Server:Servlet Requests >> Synthetic User Transaction Performance**Description: J2EE Server Servlet Requests Impacts Synthetic User Transaction Performance**

Cause

CIT: J2EE Server	ETI: Servlet Requests	Value: High
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Symptom

CIT: BusinessApplication	ETI:Synthetic User Transaction Performance event	Value: Critical
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J2EE::J2EE Cluster:Cluster Health >> Real User Transaction Performance & Real User Sessions Performance

Description: J2EE Cluster Health Impacts Real User Transaction Performance & Real User Sessions Performance		
Cause		
CIT: J2eeCluster	ETI: Cluster Health	Value: Poor
Symptom 1		
CIT: BusinessApplication	ETI:Real User Transaction Performance event	Value: Critical
Symptom 2		
CIT: BusinessApplication	ETI:Real User Sessions Performance	Value: Critical

J2EE::J2EE Server:EJB Free Pool Wait Rate >> Servlet Performance

Description: EJB Free Pool Wait Rate Impacts Servlet Performance		
Cause		
CIT: J2EE Server	ETI: EJB Free Pool Wait Rate	Value: High
Symptom 1		
CIT: J2eeApplication	ETI:Servlet Performance	Value: Low
Symptom 2		
CIT: J2EE Server	ETI:Servlet Performance	Value: Low

J2EE::J2EE Server:Server Status >> Domain Status & Cluster Health & Cluster Status

Description: J2EE Server Status Impacts Domain Status & Cluster Health & Cluster Status		
Cause		
CIT: J2EE Server	ETI: Server Status	Value: Unavailable
Symptom 1		
CIT: J2eeCluster	ETI:Cluster Status	Value: Partial Stop
Symptom 2		
CIT: J2eeCluster	ETI:Cluster Health	Value: Poor
Symptom 3		
CIT: J2eeCluster	ETI:Cluster Status	Value: Stopped

J2EE::J2EE Cluster:Cluster Status >> Synthetic User Transaction Availability

Description: J2EE Cluster Status Impacts Synthetic User Transaction Availability		
Cause		
CIT: J2eeCluster	ETI: Cluster Status	Value: Stopped
Symptom		
CIT: BusinessApplication	ETI:Synthetic User Transaction Availability event	Value: Critical

J2EE::J2EE Server:Servlets Loaded >> JVM Memory Utilization

Description: J2EE Server Servlets Loaded Impacts JVM Memory Utilization		
Cause		
CIT: J2EE Server	ETI: Servlets Loaded	Value: High
Symptom 1		
CIT: J2EE Server	ETI:JVM Memory Utilization	Value: High
Symptom 2		
CIT: JVM	ETI:JVM Memory Utilization	Value: High

J2EE::J2EE Server:Transaction Time >> JDBC Connection Pool Wait Count

Description: J2EE Server Transaction Time Impacts JDBC Connection Pool Wait Count		
Cause		
CIT: J2EE Server	ETI: Transaction Time	Value: High
Symptom 1		
CIT: JdbcDataSource	ETI:JDBC Connection Pool Wait Count	Value: High
Symptom 2		
CIT: J2EE Server	ETI:JDBC Connection Pool Wait Count	Value: High

J2EE::JVM:Total Garbage Collection Time >> CPU Load

Description: JVM Total Garbage Collection Time Impacts CPU Load		
Cause		
CIT: JVM	ETI: Total Garbage Collection Time	Value: High
Symptom		

Description: JVM Total Garbage Collection Time Impacts CPU Load		
CIT: Computer	ETI:CPU Load	Value: Overloaded

J2EE::J2EE Server:Server Status >> Synthetic User Transaction Availability

Description: J2EE Server Status Impacts Synthetic User Transaction Availability		
Cause		
CIT: J2EE Server	ETI: Server Status	Value: Unavailable
Symptom		
CIT: BusinessApplication	ETI:Synthetic User Transaction Availability event	Value: Critical

J2EE::J2EE Server:Servlet Requests >> Real User Transaction Performance & Real User Sessions Performance

Description: J2EE Server Servlet Requests Impacts Real User Transaction Performance & Real User Sessions Performance		
Cause		
CIT: J2EE Server	ETI: Servlet Requests	Value: High
Symptom 1		
CIT: BusinessApplication	ETI:Real User Sessions Performance	Value: Critical
Symptom 2		
CIT: BusinessApplication	ETI:Real User Transaction Performance event	Value: Critical

J2EE::Computer:CPU Load >> Real User Transaction Performance & Real User Sessions Performance

Description: Computer CPU Load Impacts Real User Transaction Performance & Real User Sessions Performance		
Cause		
CIT: Computer	ETI: CPU Load	Value: Overloaded
Symptom 1		
CIT: BusinessApplication	ETI:Real User Sessions Performance	Value: Critical
Symptom 2		

Description: Computer CPU Load Impacts Real User Transaction Performance & Real User Sessions Performance

CIT: BusinessApplication	ETI:Real User Transaction Performance event	Value: Critical
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J2EE::JVM:Total Number Of Threads >> CPU Load & Memory Usage Level**Description: JVM Total Number Of Threads Impacts CPU Load & Memory Usage Level**

Cause		
CIT: JVM	ETI: Total Number Of Threads	Value: High
Symptom 1		
CIT: Computer	ETI:Memory Usage Level	Value: Higher Than Normal
Symptom 2		
CIT: Computer	ETI:CPU Load	Value: Constrained

J2EE::JDBC DataSource:ConnectionPool Utilization >> Transaction Rate & Connection Pool Availability**Description: JDBC DataSource ConnectionPool Utilization Impacts Transaction Capacity Utilization & JDBC Connection Pool Wait Count & Transaction Time & Transaction Commit Rate & Transaction Start Rate & DataSource Connection Pool Availability**

Cause		
CIT: JdbcDataSource	ETI: DataSource ConnectionPool Utilization	Value: High
Symptom 1		
CIT: J2EE Server	ETI:JDBC Connection Pool Wait Count	Value: High
Symptom 2		
CIT: J2EE Server	ETI:Transaction Start Rate	Value: High
Symptom 3		
CIT: J2EE Server	ETI:Transaction Commit Rate	Value: High
Symptom 4		
CIT: J2EE Server	ETI:Transaction Capacity Utilization	Value: High
Symptom 5		

Description: JDBC DataSource ConnectionPool Utilization Impacts Transaction Capacity Utilization & JDBC Connection Pool Wait Count & Transaction Time & Transaction Commit Rate & Transaction Start Rate & DataSource Connection Pool Availability		
CIT: J2EE Server	ETI:DataSource Connection Pool Availability	Value: Low
Symptom 6		
CIT: JdbcDataSource	ETI:JDBC Connection Pool Wait Count	Value: High
Symptom 7		
CIT: J2EE Server	ETI:Transaction Time	Value: High
Symptom 8		
CIT: JdbcDataSource	ETI:DataSource ConnectionPool Availability	Value: Low

J2EE::J2EE Server:Server Status >> Real User Transaction Availability & Real User Sessions Availability

Description: J2EE Server Status Impacts Real User Transaction Availability & Real User Sessions Availability		
Cause		
CIT: J2EE Server	ETI: Server Status	Value: Unavailable
Symptom 1		
CIT: BusinessApplication	ETI:Real User Sessions Availability	Value: Critical
Symptom 2		
CIT: BusinessApplication	ETI:Real User Transaction Availability event	Value: Critical

J2EE::J2EE Application:Servlet Requests >> InterfaceUtilization

Description: J2EE Application Servlet Requests Impacts Interface Utilization		
Cause		
CIT: J2eeApplication	ETI: Servlet Requests	Value: High
Symptom		
CIT: Interface	ETI:Interface Utilization	Value: Much Higher Than Normal

J2EE::JDBC Data Source:DataSource Connection Waiters >> DataSource Connection Pool Availability

Description: JDBC DataSource Connection Waiters Impacts DataSource Connection Pool Availability		
Cause		
CIT: JdbcDataSource	ETI: DataSource Connection Waiters	Value: High
Symptom 1		
CIT: J2EE Server	ETI:DataSource Connection Pool Availability	Value: Low
Symptom 2		
CIT: JdbcDataSource	ETI:DataSource ConnectionPool Availability	Value: Low

J2EE::J2EE Server:JVM Memory Utilization >> Real User Transaction Performance & Real User Sessions Performance

Description: J2EE Server Memory Utilization Impacts Real User Transaction Performance & Real User Sessions Performance		
Cause		
CIT: J2EE Server	ETI: JVM Memory Utilization	Value: High
Symptom 1		
CIT: BusinessApplication	ETI:Real User Transaction Performance event	Value: Critical
Symptom 2		
CIT: BusinessApplication	ETI:Real User Sessions Performance	Value: Critical

J2EE::J2EE Server:Total Garbage Collection Time >> CPU Load

Description: J2EE Server Total Garbage Collection Time Impacts CPU Load		
Cause		
CIT: J2EE Server	ETI: Total Garbage Collection Time	Value: High
Symptom		
CIT: Computer	ETI:CPU Load	Value: Overloaded

J2EE::J2EE Application:EJB Performance >> EJB Free Pool Wait Rate & EJB Missed Count Rate & Servlet Performance

Description: EJB Performance Impacts EJB Free Pool Wait Rate & EJB Missed Count Rate & Servlet Performance		
Cause		
CIT: J2eeApplication	ETI: EJB Performance	Value: Low
Symptom 1		
CIT: J2EE Server	ETI:Servlet Performance	Value: Low
Symptom 2		
CIT: J2eeApplication	ETI:EJB Free Pool Wait Rate	Value: High
Symptom 3		
CIT: J2eeApplication	ETI:EJB Missed Count Rate	Value: High
Symptom 4		
CIT: J2eeApplication	ETI:Servlet Performance	Value: Low
Symptom 5		
CIT: J2EE Server	ETI:EJB Missed Count Rate	Value: High
Symptom 6		
CIT: J2EE Server	ETI:EJB Free Pool Wait Rate	Value: High

J2EE::J2EE Server:All Processors Average Load >> CPU Load

Description: J2EE Server All Processors Average Load Impacts CPU Load		
Cause		
CIT: J2EE Server	ETI: All Processors Average Load	Value: High
Symptom 1		
CIT: Computer	ETI:CPU Load	Value: Overloaded
Symptom 2		
CIT: Computer	ETI:CPU Load	Value: Bottlenecked

J2EE::J2EE Server:EJB Timeout Rate >> Servlet Performance & EJB Transaction Throughput

Description: EJB Timeout Rate Impacts Servlet Performance & EJB Transaction Throughput Rate & EJB Transaction Rollback Rate		
Cause		
CIT: J2EE Server	ETI: EJB Timeout Rate	Value: High
Symptom 1		
CIT: J2eeApplication	ETI:EJB Transaction Throughput Rate	Value: High
Symptom 2		
CIT: J2eeApplication	ETI:EJB Transaction Rollback Rate	Value: High
Symptom 3		
CIT: J2EE Server	ETI:Servlet Performance	Value: Low
Symptom 4		
CIT: J2EE Server	ETI:EJB Transaction Rollback Rate	Value: High

J2EE::J2EE Cluster:Cluster Health >> Domain Status

Description: J2EE Cluster Health Impacts Domain Status		
Cause		
CIT: J2eeCluster	ETI: Cluster Health	Value: Poor
Symptom		
CIT: J2EE Domain	ETI:Domain Status	Value: Poor

J2EE::J2EE Server:EJB Utilization >> DataSource Connection Waiters & DataSource Connection Pool Utilization

Description: EJB Utilization Impacts DataSource Connection Waiters & DataSource Connection Pool Utilization		
Cause		
CIT: J2EE Server	ETI: EJB Utilization	Value: High
Symptom 1		
CIT: J2EE Server	ETI:DataSource Connection Pool Utilization	Value: High

Description: EJB Utilization Impacts DataSource Connection Waiters & DataSource Connection Pool Utilization		
Symptom 2		
CIT: JdbcDataSource	ETI:DataSource Connection Waiters	Value: High
Symptom 3		
CIT: JdbcDataSource	ETI:DataSource ConnectionPool Utilization	Value: High
Symptom 4		
CIT: J2EE Server	ETI:DataSource Connection Waiters	Value: High

J2EE::Computer:Memory Usage Level >> Server Status & Transaction System Errors & Thread Hung Rate

Description: Computer Memory Usage Level Impacts Server Status & Transaction System Errors & ThreadHungRate		
Cause		
CIT: Computer	ETI: Memory Usage Level	Value: Much Higher Than Normal
Symptom 1		
CIT: J2EE Server	ETI:Thread Hung Rate	Value: High
Symptom 2		
CIT: J2EE Server	ETI:Transaction System Errors	Value: High
Symptom 3		
CIT: J2EE Server	ETI:Server Status	Value: Unavailable

J2EE::Computer:CPU Load >> JVM Memory & JMS Server Utilization

Description: Computer CPU Load Impacts JVM Memory Utilization & JMS Server Utilization & Transaction System Errors & EJB Performance		
Cause		
CIT: Computer	ETI: CPU Load	Value: Overloaded
Symptom 1		
CIT: J2eeApplication	ETI:EJB Performance	Value: Low

Description: Computer CPU Load Impacts JVM Memory Utilization & JMS Server Utilization & Transaction System Errors & EJB Performance		
Symptom 2		
CIT: JVM	ETI:JVM Memory Utilization	Value: High
Symptom 3		
CIT: J2EE Server	ETI:Transaction System Errors	Value: High
Symptom 4		
CIT: J2EE Server	ETI:EJB Performance	Value: Low
Symptom 5		
CIT: J2EE Server	ETI:JVM Memory Utilization	Value: High

J2EE::J2EE Server:DataSource ConnectionPool Utilization >> Transaction Capacity Utilization

Description: J2EE Server DataSource ConnectionPool Utilization Impacts Transaction Capacity Utilization & JDBC Connection Pool Wait Count & Transaction Time & Transaction Commit Rate & Transaction Start Rate & DataSource Connection Pool Availability		
Cause		
CIT: J2EE Server	ETI: DataSource Connection Pool Utilization	Value: High
Symptom 1		
CIT: J2EE Server	ETI:Transaction Start Rate	Value: High
Symptom 2		
CIT: JdbcDataSource	ETI:JDBC Connection Pool Wait Count	Value: High
Symptom 3		
CIT: J2EE Server	ETI:Transaction Capacity Utilization	Value: High
Symptom 4		
CIT: J2EE Server	ETI:DataSource Connection Pool Availability	Value: Low
Symptom 5		

Description: J2EE Server DataSource ConnectionPool Utilization Impacts Transaction Capacity Utilization & JDBC Connection Pool Wait Count & Transaction Time & Transaction Commit Rate & Transaction Start Rate & DataSource Connection Pool Availability		
CIT: J2EE Server	ETI:Transaction Time	Value: High
Symptom 6		
CIT: J2EE Server	ETI:JDBC Connection Pool Wait Count	Value: High
Symptom 7		
CIT: J2EE Server	ETI:Transaction Commit Rate	Value: High
Symptom 8		
CIT: JdbcDataSource	ETI:DataSource ConnectionPool Availability	Value: Low

J2EE::J2EE Server:Server Sessions >> JVM Memory Utilization

Description: J2EE Server Server Sessions Impacts JVM Memory Utilization		
Cause		
CIT: J2EE Server	ETI: Server Sessions	Value: High
Symptom 1		
CIT: J2EE Server	ETI:JVM Memory Utilization	Value: High
Symptom 2		
CIT: JVM	ETI:JVM Memory Utilization	Value: High

J2EE::J2EE Server:Total Number Of Threads >> CPU Load & Memory Usage Level

Description: J2EE Server Total Number Of Threads Impacts CPU Load & Memory Usage Level		
Cause		
CIT: J2EE Server	ETI: Total Number Of Threads	Value: High
Symptom 1		
CIT: Computer	ETI:CPU Load	Value: Overloaded
Symptom 2		
CIT: Computer	ETI:Memory Usage Level	Value: Higher Than Normal
Symptom 3		

Description: J2EE Server Total Number Of Threads Impacts CPU Load & Memory Usage Level

CIT: Computer	ETI:Memory Usage Level	Value: Much Higher Than Normal
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J2EE::J2EE Server:HTTP Sessions >> JVM Memory Utilization**Description: J2EE Server HTTP Sessions Impacts JVM Memory Utilization**

Cause

CIT: J2EE Server	ETI: HTTP Sessions	Value: High
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Symptom 1

CIT: JVM	ETI:JVM Memory Utilization	Value: High
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Symptom 2

CIT: J2EE Server	ETI:JVM Memory Utilization	Value: High
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J2EE::Network Interface:Interface Utilization >> Synthetic User Transaction Performance**Description: Network Interface Utilization Impacts Synthetic User Transaction Performance**

Cause

CIT: Interface	ETI: Interface Utilization	Value: Higher Than Normal
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Symptom

CIT: BusinessApplication	ETI:Synthetic User Transaction Performance event	Value: Critical
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J2EE::J2EE Server:JVM Memory Utilization >> Transaction Time & Transaction System Errors & Servlet Performance**Description: J2EE ServerJVMMemoryUtilization Impacts Transaction Time & Transaction System Errors & Servlet Performance**

Cause

CIT: J2EE Server	ETI: JVM Memory Utilization	Value: High
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Symptom 1

CIT: J2EE Server	ETI:Transaction Time	Value: High
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Symptom 2

CIT: J2eeApplication	ETI:Servlet Performance	Value: Low
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Description: J2EE ServerJVMMemoryUtilization Impacts Transcation Time & Transaction System Errors & Servlet Performance		
Symptom 3		
CIT: J2EE Server	ETI:Transaction System Errors	Value: High
Symptom 4		
CIT: J2EE Server	ETI:Servlet Performance	Value: Low

J2EE::JDBC Data Source:DataSource Connection Pool Availability >> EJBPerformance & Transaction Timeout

Description: JDBC DataSource Connection Pool Availability Impacts EJBPerformance & Transaction Timeout Rate & Transaction Commit Rate		
Cause		
CIT: JdbcDataSource	ETI: DataSource ConnectionPool Availability	Value: Low
Symptom 1		
CIT: J2EE Server	ETI:Transaction Commit Rate	Value: High
Symptom 2		
CIT: J2EE Server	ETI:Transaction Timeout Rate	Value: High
Symptom 3		
CIT: J2EE Server	ETI:EJB Performance	Value: Low
Symptom 4		
CIT: J2eeApplication	ETI:EJB Performance	Value: Low

J2EE::JDBC Data Source:DataSource Leaked Connections Rate >> DataSource ConnectionPool Utilization

Description: JDBC DataSource Leaked Connections Rate Impacts DataSource ConnectionPool Utilization		
Cause		
CIT: JdbcDataSource	ETI: DataSource Leaked Connections Rate	Value: High
Symptom 1		
CIT: JdbcDataSource	ETI:DataSource ConnectionPool Utilization	Value: High

Description: JDBC DataSource Leaked Connections Rate Impacts DataSource ConnectionPool Utilization		
Symptom 2		
CIT: J2EE Server	ETI:DataSource Connection Pool Utilization	Value: High

J2EE::Network Interface:Interface Utilization >> Servlet Performance

Description: Network Interface Utilization Impacts Servlet Performance		
Cause		
CIT: Interface	ETI: Interface Utilization	Value: Much Higher Than Normal
Symptom 1		
CIT: J2eeApplication	ETI:Servlet Performance	Value: Low
Symptom 2		
CIT: J2EE Server	ETI:Servlet Performance	Value: Low

J2EE::J2EE Application:EJB Timeout Rate >> Servlet Performance & EJB Transaction Throughput

Description: EJB Timeout Rate Impacts Servlet Performance & EJB Transaction Throughput Rate & EJB Transaction Rollback Rate		
Cause		
CIT: J2eeApplication	ETI: EJB Timeout Rate	Value: High
Symptom 1		
CIT: J2eeApplication	ETI:EJB Transaction Throughput Rate	Value: High
Symptom 2		
CIT: J2eeApplication	ETI:EJB Transaction Rollback Rate	Value: High
Symptom 3		
CIT: J2EE Server	ETI:EJB Transaction Rollback Rate	Value: High
Symptom 4		
CIT: J2eeApplication	ETI:Servlet Performance	Value: Low

Description: EJB Timeout Rate Impacts Servlet Performance & EJB Transaction Throughput Rate & EJB Transaction Rollback Rate

Symptom 5

CIT: J2EE Server	ETI:Servlet Performance	Value: Low
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J2EE::J2EE Server:DataSource Connection Pool Availability >> EJBPerformance & Transaction Timeout
Description: J2EE Server DataSource Connection Pool Availability Impacts EJBPerformance & Transaction Timeout Rate & Transaction Commit Rate

Cause

CIT: J2EE Server	ETI: DataSource Connection Pool Availability	Value: Low
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Symptom 1

CIT: J2EE Server	ETI:EJB Performance	Value: Low
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Symptom 2

CIT: J2EE Server	ETI:Transaction Commit Rate	Value: High
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Symptom 3

CIT: J2EE Server	ETI:Transaction Timeout Rate	Value: High
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Symptom 4

CIT: J2eeApplication	ETI:EJB Performance	Value: Low
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J2EE::J2EE Server:EJB Concurrent Lives >> EJB Utilization
Description: EJB Concurrent Lives Impacts EJB Utilization

Cause

CIT: J2EE Server	ETI: EJB Concurrent Lives	Value: High
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Symptom 1

CIT: J2EE Server	ETI:EJB Utilization	Value: High
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Symptom 2

CIT: J2eeApplication	ETI:EJB Utilization	Value: High
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J2EE::JVM:JVM Memory Utilization >> Synthetic User Transaction Performance

Description: JVM Memory Utilization Impacts Synthetic User Transaction Performance		
Cause		
CIT: JVM	ETI: JVM Memory Utilization	Value: High
Symptom		
CIT: BusinessApplication	ETI: Synthetic User Transaction Performance event	Value: Critical

J2EE::JVM:Total Garbage Collection Count >> CPU Load

Description: JVM Total Garbage Collection Count Impacts CPU Load		
Cause		
CIT: JVM	ETI: Total Garbage Collection Count	Value: High
Symptom		
CIT: Computer	ETI: CPU Load	Value: Overloaded

J2EE::J2EE Application:EJB Concurrent Lives >> EJB Utilization

Description: EJB Concurrent Lives Impacts EJB Utilization		
Cause		
CIT: J2eeApplication	ETI: EJB Concurrent Lives	Value: High
Symptom 1		
CIT: J2eeApplication	ETI: EJB Utilization	Value: High
Symptom 2		
CIT: J2EE Server	ETI: EJB Utilization	Value: High

J2EE::J2EE Application:EJB Utilization >> DataSource Connection Waiters & DataSource Connection Pool Utilization

Description: EJB Utilization Impacts DataSource Connection Waiters & DataSource Connection Pool Utilization		
Cause		
CIT: J2eeApplication	ETI: EJB Utilization	Value: High
Symptom 1		
CIT: JdbcDataSource	ETI: DataSource ConnectionPool Utilization	Value: High

Description: EJB Utilization Impacts DataSource Connection Waiters & DataSource Connection Pool Utilization		
Symptom 2		
CIT: J2EE Server	ETI:DataSource Connection Waiters	Value: High
Symptom 3		
CIT: J2EE Server	ETI:DataSource Connection Pool Utilization	Value: High
Symptom 4		
CIT: JdbcDataSource	ETI:DataSource Connection Waiters	Value: High

J2EE::J2EE Application:Servlet Requests >> Thread Pool & JVM Memory Utilization

Description: J2EE Application Servlet Requests Impacts Thread Pool Utilization & Active Sockets Count & JVM Memory Utilization & HTTP Sessions & Thread Requests Pending & Servlets Loaded & Interface Discard Rate & Interface Utilization		
Cause		
CIT: J2eeApplication	ETI: Servlet Requests	Value: High
Symptom 1		
CIT: Interface	ETI:Interface Discard Rate	Value: High
Symptom 2		
CIT: J2eeApplication	ETI:HTTP Sessions	Value: High
Symptom 3		
CIT: Interface	ETI:Interface Utilization	Value: Higher Than Normal
Symptom 4		
CIT: J2EE Server	ETI:Thread Requests Pending	Value: High
Symptom 5		
CIT: J2EE Server	ETI:Servlets Loaded	Value: High
Symptom 6		
CIT: J2EE Server	ETI:Active Sockets Count	Value: High
Symptom 7		

Description: J2EE Application Servlet Requests Impacts Thread Pool Utilization & Active Sockets Count & JVM Memory Utilization & HTTP Sessions & Thread Requests Pending & Servlets Loaded & Interface Discard Rate & Interface Utilization

CIT: J2EE Server	ETI:Thread Pool Utilization	Value: High
Symptom 8		
CIT: JVM	ETI:JVM Memory Utilization	Value: High
Symptom 9		
CIT: J2EE Server	ETI:HTTP Sessions	Value: High
Symptom 10		
CIT: Interface	ETI:Interface Utilization	Value: High
Symptom 11		
CIT: J2EE Server	ETI:JVM Memory Utilization	Value: High

J2EE::J2EE Server:DataSource Connection Pool Performance >> EJB Performance
Description: J2EE Server DataSource Connection Pool Performance Impacts EJB Performance

Cause		
CIT: J2EE Server	ETI: DataSource Connection Pool Performance	Value: Low
Symptom 1		
CIT: J2EE Server	ETI:EJB Performance	Value: Low
Symptom 2		
CIT: J2eeApplication	ETI:EJB Performance	Value: Low

J2EE::J2EE Application:HTTP Sessions >> JVM Memory Utilization
Description: J2EE Application HTTP Sessions Impacts JVM Memory Utilization

Cause		
CIT: J2eeApplication	ETI: HTTP Sessions	Value: High
Symptom 1		
CIT: JVM	ETI:JVM Memory Utilization	Value: High
Symptom 2		
CIT: J2EE Server	ETI:JVM Memory Utilization	Value: High

J2EE::JDBC DataSource:DataSource Connection Pool Performance >> EJB Performance

Description: JDBC DataSource Connection Pool Performance Impacts EJB Performance		
Cause		
CIT: JdbcDataSource	ETI: DataSource ConnectionPool Performance	Value: Low
Symptom 1		
CIT: J2eeApplication	ETI:EJB Performance	Value: Low
Symptom 2		
CIT: J2EE Server	ETI:EJB Performance	Value: Low

J2EE::J2EE Server:Thread Pool Utilization >> Servlet Performance & Thread Request Wait

Description: J2EE Server Thread Pool Utilization Impacts Execute Queue Wait Count & Active Sockets Count & Servlet Performance & Deferred Thread Requests & Thread Request Wait Time & Thread Requests Pending & Thread Request Service Time & Thread Pool Availability & JVM Memory Utilization		
Cause		
CIT: J2EE Server	ETI: Thread Pool Utilization	Value: High
Symptom 1		
CIT: J2EE Server	ETI:Deferred Thread Requests	Value: High
Symptom 2		
CIT: J2EE Server	ETI:JVM Memory Utilization	Value: High
Symptom 3		
CIT: J2EE Server	ETI:Servlet Performance	Value: Low
Symptom 4		
CIT: J2EE Server	ETI:Thread Request Service Time	Value: High
Symptom 5		
CIT: JVM	ETI:JVM Memory Utilization	Value: High
Symptom 6		
CIT: J2EE Server	ETI:Thread Request Wait Time	Value: High
Symptom 7		

Description: J2EE Server Thread Pool Utilization Impacts Execute Queue Wait Count & Active Sockets Count & Servlet Performance & Deferred Thread Requests & Thread Request Wait Time & Thread Requests Pending & Thread Request Service Time & Thread Pool Availability & JVM Memory Utilization

CIT: J2EE Server	ETI:Active Sockets Count	Value: High
Symptom 8		
CIT: J2EE Server	ETI:Execute Queue Wait Count	Value: High
Symptom 9		
CIT: J2EE Server	ETI:Thread Requests Pending	Value: High
Symptom 10		
CIT: J2eeApplication	ETI:Servlet Performance	Value: Low
Symptom 11		
CIT: J2EE Server	ETI:Thread Pool Availability	Value: Low

J2EE::J2EE Server:Transaction System Errors >> Transactions Rolled Back

Description: J2EE Server Transaction System Errors Impacts Transactions Rolled Back

Cause		
CIT: J2EE Server	ETI: Transaction System Errors	Value: High
Symptom		
CIT: J2EE Server	ETI:Transactions Rolled Back	Value: High

J2EE::Network Interface:Interface Communication Status >> Server Status

Description: Network Interface Communication Status Impacts Server Status

Cause		
CIT: Interface	ETI: Interface Communication Status	Value: Unavailable
Symptom		
CIT: J2EE Server	ETI:Server Status	Value: Unavailable

J2EE::J2EE Cluster:Cluster Status >> Domain Status

Description: J2EE Cluster Status Impacts Domain Status

Cause		
CIT: J2eeCluster	ETI: Cluster Status	Value: Stopped

Description: J2EE Cluster Status Impacts Domain Status

Symptom

CIT: J2EE Domain	ETI:Domain Status	Value: Poor
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J2EE::JVM:All Processors Average Load >> CPU Load**Description: JVM All Processors Average Load Impacts CPU Load**

Cause

CIT: JVM	ETI: All Processors Average Load	Value: High
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Symptom

CIT: Computer	ETI:CPU Load	Value: Overloaded
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J2EE::J2EE Server:Total Garbage Collection Count >> CPU Load**Description: J2EE Server Total Garbage Collection Count Impacts CPU Load**

Cause

CIT: J2EE Server	ETI: Total Garbage Collection Count	Value: High
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Symptom

CIT: Computer	ETI:CPU Load	Value: Overloaded
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J2EE::J2EE Server:JVM Memory Utilization >> Synthetic User Transaction Performance**Description: J2EE Server Memory Utilization Impacts Synthetic User Transaction Performance**

Cause

CIT: J2EE Server	ETI: JVM Memory Utilization	Value: High
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Symptom

CIT: BusinessApplication	ETI:Synthetic User Transaction Performance event	Value: Critical
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J2EE::J2EE Server:DataSource Connection Waiters >> DataSource Connection Pool**Availability****Description: J2EE Server DataSource Connection Waiters Impacts DataSource Connection Pool Availability**

Cause

CIT: J2EE Server	ETI: DataSource Connection Waiters	Value: High
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Description: J2EE Server DataSource Connection Waiters Impacts DataSource Connection Pool Availability

Symptom 1

CIT: J2EE Server	ETI:DataSource Connection Pool Availability	Value: Low
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Symptom 2

CIT: JdbcDataSource	ETI:DataSource ConnectionPool Availability	Value: Low
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J2EE::J2EE Application:Servlet Requests >> Real User Transaction Performance & Real User Sessions Performance**Description: J2EE Application Servlet Requests Impacts Real User Transaction Performance & Real User Sessions Performance**

Cause

CIT: J2eeApplication	ETI: Servlet Requests	Value: High
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Symptom 1

CIT: BusinessApplication	ETI:Real User Sessions Performance	Value: Critical
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Symptom 2

CIT: BusinessApplication	ETI:Real User Transaction Performance event	Value: Critical
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J2EE::JVM:JVM Memory Utilization >> Transaction Time & Transaction System Errors & Servlet Performance**Description: JVMMemoryUtilization Impacts Transaction Time & Transaction System Errors & Servlet Performance**

Cause

CIT: JVM	ETI: JVM Memory Utilization	Value: High
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Symptom 1

CIT: J2EE Server	ETI:Transaction System Errors	Value: High
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Symptom 2

CIT: J2EE Server	ETI:Servlet Performance	Value: Low
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Symptom 3

Description: JVMMemoryUtilization Impacts Transaction Time & Transaction System Errors & Servlet Performance

CIT: J2EE Server	ETI:Transaction Time	Value: High
Symptom 4		
CIT: J2eeApplication	ETI:Servlet Performance	Value: Low

J2EE::J2EE Server:Servlet Requests >> Thread Pool & JVM Memory Utilization**Description: J2EE Server Servlet Requests Impacts Thread Pool Utilization & Active Sockets Count & JVM Memory Utilization & HTTP Sessions & Thread Requests Pending & Servlets Loaded & Interface Discard Rate & Interface Utilization**

Cause		
CIT: J2EE Server	ETI: Servlet Requests	Value: High
Symptom 1		
CIT: J2EE Server	ETI:Thread Pool Utilization	Value: High
Symptom 2		
CIT: J2EE Server	ETI:Servlets Loaded	Value: High
Symptom 3		
CIT: JVM	ETI:JVM Memory Utilization	Value: High
Symptom 4		
CIT: J2EE Server	ETI:Thread Requests Pending	Value: High
Symptom 5		
CIT: Interface	ETI:Interface Utilization	Value: Higher Than Normal
Symptom 6		
CIT: J2EE Server	ETI:JVM Memory Utilization	Value: High
Symptom 7		
CIT: Interface	ETI:Interface Discard Rate	Value: High
Symptom 8		
CIT: J2EE Server	ETI:Active Sockets Count	Value: High

J2EE::J2EE Server:Transaction Application Errors >> Transactions Rolled Back

Description: J2EE Server Transaction Application Errors Impacts Transactions Rolled Back		
Cause		
CIT: J2EE Server	ETI: Transaction Application Errors	Value: High
Symptom		
CIT: J2EE Server	ETI:Transactions Rolled Back	Value: High

J2EE::J2EE Application:Servlet Requests >> Synthetic User Transaction Performance

Description: J2EE Application Servlet Requests Impacts Synthetic User Transaction Performance		
Cause		
CIT: J2eeApplication	ETI: Servlet Requests	Value: High
Symptom		
CIT: BusinessApplication	ETI:Synthetic User Transaction Performance event	Value: Critical

J2EE::J2EE Server:Transaction Timeout Errors >> Transactions Rolled Back

Description: J2EE Server Transaction Timeout Errors Impacts Transactions Rolled Back		
Cause		
CIT: J2EE Server	ETI: Transaction Timeout Errors	Value: High
Symptom		
CIT: J2EE Server	ETI:Transactions Rolled Back	Value: High

HI Assignment

The following table lists the HI assignments for OMi MP for Oracle WebLogic.

HI Mapping	HI Assignment
J2EE Application	J2EE Application Mapping for HIs assignment
	J2EE Application Mapping for HIs assignment with empty monitor

HI Mapping	HI Assignment
J2EE Cluster	J2EE Cluster for HIs assignment
	J2EE Cluster for HIs assignment with empty monitor
J2EE Domain	J2EE Domain Mapping for HIs assignment
	J2EE Domain Mapping for HIs assignment with empty monitor
J2EE Server	J2EE Server Mapping for HIs assignment
	J2EE Server Mapping for HIs assignment with empty monitor
JDBC Data Source	JDBC Data Source Mapping for HIs assignment
	JDBC Data Source Mapping for HIs assignment with empty monitor
JVM	JVM Mapping for HIs assignment
	JVM Mapping for HIs assignment with empty monitor

KPI Assignment

The following table lists the KPI assignments for OMi MP for Oracle WebLogic.

CI Type	KPI Assignment
J2EE Application	J2EE Application Mapping for Service Health
	J2EE Application Mapping for SLM
J2EE Cluster	J2EE Cluster Mapping for Service Health
	J2EE Cluster Mapping for SLM
J2EE Domain	J2EE Domain Mapping for Service Health
	J2EE Domain Mapping for SLM
J2EE Server	J2EE Server Mapping for Service Health
	J2EE Server Mapping for SLM
JDBC Data Source	JDBC Data Source Mapping for Service Health
	JDBC Data Source Mapping for SLM
JVM	JVM Mapping for Service Health
	JVM Mapping for SLM

Operations Orchestration (OO) Flows

When creating the mapping for the OO flows, you can set default values for the attributes listed in the following table. You need not specify these values each time you run the flows.

Note: The OO flows shipped by OMi MP for WebLogic can only be used in deployment scenarios where the application is monitored by Smart Plug-ins managed by an Operations Manager (OM) server. In such a case, the OO flows included in OMi MP for WebLogic can be installed on an OO server and launched through the OMi-OO integration. For information about installing OO flows, see the section *Installing Operations Orchestration (OO) Flows* in the *OMi MP for WebLogic Installation Guide*. For more information about the OMi-OO integration, see the *OMi- Operations Orchestrations Integration Guide*.

Attribute	Description
omServerPort	Port number of the OM Tool WS. This is an optional attribute.
omServerUser	User name for the OM Server that will be used in the OM Tool WS.
omServerPassword	Password for the OM Server that will be used in the OM Tool WS.

The following section lists the OO flows:

Application Server Health Check

You can use this flow to check the health of an Application Server.

You must map this flow to the CIT **J2EEServer**.

The following table lists the user input items when executing this OO flow.

Flow input	Description
omNode	FQDN of the node. This must be a managed node for the OM Server and must be specified each time you run the OO flow.
jeeserver	Determines the type and the valid values are wls/wbs. You must specify this value each time you run the OO flow.
omServer	FQDN of the OM Server. You can map this input to the Event attribute Originating Server .
jeeserverName	Name of the J2EE Server. You can map this input to the CI attribute J2eeserver_fullname of CI Type J2EEServer .
timeout	Used when running the remote command on the node. This is an optional attribute and the default value is 100000.

Application Server Performance Check

You can use this flow to check the performance of an Application Server.

You must map this flow to the CIT **J2EEServer**.

The following table lists the user input items when executing this OO flow.

Flow input	Description
omNode	FQDN of the node. This must be a managed node for the OM Server and must be specified each time you run the OO flow.
jeeserver	Determines the type and the valid values are wls/wbs. You must specify this value each time you run the OO flow.
omServer	FQDN of the OM Server. You can map this input to the Event attribute Originating Server .
jeeserverName	Name of the J2EE Server. You can map this input to the CI attribute J2eeserver_fullname of CI Type J2EEServer .
timeout	Used when running the remote command on the node. This is an optional attribute and the default value is 100000.

JDBC Health Check

You can use this flow to check the health of the JDBC Connection.

You must map this flow to the CIT **J2EEServer**.


The following table lists the user input items when executing this OO flow.

Flow input	Description
omNode	FQDN of the node. This must be a managed node for the OM Server and must be specified each time you run the OO flow.
jeeserver	Determines the type and the valid values are wls/wbs. You must specify this value each time you run the OO flow.
omServer	FQDN of the OM Server. You can map this input to the Event attribute Originating Server .
jeeserverName	Name of the J2EE Server. You can map this input to the CI attribute J2eeserver_fullname of CI Type J2EEServer .
timeout	Used when running the remote command on the node. This is an optional attribute and the default value is 100000.

Performance Dashboard

Performance Dashboards represent a pictorial representation of metrics. The OMi MP for Oracle WebLogic includes the performance dashboard. The graphs are generated from the **<WEBLOGIC_DATA>** data source. For information about creating and viewing graphs, see the documents for Performance Dashboard available in documentation for the Operations Manager i.

Configure CI Attribute in PD Mapping

1. Open Performance Dashboard Mapping pane:
Click **Administration > Operations Console > Performance Dashboard Mapping**.
2. In the CI Types pane, expand **ConfigurationItem > InfrastructureElement > Node > Computer**.
3. In the Performance Dashboard Mapping pane, click . The button is green with a white pencil icon and the text "Edit Mappings".
4. In the Instance ID Definition tab, select **PrimaryDnsName** in *CI Attributes* field.
5. Click **Save**.

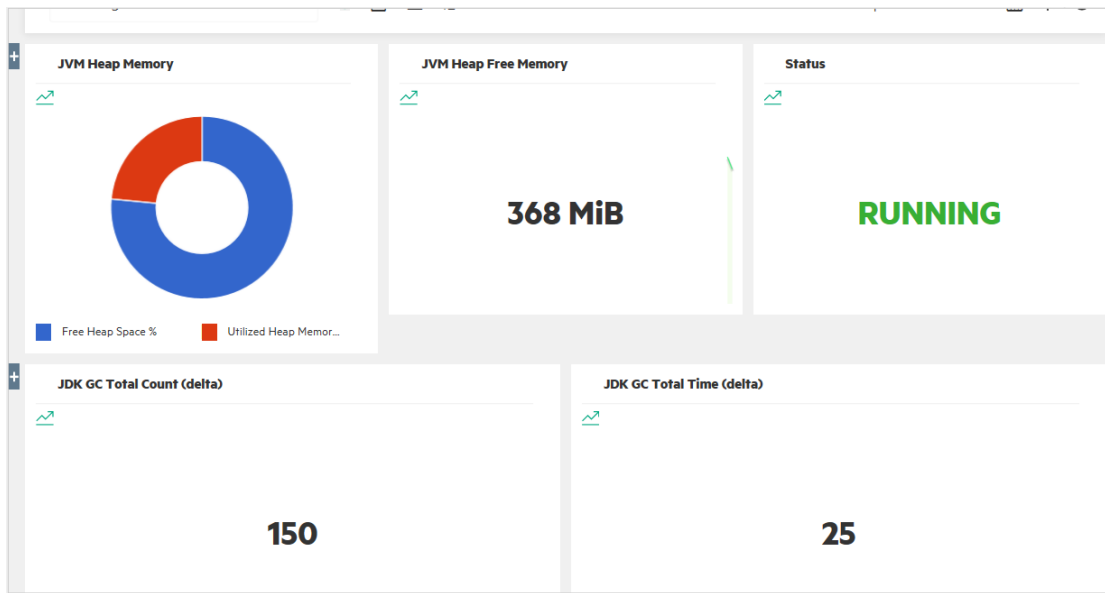
View Performance Dashboard

Performance Perspective enables you to populate graphs from existing graph templates. You can also plot customized graphs by selecting the required metrics for a selected CI.

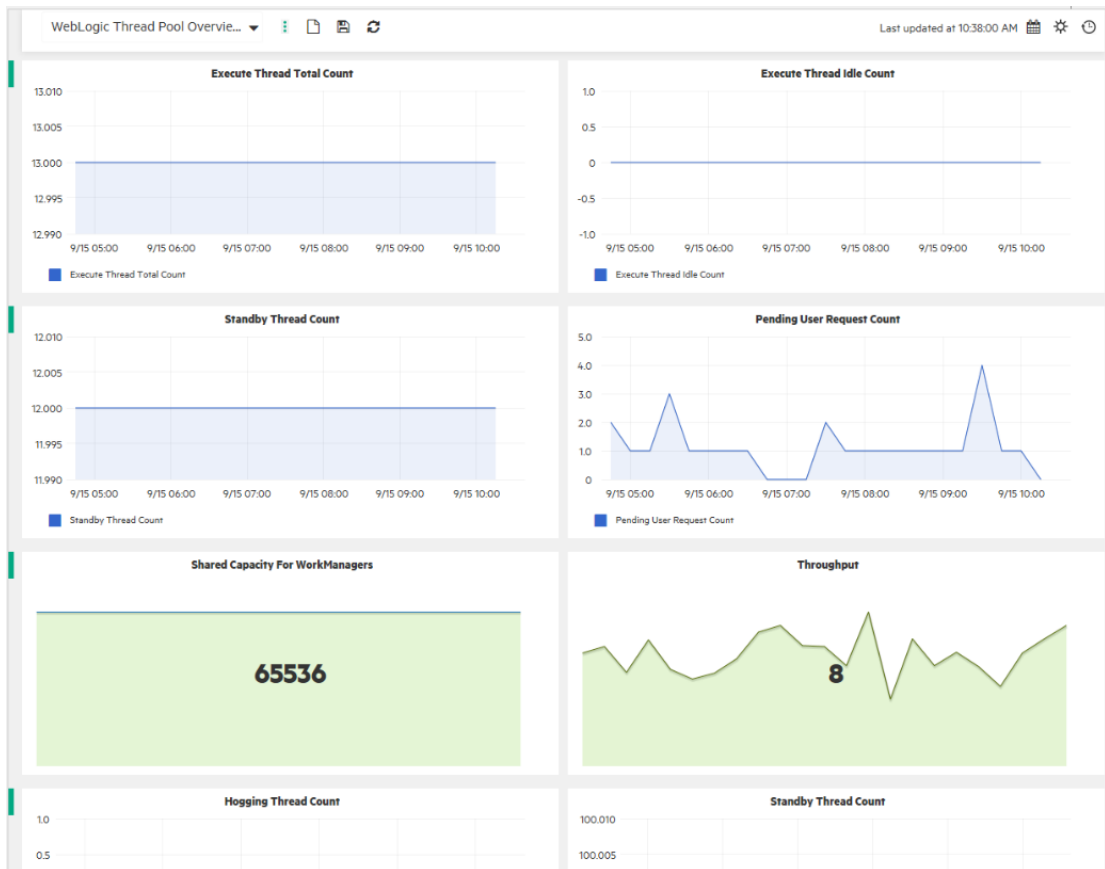
To view the Performance Perspective of **Weblogic_Deployment_View** CIs using dashboard, follow these steps:

1. Open the Performance Perspective pane:
Click **Workspaces > Operations Console > Performance Perspective**.
The View Explorer pane appears.
2. In the **Browse Views** tab, select the **Weblogic_Deployment_View** view.
The default graphs or dashboard available for the **Weblogic_Deployment_View** appears in the Performance pane.
The following is an example of **Weblogic_Deployment_View** view Performance Dashboard:

o **WebLogic Overview**



o **WebLogic Thread Pool Overview**



List of Performance Dashboard

Datasource	Performance Dashboard
Operations Agent	WebLogic Overview WebLogic Thread Constraint Overview WebLogic Thread Pool Overview

Types of Performance Dashboard

Performance Dashboard	Graphs	Metrics
WebLogic Overview	JVM Heap Memory	WEBLGCJRKTRTHPFREEPC WEBLGCJVMMEMUTILPCT
	JVM Heap Free Memory	WEBLGCJVMHEAPFREEMEM
	Status	WEBLOGIC_SERSTATUS
	JDK GC Total Count (delta)	WEBLGCJDKGCTOTCOUNT
	JDK GC Total Time (delta)	WEBLGCJDKGCTOTTIME
WebLogic Thread Constraint Overview	Current Wait Time	WEBLGCREQWAITTIMTHRD
	Max Wait Time	WEBLGCREQMAXWAITTIME
	Pending Requests	WEBLGCPENDINGREQCNT
	Executing Requests	WEBLGCEXECUTINGRQSTS
	Completed Requests	WEBLGCCOMPLETEDRQSTS
WebLogic Thread Pool Overview	Execute Thread Total Count	WEBLGCTHRPLRTEXTHRCT

Performance Dashboard	Graphs	Metrics
	Execute Thread Idle Count	WEBLGCTPLRTEXTHIDLCT
	Standby Thread Count	WEBLGCSTANDBYTHRDCNT
	Pending User Request Count	WEBLGCPNDNGUSRRQSTCT
	Shared Capacity For WorkManagers	WEBLGCSHRCAPFRWRKMGR
	Throughput	WEBLGCEXQTHROUGHPUT
	Hogging Thread Count	WEBLGCHOGGINGTHRDCNT
	Standby Thread Count	WEBLGCEXQTHRUTILPCT

Tools

The OMi MP for Oracle WebLogic is packaged with tools which enable administering and monitoring the WebLogic CIs. It comprises the following tools:

CI Type	Tool Name	Description
host_node	Stop Weblogic Monitoring 2.0	Stops Weblogic Monitoring on the managed server
host_node	Restart Weblogic Monitoring 2.0	Restarts Weblogic Monitoring on the managed server
host_node	Start Weblogic Monitoring 2.0	Starts Weblogic Monitoring on the managed server

Chapter 4: Customizing OMi MP for Oracle WebLogic

OMi MP for Oracle WebLogic can be customized to suit your monitoring requirements. You can edit the existing WebLogic Management Templates or create new WebLogic Management Templates to monitor your WebLogic Application Server environment.

This section provides information about the following:

- [Editing WebLogic Management Templates](#)
- [Creating WebLogic Management Templates](#)

Customizing WebLogic Management Templates


You can edit the WebLogic Management Templates and modify the following components:

- Parameters
- WebLogic Aspects

Editing Parameters

Use Case: You are using Essential WebLogic Management Template to monitor WebLogic JVM Heap Memory usage in your environment. You are monitoring the percentage of heap space used in JVM and want to modify the parameters corresponding to JVM Heap Space to closely monitor the memory usage.

To closely monitor the JVM Heap Space usage in your environment, you must modify the JVM Heap Space parameters - Percentage of heap space used in the JVM Frequency, Percentage of heap space used in the JVM Severity, and Percentage of heap space used in the JVM Threshold.

1. Open the Management Templates and Aspects:
Click **Administration > Monitoring > Management Templates & Aspects**.
2. In the Configuration Folders pane:
Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates > Essential Weblogic Management Template
3. Select the **Essential Weblogic Management Template** from the list, and then click . The Edit Management Template dialog box opens.
4. Click the **Parameters** tab. The list of parameters appear.
5. Double-click the Percentage of heap space used in the JVM parameter. The Edit Parameter window appears.

In this instance, Percentage of heap space used in JVM parameter is Percentage of heap space used in JVM Frequency, Percentage of heap space used in JVM Severity, and Percentage of heap space used in JVM Threshold.
6. You can change the default value by using the drop-down text. For example, you can change the value of the parameter Percentage of heap space used in JVM Severity Lower to Major from Minor.
7. Click **OK**. The Edit Management Template dialog box opens.
8. Click **OK**. The version of the WebLogic Management Template is incremented.



Note: The version number of the WebLogic Management Template is incremented when any customizations are made to the WebLogic Management Template.

Editing Aspects

Use Case: You are using Extensive WebLogic Management Template to monitor your J2EE environment. You do not want to use some Aspects which are part of the Extensive WebLogic Management Template.

1. Open the Management Templates and Aspects manager:
Click **Administration > Monitoring > Management Templates & Aspects**.
2. In the Configuration Folders pane:

Configuration Folders > Application Server Management > Oracle WebLogic Management > Management Templates > Extensive Weblogic Management Template

3. Select the **Extensive Weblogic Management Template** from the list, and then click . The Edit Management Template dialog box opens.
4. Click the **Aspects** tab. The list of Aspects appear.
5. Select the Aspect that you want to delete from the list. For example, you want to delete the Weblogic JCA Statistics.
6. Click  to delete the selected aspect.
7. Click **OK**. The version of the WebLogic Management Template is incremented.


Creating Weblogic Management Templates

1. Open the Management Templates and Aspects manager:



Click **Administration > Monitoring > Management Templates & Aspects**.

2. In the Configuration Folders pane:

Configuration Folders > Application Server Management > Oracle WebLogic Management



3. Select the Weblogic configuration folder and if you need to create a new configuration folder, click . The Create Configuration Folder opens.
4. Type the name of the new configuration folder and the description. For example, you can type the new configuration folder name as <Test>.
5. Click **OK**. The new configuration folder is created.



Configuration Folders > Application Server Management > WebLogic Management > Test

6. In the Management Templates & Aspects pane, select the new configuration folder and click  and then click  **Create Management Template**. The Create Management Template wizard opens.
7. In the General page, type a **Name** for the new WebLogic Management Template. Click **Next**.

8. A WebLogic Management Template enables you to manage WebLogic CIs and all the related dependent CIs. Select **Weblogic_Deployment_View** from the list as the Topology View. The `Weblogic_Deployment_View` shows the WebLogic CIs and all the related CITs.
9. Click an item in the topology map to select the **CI Type** of the CIs that this Management Template enables you to manage. This is the type of CI to which the Management Template can be assigned. For example, you can select J2EE Application to monitor WebLogic Application server.

Click **Next**.

10. In the Aspects page, click , and then click  **Add Existing Aspect** to add existing Aspects to the new WebLogic Management Template. The Add Existing Aspect dialog box opens. Select the Aspects that you want to add, and then click **OK**.


If suitable Aspects do not exist, click the , and then click  **Add New Aspect** to create them from here.

11. For each aspect that you add, you must specify at least one **Target CI**.

Click an aspect in the list, and then in the topology map click the CIT you want the Aspect to monitor when this Management Template is assigned. (Press **CTRL** to select several CITs.) Each CIT that you select here must correspond to one of the CI types assigned within the aspect itself (or a child of one of those CITs). For example, you can select WebLogic CI from the topology map.

12. In the Parameters page, you see a list of all the parameters from the Aspects that you added to this Management Template.


To combine parameters:

- a. Press **CTRL** and click the parameters that you want to combine.
- b. Click the . The Edit/Combine Parameters dialog box opens.
- c. Type a **Name** for the combined parameters.
- d. *Optional.* Specify a **Description**, **Default Value**, and whether the combined parameter is **Read Only**, an **Expert Setting**, or **Hidden**.

You can specify either a specific default value, or you can click **From CI Attribute** and then browse for a CI attribute. When you specify a CI attribute, Operations Management sets the parameter value automatically during the deployment of the underlying policy templates, using the actual value of this attribute from the CI. You can also change values of conditional parameters. (The conditions are read-only and cannot be changed at Management Template level.)

Read Only prevents changes to the parameter value when the Management Template is assigned to a configuration item. Hidden also prevents changes, but additionally makes the parameter invisible when the Management Template is assigned, and during parameter tuning. Users can choose whether to show expert settings when they make an assignment.

- e. Click **OK**.

You can also edit the parameters without combining them, to override the defaults in the Aspects or policy templates. Click one parameter, and then click . The Edit/Combine Parameters dialog box opens.

13. In the Create Management Template wizard, click **Finish** to save the Management Template and close the wizard. The new Management Template appears in the Management Templates & Aspects pane.

Chapter 5: Troubleshooting

The following section provides information about troubleshooting scenarios:

Note: The troubleshooting steps provided here must be executed on the WebLogic node.

Licensing count is not updated


Problem: Licensing count is not updated on License Management

Solution: To resolve this problem, follow these steps:

1. After installing OMi MP for Oracle WebLogic, ensure that the license is activated by following these steps:

- a. Open License Management:

Click **Administration > Setup and Maintenance > License Management**.

- b. Click  and select the `license.dat` file. The license details appears in the **License Management** window.

The License Management provides details about the name, license type, days left, expiration date, capacity, and capacity details.

2. To check for the license usage on the managed node, run the following command on the managed node:

```
<OvAgentDir>/bin/ovodetect -t
```

If the output of the preceding command is `mpinstance="1"`, then Oracle WebLogic are being monitored. If the output of the preceding command is `mpinstance="0"`, then Oracle WebLogic are not being monitored.

3. If the license is still not updated in **License Management**, restart agent on the managed node by running the following command:

```
<OvAgentDir>/bin/ovc- restart opcmsga
```

Management Templates and Aspects are not deployed to the managed nodes

Problem: Management Templates and Aspects are not deployed to the managed nodes

Solution: To resolve this problem, follow these steps:

1. To check the deployment status, open Deployment Jobs:
Click **Administration > Monitoring > Deployment Jobs**.
2. To check the assignment status, open Assignment & Tuning:
Click **Administration > Monitoring > Assignments & Tuning**.

3. Check the following OMi log files:

Linux:

`/opt/HP/BSM/log/EJBContainer/opr-webapp.log`

`/opt/HP/BSM/log/EJBContainer/opr-configserver.log`

Windows:

`%topaz_home%\log\EJBContainer\opr-webapp.log`

`%topaz_home%\log\EJBContainer\opr-configserver.log`

OMi MP for Oracle WebLogic display errors during upload of Management Pack

Problem: OMi MP for Oracle WebLogic returns error during upload.

Solution: You can identify specific errors by checking the `opr-configserver.log` log file.

The `opr-configserver.log` log file is available at the following locations:

Windows:

`%TOPAZ_HOME%\log\EJBContainer\opr-configserver.log`

UNIX:

`$TOPAZ_HOME/log/EJBContainer/opr-configserver.log`

Views not getting populated after deployment of WebLogic Discovery Aspect

Problem: Views for OMi MP for Oracle WebLogic not getting populated after deployment of Weblogic Discovery Aspect.

Solution: You can identify specific errors by following these steps:

1. Open the Oracle WebLogic Instrumentation folder:

Windows:

`%OVADATADIR%\bin\instrumentation`

UNIX:


```
/var/opt/OV/bin/instrumentation
```

2. In the Instrumentation folder, look for the following file:

```
bin/instrumentation/Weblogic_Discovery_Log4j.properties
```

3. Open Weblogic_Discovery_Log4j.properties file.
4. Select log4j.appender.FILE.Threshold and modify to log4j.appender.FILE.Threshold=trace.

Tracing is enabled for Weblogic Discovery. WeblogicDiscovery.log log file is created.

5. Check the WeblogicDiscovery.log log file for specific errors.

The WeblogicDiscovery.log log file is available at the following locations.

Windows:

```
%OVDATADIR%\log\Weblogic\
```

UNIX:

```
/var/opt/OV/log/Weblogic/
```

Connection could not be established error during deployment of WebLogic Discovery Aspect

Problem: WebLogic Discovery Aspect returns Connection could not be established error during deployment.

Solution: To resolve this problem, follow these steps:

1. Check if the credentials entered during deployment have required access permissions to WebLogic Application Server.
2. Configure WebLogic Keystore and Passphrase if the WebLogic Application Server uses SSL Authentication Providers.

Collection Manager for OMi MP for Oracle WebLogic not getting invoked

Problem: Collection manager for OMi MP for Oracle WebLogic is not getting invoked for data collection.

Solution: To resolve this problem, follow these steps:

1. Open the Oracle WebLogic Instrumentation folder:

Windows:

```
%ovdatadir%\bin\instrumentation
```

UNIX:

`/var/opt/OV/bin/instrumentation`

2. In the Instrumentation folder, look for the following file:

`bin/instrumentation/Weblogic_cmlog4j.properties`

3. Open **Weblogic_cmlog4j.properties** file.
4. Select `log4j.appender.FILE.Threshold` and modify to `log4j.appender.FILE.Threshold=trace`.

Tracing is enabled for WebLogic Collection Manager.

5. Check the `Collector.log` and `CollectionManager.log` log file for specific errors.

The `Collector.log` log file is available at the following locations.

Windows:

`%OVDATADIR%\log\Weblogic`

UNIX:

`/var/opt/OV/log/Weblogic`

The `CollectionManager.log` log file is available at the following locations.

Windows:

`%OVDATADIR%\log\Weblogic\collectionManager`

UNIX:

`/var/opt/OV/log/Weblogic/collectionManager`

No data for Performance Manager i (PMi) Graphs

Problem: The information to create PMi graph is not available from OMi MP for Oracle WebLogic.

Solution: To resolve this problem, follow these steps:

1. Run the following command to check if the graph data sources are created:

```
ovcodautl -obj WEBLOGIC_DATA
```

2. Run the following command to check data dumps of WEBLOGIC_DATA data source:

```
ovcodautl -dumpds WEBLOGIC_DATA
```

If there are empty instances, perform step 3 and 4.

3. From the `Weblogic_cmlog4j.properties` file, select `log4j.appender.FILE.Threshold` and modify to `log4j.appender.FILE.Threshold=trace`.

Tracing is enabled for WebLogic Collection Manager.

4. Check the `Collector.log` and `CollectionManager.log` log file for specific errors.

The `Collector.log` log file is available at the following locations.

Windows:

```
%OVDATADIR%\log\Weblogic
```

UNIX:

```
/var/opt/OV/log/Weblogic
```

The `CollectionManager.log` log file is available at the following locations.

Windows:

```
%OVDATADIR%\log\Weblogic\collectionManager
```

UNIX:

```
/var/opt/OV/log/Weblogic/collectionManager
```

Unable to access lib folder

Problem: Non-root users are unable to access lib folder.

Solution: For non-root users, you must provide the read access to Oracle WebLogic lib folder in the WebLogic installation path.

Data Logging for Metric may show values as -1

Problem: Data logging for few metrics may shows values of -1 for one of the following reasons:

- If the WebLogic run-time Mbean returns null values for raw metrics.
- If the calculated metric contains operands as raw metrics which have null values.
- Delta and rate of change metrics will result in -1 values for the first scheduled collection. This is expected behavior.

Solution: To know more details about the cause of -1 errors, follow these steps:

1. To view the data logged for metrics, run the following command:

```
ovcodautl -dumpds WEBLOGIC_DATA
```

2. Identify the metric name and check for the metric which contains value logged as -1 in the CODA dump.

3. Determine the metric ID using the `WebLogic_MetricDefinition.xml` available at the following location:

```
%ovdatadir%/bin/instrumentation
```

4. Verify collector logs on the managed node and check for the collection ID that is showing exceptions with null value return message in the `collector.log` file available at the following location:

```
%ovdatadir%/log/WebLogic
```

The message provides exact details about which MBean query failed and which returned a null value for the metric.

Collection Process Fails

Problem: Collection process fails as `Expat.so` library not found in the `/etc/profile` file.

Solution: Update the `/etc/profile` file by following these steps:

1. Look for `libgcc_s.so` on Solaris managed node using the following command:

```
find / -name libgcc_s.so
```

2. Search 32-bit `libgcc_s.so` using the following command:

```
file <libgcc_s.so along with path>
```

3. If 32-bit `libgcc_s.so` is not installed on the node, install GCC Runtime libraries package.
4. Set `LD_LIBRARY_PATH` to 32-bit `libgcc_s.so` in `/etc/profile`
5. Export `LD_LIBRARY_PATH` in `/etc/profile`.

Connection Errors for Discovered WebLogic Servers

Problem 1: Connection errors for discovered WebLogic servers due to incorrect port numbers in the `config.xml` server.

Solution 1: Configure the correct ports in the `config.xml` server as follows:

```
<server>
```

```
<name>AdminServer</name>
```

```
<listen-port>7007</listen-port>
```

```
<listen-address></listen-address>
```

</server>

Note: You can modify the listen port number according to your requirement.

Problem 2: Connection errors for discovered WebLogic servers due to incorrect `commEnv.sh` or `commEnv.cmd`.

Solution 2: Copy the correct `commEnv.sh` or `commEnv.cmd` as follows:

1. Take the back up of `commEnv.sh` under `<WLSERVER_HOME>/common/bin/commEnv.sh`
2. Copy the `commEnv.sh` from `<ORACLE_COMMON>/common/bin/commEnv.sh` to `<WLSERVER_HOME>/common/bin/commEnv.sh`

For Example:

```
mv /export/home/wls/Oracle/Middleware/Oracle_Home/wlserver/common/bin/commEnv.sh  
/export/home/wls/Oracle/Middleware/Oracle_Home/wlserver/common/bin/commEnv.sh.orig
```

```
cp /export/home/wls/Oracle/Middleware/Oracle_Home/oracle_  
common/common/bin/commEnv.sh /export/home/wls/Oracle/Middleware/Oracle_  
Home/wlserver/common/bin/commEnv.sh
```

Data logging fails after Management Template Deployment

Problem: Data logging may fail after deploying the Management Template

Solution: Use the tool **Restart Weblogic Monitoring** to start the Data logging.

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