HP OpenView Smart Plug-in for Oracle Application Server

For the HP-UX and Solaris OpenView Operations Management Servers

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Configuration Guide

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hp invent

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Contents

1 OAS SPI Concepts

The Smart Plug-in for Oracle Application Server (OAS SPI) allows you to manage Oracle Application Servers from an HP OpenView Operations (OVO) console. OAS SPI adds monitoring capabilities otherwise unavailable to OVO. For more information on OVO refer to *HP OpenView Operations for UNIX Concepts Guide*.

This chapter offers a basic introduction to its concepts. The following topics are covered:

- Introducing the OAS SPI
- Functions of OAS SPI
- Components of OAS SPI

Introducing the OAS SPI

The OAS SPI adds monitoring capabilities otherwise unavailable to OVO.

Smart Plug-in Integration Uses

Used in conjunction with OVO, the OAS SPI offers centralized tools that help you monitor and manage systems using Oracle Application Server. From the OVO console, an operator can apply the same familiar HP OpenView performance and problem managing processes to monitor a system using Oracle Application Server. OAS SPI metrics are automatically sent to the OVO agent and can be alarmed on, and/or consolidated into reports and graphs which help you analyze trends in server usage, availability, and performance. OAS SPI can be integrated with HP OpenView Reporter and HP OpenView Performance Manager (both products must be purchased separately) to provide additional reporting and graphing flexibility and capabilities.

Smart Plug-in Data

After completing the OAS SPI installation, you can find key server-related metrics that cover the following areas:

- server availability
- server performance
- JVM memory usage
- EJB client and method wrapper active threads, execution times, and calls processed
- servlet execution times and threads
- JSP service time and active requests
- Java message service connections and messages

- JDBC connection status
- Web application processing and open sessions
- HTTP server active connections and processed data

Smart Plug-in Uses and Customizations

Oracle Application Server administrators can choose those metrics that are most crucial to the successful operation of Oracle Application Server by modifying OAS SPI templates. The templates contain settings that allow incoming data to be measured against predefined rules that generate useful information in the form of messages. These messages with severity-level color-coding can be reviewed for problem analysis and resolution. Corrective actions that are pre-defined for specific events or threshold violations can be automatically triggered or operator-initiated.

Functions of OAS SPI

OAS SPI messaging, reporting, and action-executing capabilities are based on the OVO concept of templates; for more information refer to *HP OpenView Operations for UNIX Concepts Guide.* The settings within these templates define various conditions within the Oracle Application Server. Once in use, OAS SPI templates allow information to be sent back to the OVO management server to help you proactively address potential or existing problems and avoid serious disruptions to Web transaction processing. OAS SPI performs the following functions:

- Collecting and Interpreting Server Performance and Availability Information
- Displaying Information
- Generating Reports Using HP OpenView Reporter
- Graphing Data with OpenView Performance Manager
- Customizing Templates

Collecting and Interpreting Server Performance and Availability Information

OAS SPI, once configured and deployed to managed nodes, gathers data that is interpreted and acted upon, according to settings within the deployed templates. Those templates define conditions that can occur within the Oracle Application Server, such as throughput rates and execution times. Default thresholds, set within the templates, monitor these conditions and trigger messages to the console when a threshold has been exceeded.

Displaying Information

- **Messages in the Message Browser** - Comparing the values gathered for Oracle Application Server performance/availability against the schedule template settings relating to those specific areas, OVO agent software forwards the appropriate messages to the OVO console. These messages are displayed with color-coded severity levels in the OVO Message Browser.
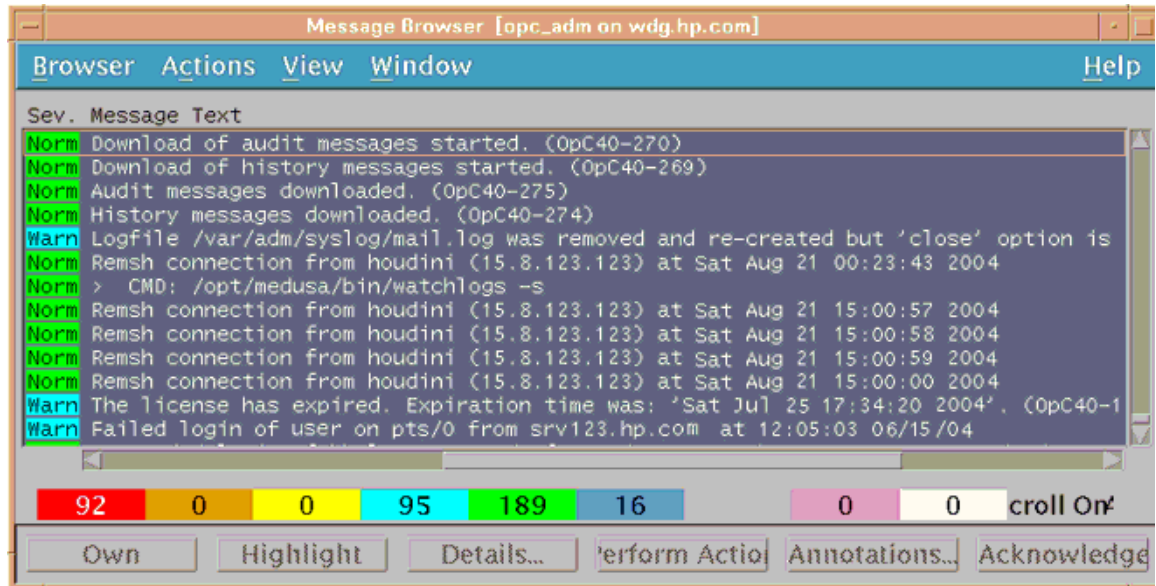
- **Instruction Text** - Messages generated by OAS SPI programs contain instruction text to help diagnose and remedy problems. Corrective actions that are preassigned to events can be triggered automatically or manually by an operator.

Instruction text, when available, can be found in the message details. This same text is also available in the *HP OpenView Smart Plug-in for Oracle Application Server Reference* manual metric definition.
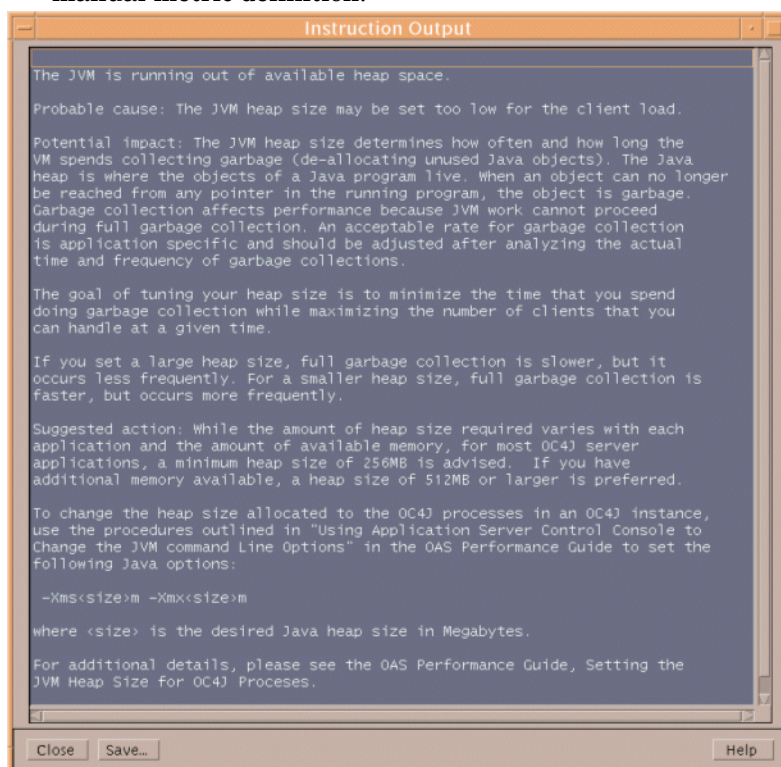
- **ASCII-Text Reports** - In addition to the instruction text mentioned above, some messages cause automatic action reports to be generated. These reports show conditions of a specific Oracle OC4J/OHS server instance. When a report is available, like the instruction text, you can find it within the Message Details (in the Annotations area).

Generating Reports Using HP OpenView Reporter

The OAS SPI also integrates with HP OpenView Reporter to provide you with management-ready, Web-based reports. OAS SPI includes the templates for generating these reports within its Report package, which you can install on the Reporter Windows system. After you have installed the product and completed some configuration steps, you can expect to see new reports of summarized, consolidated data generated nightly that help you assess how the Oracle OC4J/OHS server is performing over time.

Graphing Data with OpenView Performance Manager

OAS SPI can be used with HP OpenView Performance Manager (OVPM) to generate graphs (using the **OASSPI Admin** → **View Graphs** application) showing the OAS SPI collected metric values. OVPM also allows you to view OAS SPI graphed data from most OAS SPI alarm messages by clicking **Perform Action**. **Perform Action** is available in both the Message Browser and in the message details (access details by either double-clicking the message or clicking **Details...**) in the Message Browser. The action launches your Web browser, where you can choose a graph that shows values for the metric that generated the message as well as other related metrics.

Customizing Templates

You can use OAS SPI templates with no customization, or you can change them as you find necessary. Minor modifications and major customizations are listed here:

- Modify the Default Templates - Within a template you can change the default settings for:
  - collection interval
  - threshold
  - message text
  - duration
  - severity level of the condition
  - actions assigned to the condition (operator-initiated or automatic)

- Create Custom Template Groups - Create custom template groups, using default templates as a starting point. For more information, refer to Chapter 4, Using and Customizing OAS SPI.

Components of OAS SPI

The OAS SPI components include applications (including reports) and templates that allow you to configure and receive data in the form of messages, annotations, and metric reports. These messages (available in the Message Browser), annotations (available through message properties) and metric reports (available through applications or message details) provide you with information about conditions present in the servers running on specific managed nodes.

OAS SPI configuration applications let you configure the management server's connection to named server instances on specific managed nodes. After you have configured the connection, you can assign templates to the nodes. With OVO agent software running on the managed nodes, you can use OAS SPI reporting applications to generate metric reports. In addition, you can generate graphs that show OAS SPI data (available through message properties).

Applications

The OAS SPI applications include configuration, troubleshooting, and report-generating utilities. In the Application Bank window the OAS SPI applications are divided into three categories: OASSPI Admin, OracleAS, and OASSPI Reports.

OASSPI Admin Applications

OASSPI Admin applications allow you to configure, control, and troubleshoot the OAS SPI.
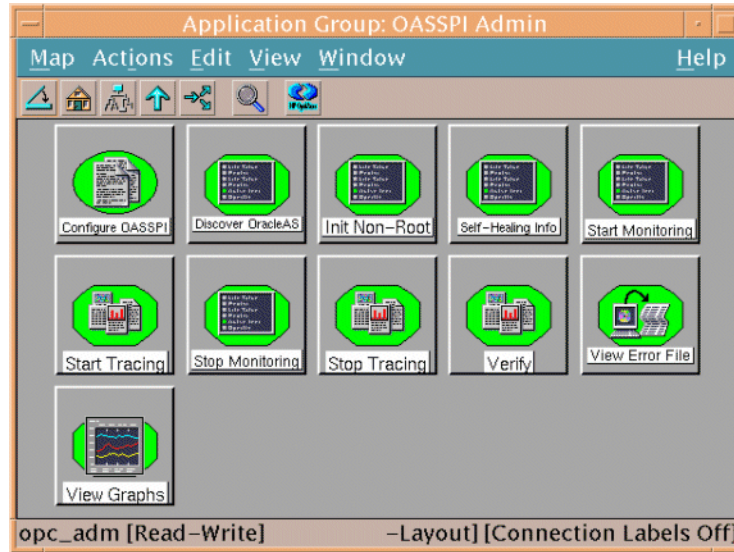
The group contains the following applications (additional information about each application is located in Appendix C, Applications):

- **Configure OASSPI** - Launches the configuration editor and maintains the OAS SPI configuration.

- **Discover OracleAS** - Sets basic configuration properties needed for discovery.

- **Init Non-Root** - Simplifies the configuration of a non-root HTTPS agent on a UNIX managed node (OVO 8.x only). Refer to Configuring a Non-Root HTTPS Agent on a UNIX Managed Node (OVO 8.x Only) on page 56 for all the steps necessary to configure a non-root HTTPS agent on a UNIX managed node.

- **Self-Healing Info** - Collects data to be sent to your HP support representative.

- **Start/Stop Monitoring** - Starts/stops the collection of metrics for one OC4J/OHS server or all OC4J/OHS servers on a managed node.

  Run the Verify application to determine if monitoring is started or stopped. By default, monitoring is on.

- **Start/Stop Tracing** - Starts/stops the tracing of the collection of metrics into a file. Run this application only when instructed by your HP support representative.

- **Verify** - Verifies that the OAS SPI is properly installed on the server or managed node.

- **View Error File** - View the contents of the OAS SPI error log file.

- **View Graphs** - View OAS SPI metric data in OpenView Performance Manager in a web browser (additional setup is required: see Task 1: Configure the Management Server to Launch your Web Browser on page 41 for more information).

OracleAS Applications

The applications in this group provide you with convenient access to Oracle Application Server functions.

You can open the Oracle applications by double-clicking **OASSPI** → **OracleAS** in the Application Bank window.
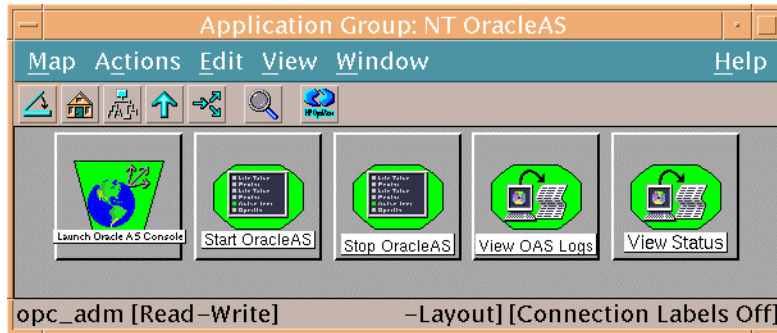
The group contains the following:

- **Launch Oracle AS Console** - Allows the OpenView Operations user to launch the Oracle Application Server Control Console, launch the AggreSPY servlet, or launch the Oracle Enterprise Manager Database Control (requires setup).

- **Start/Stop OracleAS** - Allows the OpenView Operations user to start/stop the Oracle Application Server (requires setup).

- **View OAS Logs** - Allows the OpenView Operations user to view the Oracle Application Server log file(s).

- **View Status** - Does an interactive status check of the Oracle Application Server.

OAS SPI Reports

OAS SPI reports show information on Oracle Application Server conditions in the server. You generate these reports manually by dragging the managed node onto the report in the report application. Each report reflects shows the condition of all configured server instances on the managed node in relation to the metric.

OAS SPI Application Bank Reports

You can generate a report on all servers of a managed node by dragging the node onto a report in the Application Bank window
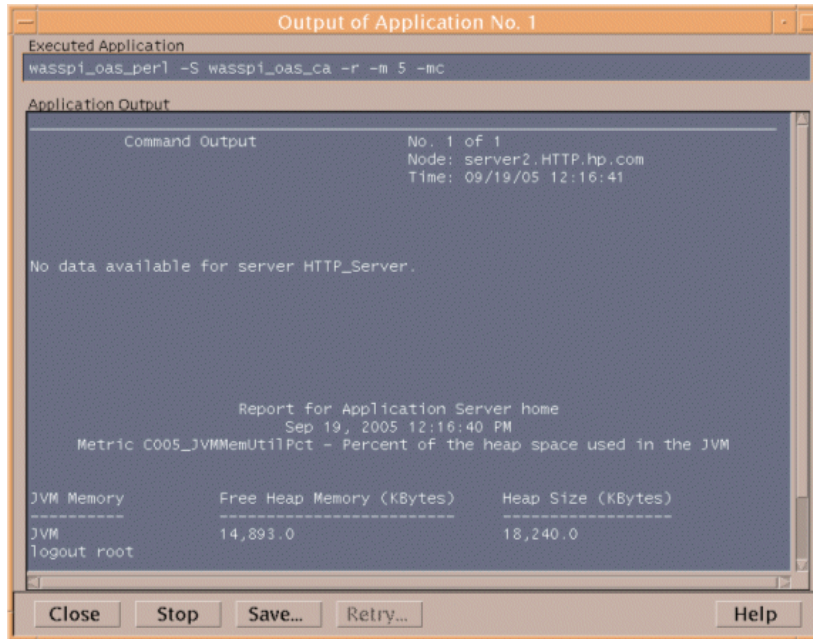
Application Bank Reports Generated from Alarms

An OASSPI Report can also be triggered by an alarm condition. When such a situation occurs, the report is generated automatically. This report is context sensitive, relating only to a single server on the managed node. You can find the report within the Annotations of a message.

If you have configured your Message Browser to display the **S** column, a flag under the **S** column (adjacent to the message) indicates that the report was successfully generated and is waiting in the Annotations of the message.

Template Groups and Templates

OAS SPI template groups provide a means of organizing various OVO templates.
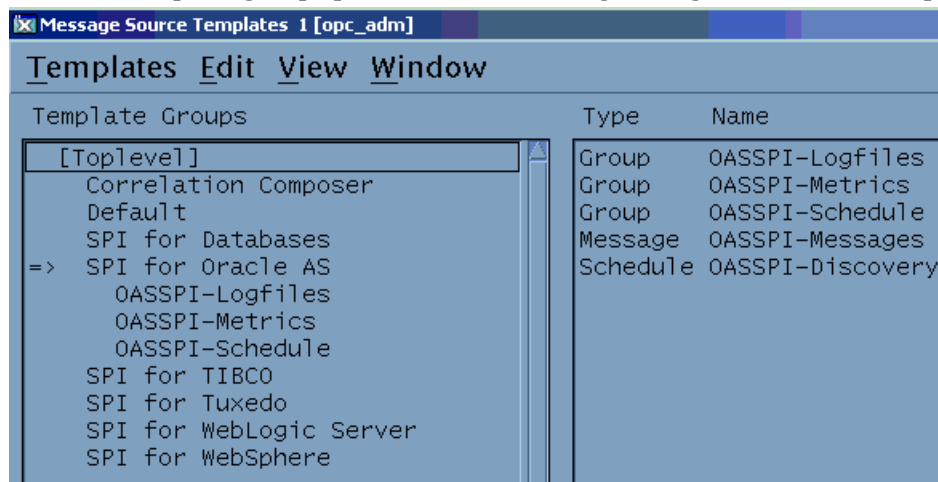
The primary SPI for OracleAS template group contains the following template groups and individual templates:

- **OASSPI-Logfiles** - Contains templates that generate messages according to log file and error text detected in both the Oracle Application Server log files and in the OAS SPI log files. The information captured from these log files includes errors that occur in the operation of the Oracle Application Server or the OAS SPI and changes to Oracle Application Server configuration.

- **OASSPI-Metrics** - Contains metric templates that monitor the performance levels and availability of a Oracle OC4J/OHS servers.

  Each metric template determines the threshold conditions for the monitored metric, the message text that is sent to the OVO message browser when the threshold is exceeded, the actions to execute, and instructions that appear.

- **OASSPI-Schedule** - Contains collector templates that specify the collection interval of metric templates. Within the name of each collector template is its collection interval. For example, the collection interval of template OASSPI-10-OHS-15min is 15 minutes (where 15min represents 15 minutes). Collector templates are assigned a collection interval of 5 minutes, 15 minutes, or one hour.

  When you open any collector template, you see the metrics collected within the interval (listed by number, following the -m option of the collector/analyzer command `wasspi_oas_ca`).

  Each collector template controls when and what metrics are collected. Specifically, the collector template does the following:

  — Runs the collector/analyzer at each collection interval

  — Specifies which metrics are collected

- **OASSPI-Messages** - A single template that is used to intercept OAS SPI messages for the OVO message browser.

- **OASSPI-Discovery** - A single template that updates the configuration on the OVO management server and managed nodes.
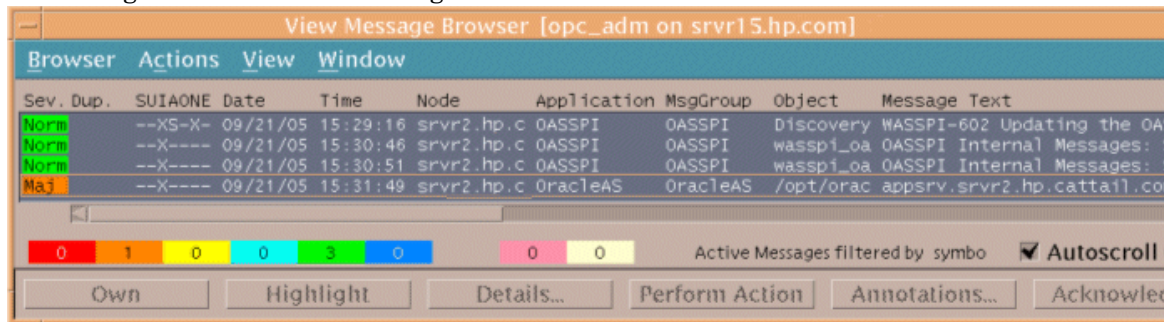
In the message browser shown above, all the messages are generated by OAS SPI templates that belong to the OracleAS and OASSPI Message Groups (see the column titled MsgGroup), indicating their origins. The OracleAS messages indicate conditions occurring in Oracle OC4J/OHS servers while the OASSPI message indicates a condition occurring in the OAS SPI.

2 Installing, Upgrading, and Removing OAS SPI

This chapter covers installing and removing the Smart Plug-in for Oracle Application Server (OAS SPI) components for use with OpenView Operations.

The sections that follow provide instructions for:

- Installing OAS SPI
- Upgrading OAS SPI
- Removing OAS SPI

Installing OAS SPI

For a complete list of software requirements, refer to the *HP OpenView Smart Plug-in for Oracle Application Server Release Notes*.

The instructions that follow show the command line usage of swinstall. For HP-UX systems, you can also use the graphical user interface (GUI), but the GUI method is not covered.

It is not necessary to stop OVO sessions before beginning the OAS SPI installation.

For an HP-UX 11.0 management server, enter:

swinstall -s /cdrom/OV_DEPOT/11.0HPUX.sdtape OASSPI

For a Solaris management server, enter:

swinstall -s /cdrom/OV_DEPOT/SOLARIS.sdtape OASSPI

OAS SPI Filesets

The swinstall commands in the previous section install filesets for all managed node platforms. If you have managed nodes running on only one platform, you may want to install the filesets only necessary for the platform you have. Instead of specifying "OASSPI" on the swinstall command, you can specify the filesets listed below.

Platform	Filesets	Description
HP-UX	OASSPI-HPUX	Fileset required for a managed node running on HP-UX.

Platform	Filesets	Description
Linux	OASSPI-LXx86	Fileset required for a managed node running on Linux.
Solaris	OASSPI-SOL	Fileset required for a managed node running on Solaris.
Windows	OASSPI-NT	Fileset required for a managed node running on Windows.

Upgrading OAS SPI

When you upgrade from a previous installation, all your configuration entries are preserved.

To upgrade OAS SPI, complete these tasks:

- Task 1: Remove OAS SPI Software from the Management Server
- Task 2: Delete OAS SPI Templates
- Task 3: Delete OAS SPI Applications
- Task 4: Upgrade the Management Server
- Task 5: Assign Operator Responsibilities for opc_adm
- Task 6: Assign Templates
- Task 7: Distribute Templates
- Task 8: Customize Templates
- Task 9: Move Nodes to New Node Group (Verify)
- Task 10: Delete Oracle Application Server Node Group
- Task 11: Distribute Actions, Monitors, Commands, and Templates
- Task 12: Launch the Discover OracleAS Application
- Task 13: Install the New Report Package (Optional)
- Task 14: Install the New Graph Package (Optional)

Task 1: Remove OAS SPI Software from the Management Server

To remove OAS SPI software from the management server follow these steps:

1 Open a terminal window and log on as **root**.

2 Run the following commands:

   /usr/sbin/swremove OASSPI
   /usr/sbin/swremove SPIOracleASAll
   /usr/sbin/swremove OASSPI-GRAPHS

3 Run the following command to delete all the SPI files in the /opt/OV/wasspi/oas/bin/ directory

```
cd /opt/OV/wasspi/oas/bin
find . -name "wasspi_oas*" -exec rm {} \;
```

This deletes all files that begin with wasspi_oas.

Task 2: Delete OAS SPI Templates

Delete all OAS SPI templates and template groups that appear under the
SPI for Oracle AS template group and then delete the SPI for Oracle AS template group. If
you have customized any of the default templates, note these changes (the customizations are
not saved). Follow these steps:

1   From the windows menu select **Message Source Templates** and select the **SPI for Oracle AS**
    template group.

2   Double-click **SPI for Oracle AS**. All the template groups and individual templates in the
    group appear.

3   Click **OASSPI- Logfiles** to open the individual templates in that group. Press **Ctrl** and click
    to select all the templates.

4   Click **Delete From All...** The following message appears:

    Do you really want to delete the template(s)?

5   Click **Yes**.

6   Go up a level and open the next group. Repeat steps 2-5 till you delete all OAS SPI
    individual and group templates in the Message Source Template window.

Task 3: Delete OAS SPI Applications

To delete OAS SPI applications, follow these steps:

1   Open the Application Bank.

2   Right-click the OASSPI application group and click **Delete**. The following message
    appears:

    Do you really want to delete the application group?

3   Click **Yes**.

Task 4: Upgrade the Management Server

The OAS SPI software is available on the *HP OpenView Smart Plug-ins for OVO/UNIX DVD*.

▶   The instructions that follow show the command line usage of swinstall. For HP-UX systems,
    you can also use the graphical user interface (GUI), but the GUI method is not covered.

For an HP-UX 11.0 management server, run:

```
swinstall –s /cdrom/OV_DEPOT/11.0HPUX.sdtape OASSPI
```

For a Solaris management server, run:

```
swinstall –s /cdrom/OV_DEPOT/SOLARIS.sdtape OASSPI
```

Task 5: Assign Operator Responsibilities for opc_adm

To assign operator responsibilty for opc_adm follow these steps:

1 Log on to OVO as administrator (**opc_adm**).

2 Open the User Bank window, right-click the opc_adm user, and click **Modify**.

3 In the Modify User:opc_adm user window, click **Responsibilities**.

4 For OASSPI and OracleAS Message Groups, ensure that all check boxes are selected.

5 Assign the OASSPI Node or Message Groups to some other appropriate operators.

6 Click **Close**.

Task 6: Assign Templates

To assign the OASSPI-Discovery and OASSPI-Messages templates to the management server
follow these steps:

1 Open the Node Bank window and select the management server.

2 From the Actions menu, select **Agents → Assign Templates**. The Define Configuration
window opens.

3 Click **Add**. The Add Configuration window opens.

4 Click **Open Template Window**. The Message Source Templates window opens.

5 In the Template Groups pane, select the **SPI for Oracle Server** template group.

6 From the Message Source Templates window, in the right pane, select the
OASSPI-Discovery template and **OASSPI-Messages** template.

7 From the Add Configuration window, click **Get Template Selections**. The OASSPI-Messages
and OASSPI-Discovery templates appear in the right pane.

8 From the Add Configuration window, click **OK**.

Task 7: Distribute Templates

To distribute the OASSPI-Discovery and OASSPI-Messages templates to the management
server, follow these steps:

1 Open the Node Bank window and select the management server.

2 From the Actions menu, select **Agents → Install/Update SW & Config**.

3 In the Target Nodes section, select **Nodes in List Requiring Update**.

4   In the Install/Update Software and Configuration window select the **Templates** check box.

5 Select **Force Update**.

6 Click **OK**.

The following message appears in the message browser:

```
The following configuration information was successfully distributed:
Templates
```

Task 8: Customize Templates

To customize the templates follow these steps:

1   Copy the default templates.

2   Apply the customizations made to the previous version of templates to the copy of the current version.

Task 9: Move Nodes to New Node Group (Verify)

Move all managed nodes (running supported versions of the Oracle Application Server) in the Oracle AS node group to the new Oracle AS node group. Follow these steps:

1   Open the Node Bank and double click **Oracle AS** node group.

2   Note the managed nodes in it.

3   Go back to the top level of the node bank (where the Oracle AS node group is displayed)

4   Drag and drop or copy and paste the nodes (noted in step 2) from the IP submap to the Oracle AS node group.

Task 10: Delete Oracle Application Server Node Group

Delete the OracleAS node group:

1   Open the Node Bank and select **Oracle AS** node group.

2   From the Edit menu, click **Delete**. The following message appears:

```
Do you really want to delete the node group?
```

3   Click **Yes**.

Task 11: Distribute Actions, Monitors, Commands, and Templates

1   From the Node Bank window, select the nodes or node groups on which you want to install OAS SPI.

2   From the Actions menu select **Agents → Install/Update SW & Config**.

3   In the Install/Update OVO Software and Configuration window select the following component check boxes:

   • Templates

   • Actions

   • Monitors

   • Commands

   Using this dialog, deploy updated components on the managed nodes.

4   Select the **Force Update** check box.

5   Select the **Nodes in list** option button. Upon completion, the following message appears in the message browser for each managed node:

```
The following configuration information was successfully distributed:
Actions Commands Monitors Templates.
```

➤ You may see some OAS SPI errors in the message browser. These errors are the result of the transition to the updated programs and you can ignore them. OAS SPI templates and programs are updated on the Management Server and selected managed nodes. These errors are resolved when the upgrade is complete.

Task 12: Launch the Discover OracleAS Application

You must launch the Discover OracleAS application. You are not required to re-enter any of the OAS SPI configuration data because all configuration data is saved. To re-deploy the file, you can drag and drop multiple nodes, node groups, or single nodes. When you re-deploy the file, relevant information is updated, transmitted, and stored on the node.

1   From the OVO console, select the node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Discover OracleAS**. (If the above does not appear as described, select **Map** → **Reload**). The Introduction window opens.

4   Click **Next**. A second Introduction window opens. Information about the properties required for the discovery process to work are given in this window

5   Read this information and click **Next**. The configuration editor opens.

6   Make the necessary changes using the configuration editor.

➤ When setting the configuration using configuration editor, note the following points:

 • GRAPH_SERVER property is no longer supported in OAS SPI. Instead, set the GRAPH_URL property.

 • UDM_DEFINITIONS_FILE property will not be supported in future versions of OAS SPI. Note the locations of the UDM files on your managed nodes and delete any occurrence of the UDM_DEFINITIONS_FILE property from your configuration.

 • Do not configure UDMs individually on your managed nodes, instead configure these UDMs on the management server in the `/opt/OV/wasspi/oas/conf/wasspi_oas_udmDefnintions.xml` file (or, set the UDM_DEFINITIONS_SOURCE property to use another file).

 • After you consolidate the UDMs on the management server, delete the old UDM files from the managed nodes and distribute the new UDM file to the managed nodes using the Deploy UDM application.

7   Click **Next** to save any changes and exit the editor. The Confirm Operation window opens.

8   Click **OK**.

If you click **Cancel**, all the changes made to the configuration will remain in the configuration on the management server. To make the changes to the selected managed nodes' configuration, you must select those nodes in the Node Bank window, launch the Discovery application, click **Next** in the configuration editor, and then click **OK** in the Confirm Operation window.

➤ Do not close the Discover application window till the discovery process is complete. The discovery process may take several minutes to complete.

Task 13: Install the New Report Package (Optional)

Remove older versions of OAS SPI report package from your Windows system running OV Reporter) and install the new OAS SPI report package. To install the new report package follow these steps:

1   On the Windows system running OV Reporter, go to **Settings** → **Control Panel** →**Add/Remove Programs**.

2   Select the OAS SPI report package and click **Remove**.

3   To install the OAS SPI report package follow the steps given in section Integrating OAS SPI with OV Reporter on page 81.

Task 14: Install the New Graph Package (Optional)

- If OVPM is running on a Windows system, remove older versions of OAS SPI graph package and install the new OAS SPI graph package. To install the new graph package follow these steps:

   a   Go to **Settings** → **Control Panel** → **Add/Remove Programs**.

   b   Select the OAS SPI graph package (HP OpenView SPI for OracleAS - Graphing Component Integration) and click **Remove**.

   c   To install the OAS SPI graph package follow the steps given in section Integrating OAS SPI with HP OpenView Performance Manager on page 84.

- If OVPM is running on a HP-UX system (not the OVO management server) follow these steps:

   ➤   If OVPM is installed on the OVO management server, the files are automatically updated when you install the SPI software.

   a   Run **swlist | grep OASSPI-GRAPHS** to verify that the graph package is installed.

   b   Run **swremove OASSPI-GRAPHS** if the graph package is installed.

   c   To install the OAS SPI graph package follow the steps given in section Integrating with HP OpenView Performance Manager on page 67.

- If OVPM is running on a Solaris system (not the OVO management server) follow these steps:

   ➤   If OVPM is installed on the OVO management server, the files are automatically updated when you install the SPI software.

   a   Run **/usr/bin/pkginfo HPOvSpiOasGc** to verify that the graph package is installed.

   b   Run **/usr/sbin/pkgrm HPOvSpiOasGc** if the graph package is installed.

To install the OAS SPI graph package follow the steps given in section Integrating with HP OpenView Performance Manager on page 67

Removing OAS SPI

The complete removal of the OAS SPI installation deletes all OAS SPI components.

Complete the following tasks:

- Task 1: Remove OAS SPI Software from the Management Server
- Task 2: Remove OAS SPI Software from the Node Group and Managed Nodes
- Task 3: Delete OAS SPI Templates and Template Groups
- Task 4: Delete OAS SPI Applications
- Task 5: Delete the OAS SPI Message and Node groups
- Task 6: Remove the Report Package (Optional)
- Task 7: Remove the Graph Package (Optional)

Task 1: Remove OAS SPI Software from the Management Server

1 Open a terminal window and log on as root.

2 In the terminal window, enter the following:
   /usr/sbin/swremove OASSPI
   /usr/sbin/swremove OASSPI-GRAPHS

The swremove command removes the files from the file system only. The OAS SPI templates are still in the OVO data repository and must be deleted manually. Before the templates can be deleted, they (and the OAS SPI software) must be de-assigned from the managed nodes.

Task 2: Remove OAS SPI Software from the Node Group and Managed Nodes

1 Open the Node Bank and from the Actions menu select **Agents → Assign Templates**.

2 Select the OracleAS node group and all managed nodes to which Oracle AS templates have been assigned.

3 Click **Remove nodes/groups**.

4 Open the Node Group Bank and select the OracleAS node group.

5 From the Action menu select **Install/Update SW & Config** and check the following check boxes:
   - Templates
   - Actions
   - Monitors
   - Commands

6 Select the **Nodes in List** option button.

7 Select the **Force Update** option button.

8 Click **OK** to remove the Templates, Actions, Commands and Monitors from the managed node(s). The following message is displayed in the Message Browser:

   The following configuration information was successfully distributed:
   Templates Actions Commands Monitors

Task 3: Delete OAS SPI Templates and Template Groups

Starting from the SPI for OracleAS template group, delete all templates and template groups. Once these templates and template groups have been deleted, delete the SPI for OracleAS template group.

1   Open the Message Source Templates window and double-click the SPI for OracleAS template group

2   Press **SHIFT** and click to select all templates and template groups in the SPI for OracleAS template group.

3   Click **Delete from All...**. The following message appears:

    Do you really want to delete the template(s)?

4   Click **YES**.

5   If additional OAS SPI templates and/or template groups are in the SPI for OracleAS template group, repeat steps 2 -4 until you have deleted all OAS SPI templates and template groups from the SPI for OracleAS template group.

6   Go up one level and delete the SPI for OracleAS template group.

> ➤   If you have customized templates (copies of OAS SPI default templates) residing in other OVO template groups, you should remove them as well.

Task 4: Delete OAS SPI Applications

Unlike templates, applications can all be removed in a single step.

1   Open the Application Bank.

2   Right-click the OASSPI application group and click **Delete**.

3   Click **Yes** in response to the following message:

    Do you really want to delete the application group?

Task 5: Delete the OAS SPI Message and Node groups

1 From the Window menu select **Message Group Bank**.

2 In the Message Group Bank window right-click the **OASSPI** group and select **Delete**.

3 Repeat for the **OracleAS** group.

4 From the Window menu select **Node Group Bank**.

5 In the Node Group Bank window right-click each OASSPI and OracleAS group and select **Delete**.

Task 6: Remove the Report Package (Optional)

If you installed the OAS SPI report package (on your Windows system running Reporter), remove it:

1 On the Windows system running Reporter, from the Control Panel, double-click the **Add/Remove Programs** icon.

2 Select the OAS SPI report package and click **Remove**.

Task 7: Remove the Graph Package (Optional)

If you installed the OAS SPI graph packages (on the system running OVPM), remove them.

On a Windows system running OVPM, do the following:

1 From the Control Panel, double-click the **Add/Remove Programs** icon.

2 Select the OAS SPI graph package (HP OpenView SPI for Oracle Application Server – Graphic Component Integration) and click **Remove**.

On an HP-UX system running OVPM that is not the OVO management server, do the following (if OVPM is installed on the OVO management server, the files are removed in Task 1: Remove OAS SPI Software from the Management Server on page 30):

1 Verify that the graph package is installed. Type
   swlist | grep OASSPI-GRAPHS

2 Type **swremove OASSPI-GRAPHS**

On a Solaris system running OVPM that is not the OVO management server, do the following (if OVPM is installed on the OVO management server, the files are removed in Task 1: Remove OAS SPI Software from the Management Server on page 30):

1 Verify that the graph package is installed. Type
   /usr/bin/pkginfo HPOvSpiOasGc

2 Type **/usr/sbin/pkgrm HPOvSpiOasGc**

3 Configuring the OAS SPI

This chapter covers configuring the Smart Plug-in for Oracle Application Server (OAS SPI) for use with OpenView Operations (OVO). To successfully configure OAS SPI, you must complete all configuration prerequisites, complete OAS SPI configuration (for managed nodes and the management server), and complete additional configuration based on your environment.

Configuration Prerequisites

Complete the following tasks before configuring OAS SPI:

- Task 1: Configure the Management Server to Launch your Web Browser
- Task 2: Assign Operator Responsibilities for opc_adm
- Task 3: Assign Templates
- Task 4: Distribute Templates
- Task 5: Update the remactconf.xml File (OVO 8.x Only)

Task 1: Configure the Management Server to Launch your Web Browser

OAS SPI uses the ovweb utility to start your web browser for running several OAS SPI applications including: Start Console (launch the Oracle Application Server Control Console), AggreSPY (launch the Oracle servlet that reports performance metrics), Repository (launch the Oracle Enterprise Manager Database Control used to manage the Oracle AS Metadata Repository database), and View Graphs (display graphed metrics, which requires HP OpenView Performance Manager). If you do not want to use these applications, skip this task.

1   Enter the browser invocation command in the `ovweb.conf` file. If no browser invocation command is included in the `ovweb.conf` file, ovweb tries to start Netscape Navigator (which must be version 6.0 or higher).

> The `ovweb.conf` file must be located in the directory specified by the environment variable $OV_CONF (used by OVO). To find the OVO directory structure on your management server, open the `/opt/OV/bin/ov.envvars.sh` file and look for the $OV_CONF definition.

The browser invocation command must contain a **%s** to allow OAS SPI to pass a URL to the browser. Open the file and insert the command according to the entry syntax and example as follows:

Syntax: `Browser:` *<browser command>* `%s`
Example: **`Browser: /opt/netscape/netscape %s`**

2   Check the Web browser setting. To display the OAS SPI graphs, ensure that your browser is JavaScript enabled. Check the setting within the browser's Preferences.

3   In , set the following conditional property:

   •   If you are using OVPM, set the GRAPH_URL property.

For more information about launching a browser in OpenView Operations, consult the man pages for `ovweb`, `ovweb.conf`, and `ov.envvars`. To access instructions for enabling graph displays, at a command prompt enter: **man ovweb**

Task 2: Assign Operator Responsibilities for opc_adm

1   Log on to OVO as the administrator (**opc_adm**).

2   Open the User Bank window, right-click the opc_adm user, and choose **Modify**.

3   In the Modify User:opc_adm user window, click **Responsibilities**.

4   For OASSPI and OracleAS Message Groups, ensure that all boxes are checked.
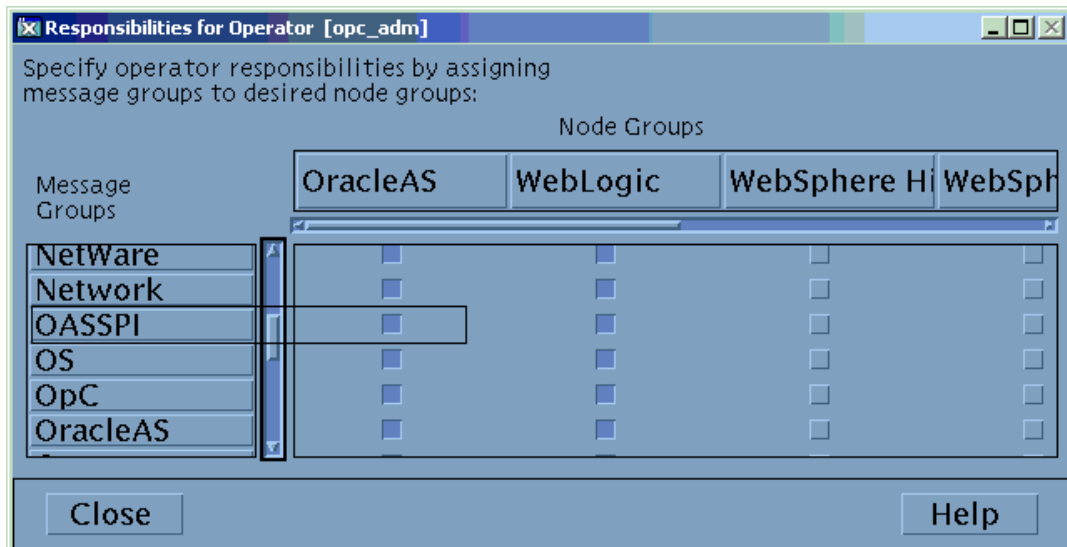
5   Assign the OASSPI Node or Message Groups to any other appropriate operators.

6   Click **Close**.

Task 3: Assign Templates

Assign the OASSPI-Discovery and OASSPI-Messages templates to the management server:

1   Open the Node Bank window and select the management server.

2 From the Actions menu, select **Agents → Assign Templates**. The Define Configuration window opens.
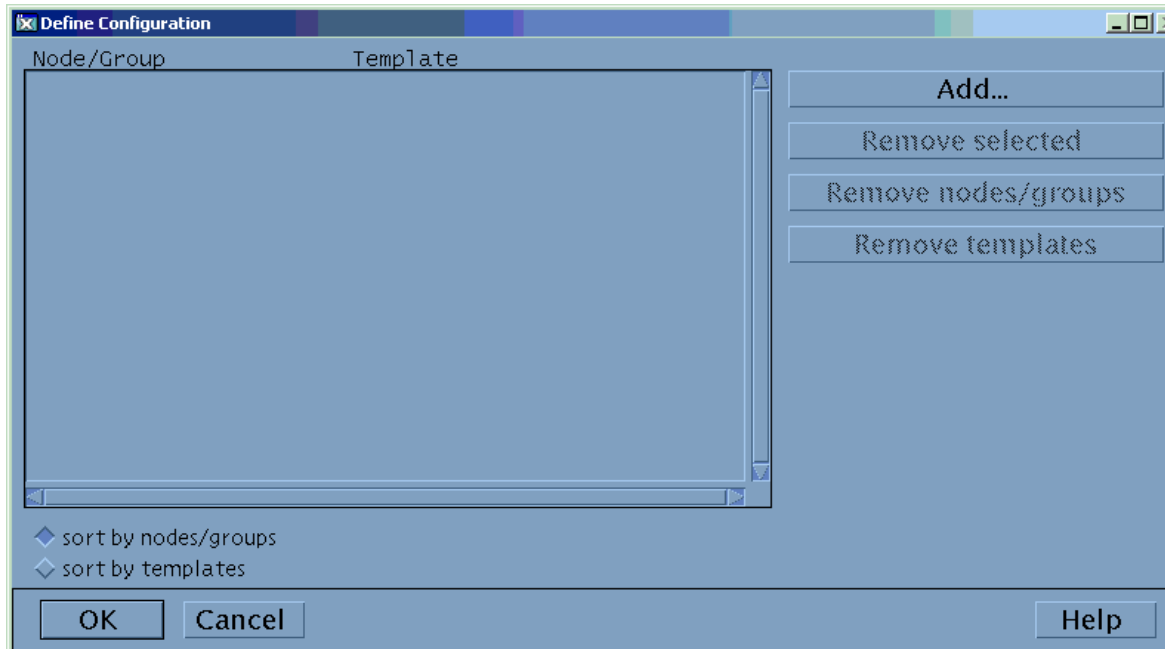
3 Click **Add**. The Add Configuration window opens.
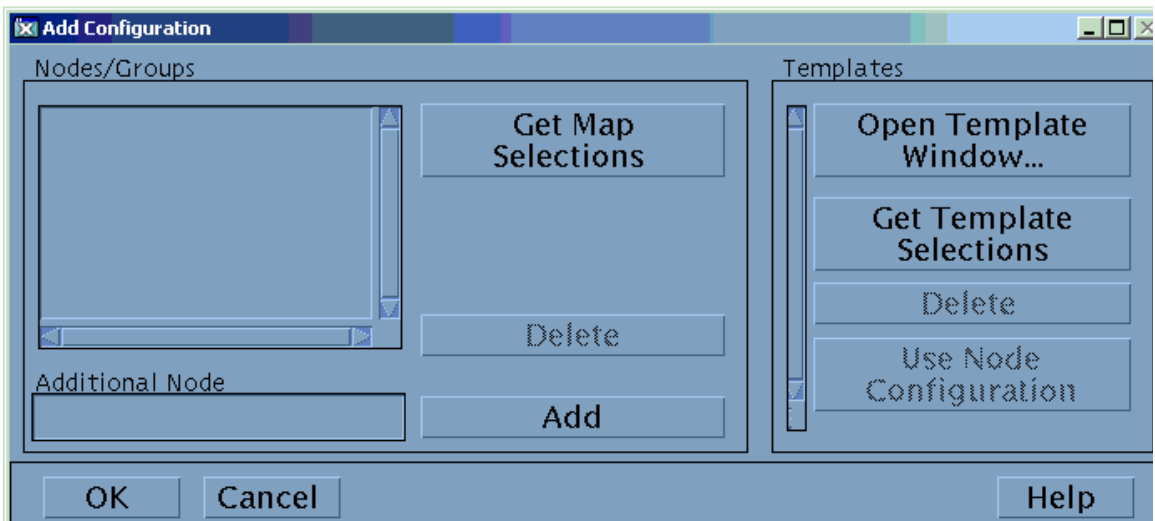
4   Click **Open Template Window**. The Message Source Templates window opens.
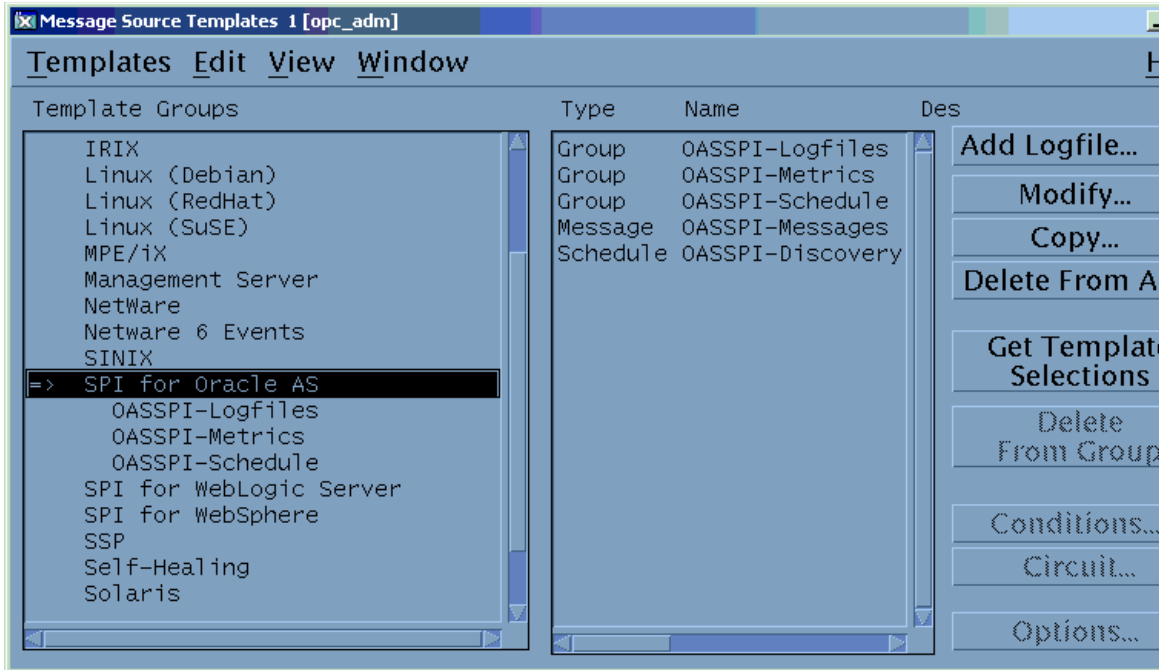
5   From the Message Source Templates window, in the Template Groups pane, select the SPI for OracleAS template group.

6   From the Message Source Templates window, in the right pane, select the OASSPI-Discovery and OASSPI-Messages templates.

7   From the Add Configuration window, click **Get Template Selections**. The OASSPI-Discovery and OASSPI-Messages templates appear in the right pane.
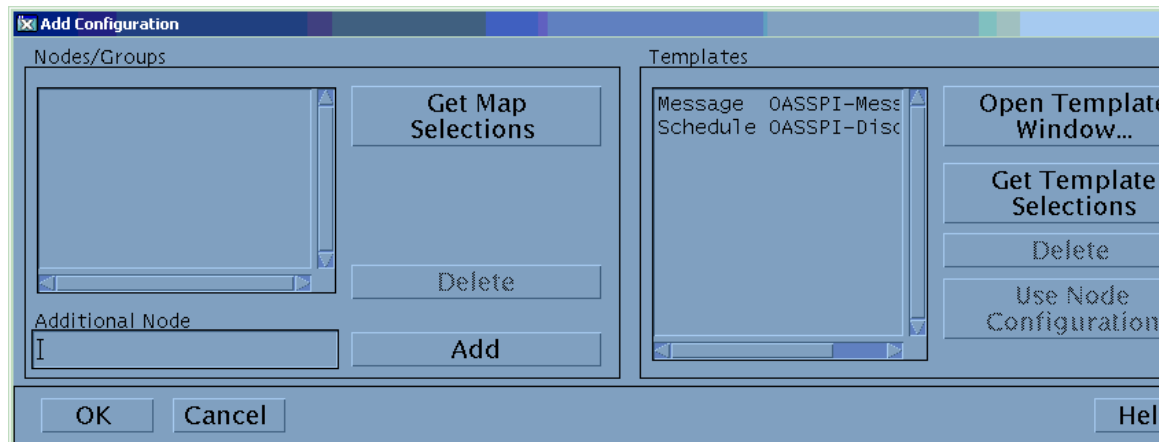
8   From the Add Configuration window, click **OK**.

Task 4: Distribute Templates

Distribute the OASSPI-Discovery and OASSPI-Messages templates to the management server:

1   Open the Node Bank window and select the management server.

2   From the Actions menu, select **Agents → Install/Update SW & Config**.

3   In the Target Nodes section, select **Nodes in List Requiring Update**.

4   In the Install/Update Software and Configuration window check the **Templates** check box.

5   Select **Force Update**.

6   Click **OK**.

The following message is displayed in the Message Browser:

```
The following configuration information was successfully distributed:
Templates
```

The OASSPI-Discovery and OASSPI-Messages templates are distributed to the management server.

Task 5: Update the remactconf.xml File (OVO 8.x Only)

If you are running DCE-based agents on your managed node(s), the discovery process must be allowed to run automatic actions on the management server. Do the following:

1   Merge (if you have updated this file) or replace the /etc/opt/OV/share/conf/OpC/mgmt_sv/remactconf.xml with the /opt/OV/wasspi/oas/OV/remactconf.xml file.

2   Restart the OVO management server: **opcsv -start** (you must restart the management server if you modify the remactconf.xml file)

If the remactconf.xml file is not updated, the discovery process fails.

OAS SPI Configuration (Managed Nodes)

To configure OAS SPI, complete the following task (for each managed node):

- Task 1: Verify the Application Server Status

Task 1: Verify the Application Server Status

Verify that your application servers are running by checking a server's status from the Oracle Application Server Control Console.

OAS SPI Configuration (from the Management Server)

To configure OAS SPI, complete the following tasks (from the management server):

- Task 1: Assign the OASSPI-Messages Template
- Task 2: Distribute Templates, Actions, Monitors, Commands
- Task 3: Add Nodes to the OracleAS Node Group
- Task 4: Run Discover OracleAS
- Task 5: Verify the Discovery Process
- Task 6: Distribute OAS SPI Templates
- Task 7: Completing Configuration
- Task 8: Verify OAS SPI Configuration

Task 1: Assign the OASSPI-Messages Template

Assign the OASSPI-Messages template to the managed nodes:

1   Open the Node Bank window and select the managed nodes.

2   From the Actions menu, select **Agents → Assign Templates**. The Define Configuration window opens.
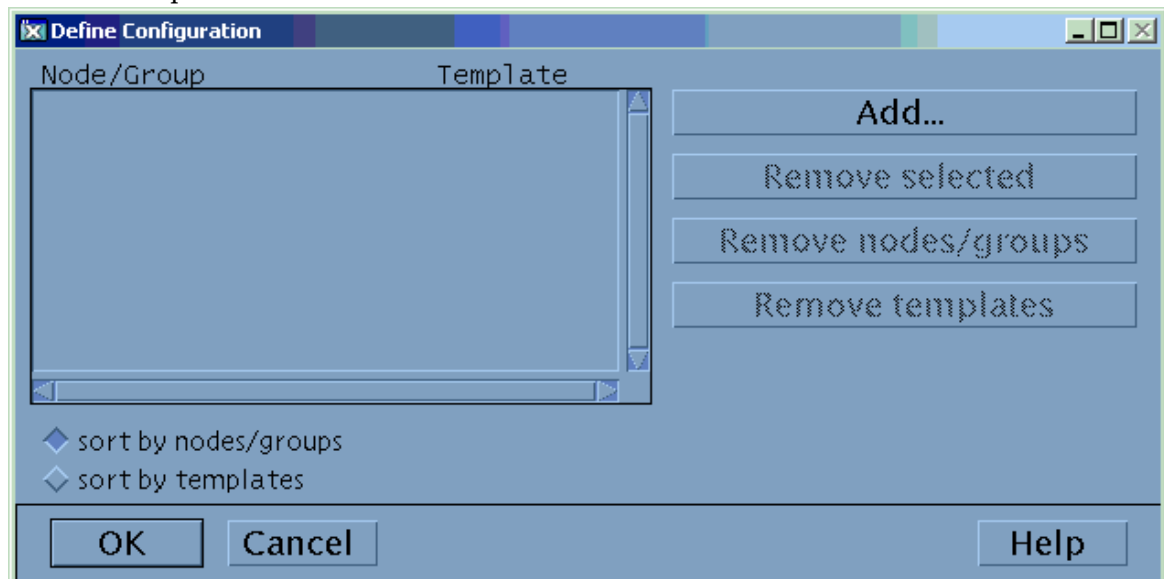
3   Click **Add**. The Add Configuration window opens.
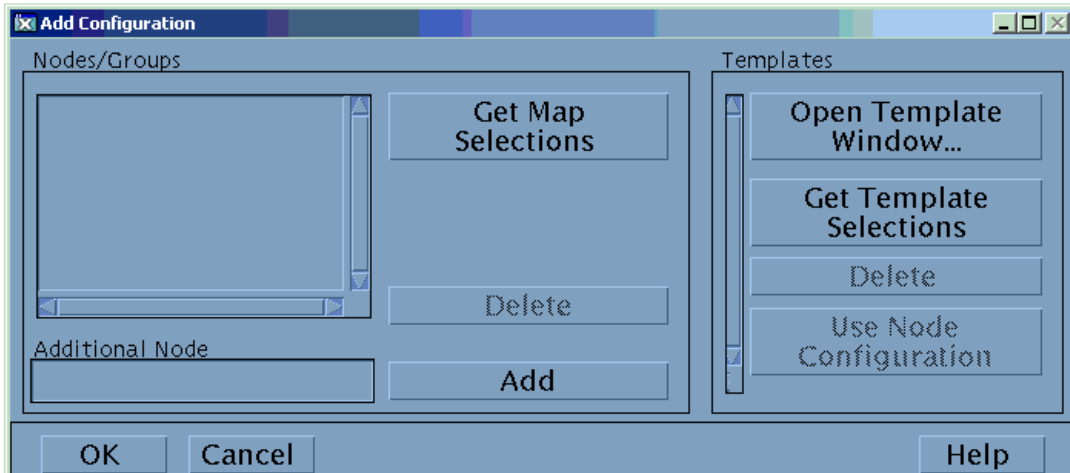
4   Click **Open Template Window**. The Message Source Templates window opens.
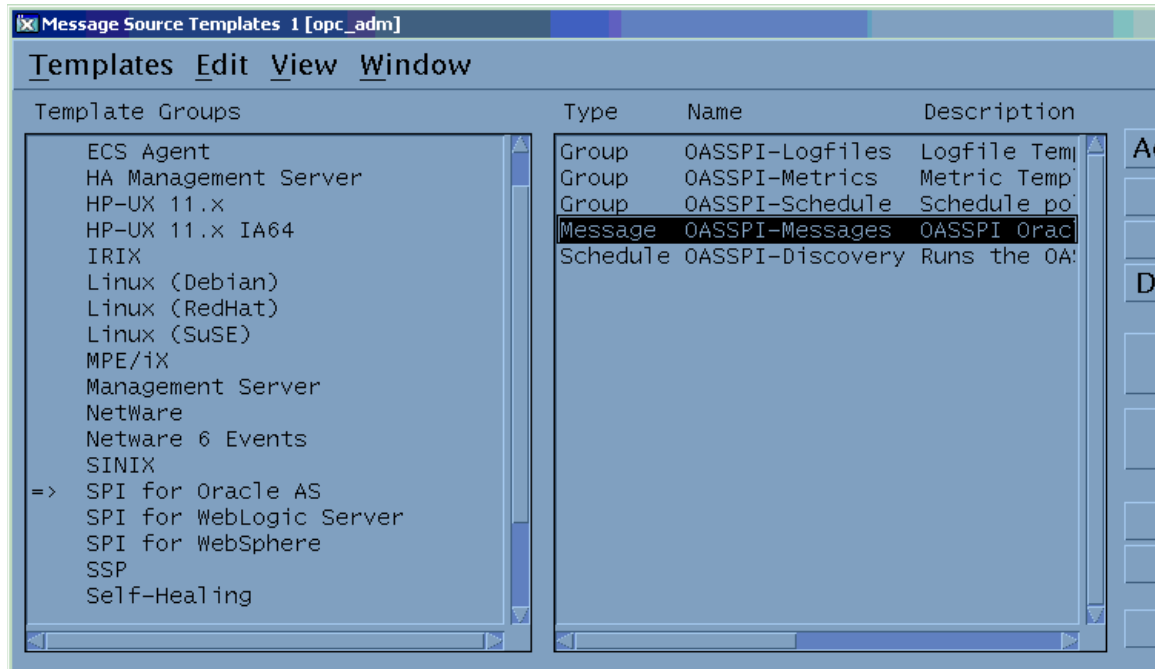
5   Select the SPI for OracleAS template group.

6   In the right pane, select the OASSPI-Messages template.

7   In the Add Configuration window, click **Get Template Selections**. The OASSPI-Messages template appears in the right pane.
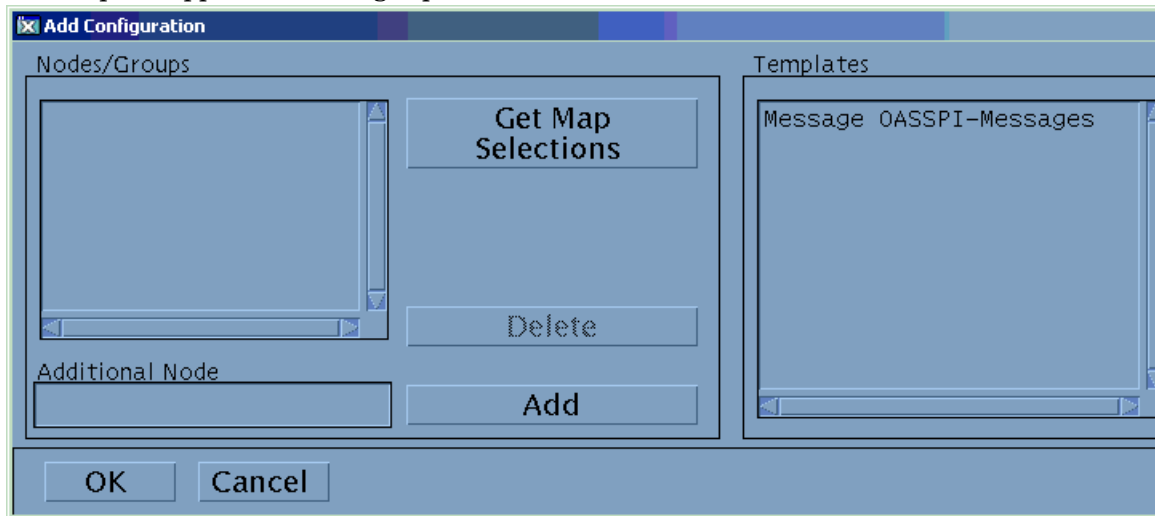
8   Click **OK**.

Task 2: Distribute Templates, Actions, Monitors, Commands

1   Select the node(s) on which to install the OAS SPI.

2   From the Node Bank's Actions menu select **Agents** → **Install/Update SW & Config**.

3   In the Install/Update OVO Software and Configuration window select the following component check boxes:

- Templates

- Actions

- Monitors

- Commands

Using this dialog, deploy program components to the managed node(s).
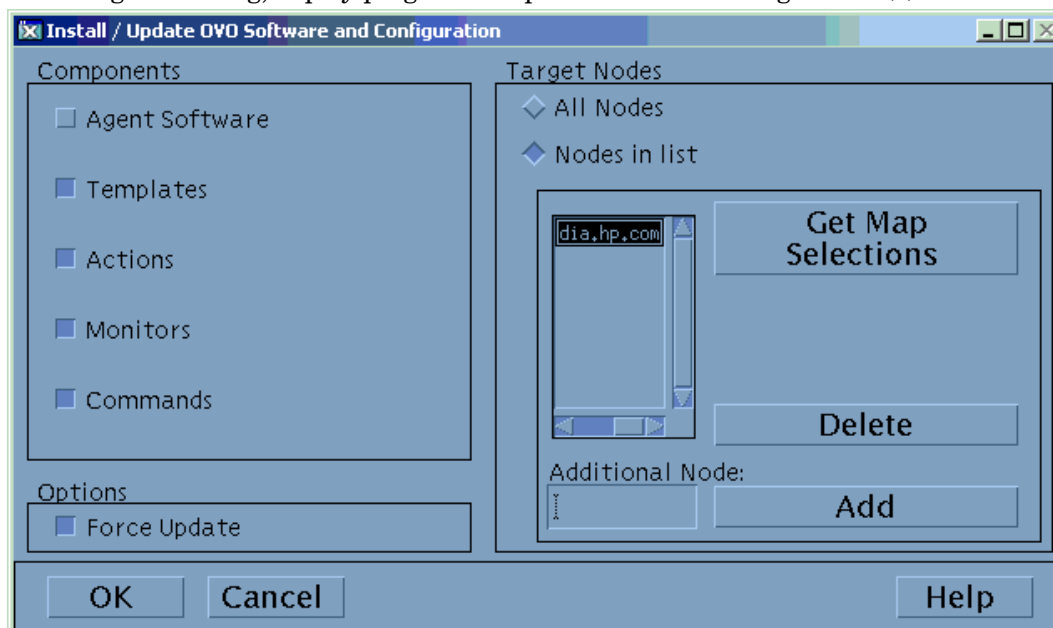
4   Select the **Force Update** check box.

5   Select the **Nodes in list** option button. Click **OK**.
Upon completion, the following message appears in the Message Browser for each
managed node:

```
The following configuration information was successfully distributed:
Templates Actions Commands Monitors
```

The OAS SPI is now installed on the selected managed node(s).

Task 3: Add Nodes to the OracleAS Node Group

OAS SPI automatically creates a single node group (OracleAS) with appropriate template
groups already assigned. Place any nodes running Oracle OC4J/OHS servers in this node
group.

1   From the OVO console, open both the Node Group Bank and the Node Bank to display
(side-by-side) the OracleAS node group and the managed nodes.

2   Drag and drop managed nodes running Oracle OC4J/OHS servers into the OracleAS node
group.

Task 4: Run Discover OracleAS

1   At the OVO console, select the OracleAS node group in the Node Group Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** and double-click Discover
OracleAS.
(If the above does not appear as described, select **Map** → **Reload**.)

4   The Introduction window opens. This window contains brief information about the
Discover OracleAS application.

Click **Next** to start the Discovery application.

5   The Confirm Operation window opens. Verify the nodes on which the operation is to be performed. Click **OK**.

Wait for the discover process to complete before going to the next task. The discover process may take several minutes to complete.

> ➤   If you click **Cancel** and made changes to the configuration, those changes remain in the configuration on the management server. To make the changes to the selected managed nodes' configuration, you must select those nodes in the Node Bank window, start the Discover OracleAS application, click **Next** from the configuration editor, and then click **OK**.

Task 5: Verify the Discovery Process

Depending on the number of managed nodes in your environment, verification takes several minutes to complete.

1   Verify that the following messages appear in the Discover OracleAS application window (the Discover OracleAS application has completed successfully):

```
Discovery started on node: <node>
Finished running the Discovery application
```

If the Discover OracleAS application does not complete successfully, the following message appears in the application window:

```
Failed to run discovery on node <node>
```

Refer to Troubleshooting the Discover Process on page 48 for information on how to troubleshoot the discovery process.

2   Verify that the following message appears in the message browser for each managed node:

```
WASSPI-602 - Updating the OASSPI configuration data with discovered
information
```

Depending on the number of managed nodes in your environment, it may take several minutes for these messages to display for all managed nodes.

3   If Service Navigator is already running, select **File → Reload Configurations**. In the Services tree, open the Application node and look for the Oracle service.

4   Run the Configure OASSPI application to verify the properties set by the discovery process. Refer to Configure OASSPI on page 190 for more information about the configuration editor.

Task 6: Distribute OAS SPI Templates

Distribute templates to the managed nodes:

1   Open the Node Group Bank window and select the OracleAS node group.

2   From the Actions menu, select **Agents → Install/Update SW & Config**.

3   In the Target Nodes section select the **Nodes in List Requiring Update** option button.

4   In the Install/Update Software and Configuration window check the **Templates** check box.

5   Select **Force Update**.

6   Click **OK**.

The following message is displayed in the Message Browser:

```
The following configuration information was successfully distributed:
Templates
```

The OAS-SPI templates are now distributed to the OracleAS node group. OAS-SPI monitors can now begin running according to their specific collection interval.

▶   If you use HP OpenView Reporter, see Chapter 5, Integrating OAS SPI with HP OpenView Reporting and Graphing Products, for information on integrating OAS-SPI with Reporter. Use Reporter to generate Oracle Application Server reports that show more consolidated information.

Task 7: Completing Configuration

Before configuration is complete, the configuration information on the management server and managed nodes must be updated. You can either:

•   Run the Configure OASSPI application (which updates the configuration information on the management server and managed nodes). Refer to Configure OASSPI on page 190 for more information. This method is recommended.

Or

•   Wait at least 10 minutes for the automatic configuration template to run.

Task 8: Verify OAS SPI Configuration

Run the Verify application to verify that OAS SPI is properly installed and configured (refer to Verify on page 201 for more information about this application).

1   At the OVO console, select the OracleAS node group in the Node Group Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** and double-click **Verify**.

Additional OAS SPI Configuration

Based on your Oracle Application Server configuration and application needs, you must finish OAS SPI configuration by setting additional configuration properties and/or installing and configuring additional components. Setting additional properties and configuring additional components depends on your environment.

Conditional Properties

Based on your Oracle Application Server configuration and application needs, you may need to set one or more conditional properties. If you meet a condition, set the properties listed to the right of the condition (these properties are not automatically discovered by the discovery process). For more information about the properties, refer to Configuration Properties on page 178.

Table 1   Conditional Properties

Condition	Property to Set
Oracle OC4J/OHS servers on a system share the same name. The discovery process automatically sets the ALIAS property, but you may want to edit this value as this is the name used in messages, reports, and graphs.	ALIAS
Start or stop an Oracle Application Server using the Start/Stop OracleAS application from the OVO console.	START_CMD, STOP_CMD, and USER
Use the View Graphs application from the OVO console (Performance Manager must be installed).	GRAPH_URL

Setting Conditional Properties

1   At the OVO console, select the node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Configure OASSPI**. (If the above does not appear as described, select **Map** → **Reload**.)

4   The Introduction window opens. This window contains brief information about the Discover OracleAS application.

    Click **Next**.

5   From the configuration editor, set the properties. Refer to Appendix B, The Configuration for more information about using the configuration editor.

6   Click **Next** to save any changes and exit the editor.

7   The Confirm Operation window opens. Click **OK**.

    ▶   If you click **Cancel** and made changes to the configuration, those changes remain in the configuration on the management server. To make the changes to the selected managed nodes' configuration, you must select those nodes in the Node Bank window, start the Configure OASSPI application, click **Next** from the configuration editor, and then click **OK**.

Configuring a Non-Root HTTPS Agent on a UNIX Managed Node (OVO 8.x Only)

If you are running or planning to run a non-root HTTPS agent on a UNIX managed node (OVO 8.x only), do the following:

▶ You must install the OS-dependent Sudo software package on the UNIX managed node. Sudo is free software available from **http://www.sudo.ws.** The OS-dependent software packages are located at the bottom of the download page (**http://www.sudo.ws/sudo/download.html**). Refer to the release notes for more installation information.

1 Switch the HTTPS agent to a non-root user. For more information, refer to the *HP OpenView Operations HTTPS Agent Concepts and Configuration Guide*. This document is available at **http://ovweb.external.hp.com/lpe/doc_serv/** under the product Operations for UNIX, version 8.x.

2 Add the OVO agent user account to the local Oracle Application Server user group on the managed node. This allows the OVO agent user access to the files in the Oracle Application Server installation directories. Use the system administration tool or modify the /etc/group file to add the user.

3 On the managed node, set the OV_SUDO variable. As root or with OVO agent user privileges, do the following:

   a Stop all OVO agents. Run the following command:

   opcagt -kill

   b Set the OV_SUDO variable. Run the following command:

   ovconfchg -ns ctrl.sudo -set OV_SUDO *<sudo_program>*

   where *<sudo_program>* is the location (including the absolute pathname) where sudo is installed (for example, /usr/local/bin/sudo).

   c Start the OVO agents. Run the following command:

   opcagt -start

   d Verify OV_SUDO is set. Run the following command:

   ovdeploy -cmd set | grep SUDO

   The following displayed:

   OV_SUDO=*<sudo_program>*

4 Configure the managed node. These steps MUST be completed to successfully run the SPI in a non-root HTTPS agent environment.

   a From the OVO management server, deploy actions, commands, and monitors to the managed node.

   b Select the node in the Node Bank window.

   c From the Application Bank window, select **OASSPI** → **OASSPI Admin** → **Init Non-Root**.

5 Edit the /etc/sudoers file using the visudo editor (installed with sudo):

   a On the managed node, log in as root.

   b Open the /*<SPI_Config_DIR>*/wasspi_oas_sudoers file

   where *<SPI_Config_DIR>* is the location of the SPI's configuration files on a managed node. Refer to Managed Node File Locations on page 161 for more information.

6　In a separate window, run the `visudo` command (for example, type: **/usr/local/sbin/visudo**).

　　c　From the `wasspi_oas_sudoers` file, copy and append the following lines to the `sudoers` file:

```
Cmnd_Alias OASSPI_ADMN = /opt/OV/nonOV/perl/a/bin/perl -S \
wasspi_oas_admin *
Cmnd_Alias OASSPI_COLL = /opt/OV/nonOV/perl/a/bin/perl -S \
wasspi_oas_ca *
Cmnd_Alias OASSPI_DISC = /opt/OV/nonOV/perl/a/bin/perl \
wasspi_oas_discovery.pl
Cmnd_Alias OASSPI_LFEN = /opt/OV/nonOV/perl/a/bin/perl -S \
wasspi_oas_le *
Cmnd_Alias OASSPI_SHSC = /opt/OV/nonOV/perl/a/bin/perl -S \
shs_collector.pl *

Cmnd_Alias OASSPI_ADMNP = /opt/OV/nonOV/perl/a/bin/perl -S \
/var/opt/OV/bin/instrumentation/wasspi_oas_admin *
Cmnd_Alias OASSPI_COLLP = /opt/OV/nonOV/perl/a/bin/perl -S \
/var/opt/OV/bin/instrumentation/wasspi_oas_ca *
Cmnd_Alias OASSPI_DISCP = /opt/OV/nonOV/perl/a/bin/perl \
/var/opt/OV/bin/instrumentation/wasspi_oas_discovery.pl
Cmnd_Alias OASSPI_LFENP = /opt/OV/nonOV/perl/a/bin/perl -S \
/var/opt/OV/bin/instrumentation/wasspi_oas_le *
Cmnd_Alias OASSPI_SHSCP = /opt/OV/nonOV/perl/a/bin/perl -S \
/var/opt/OV/bin/instrumentation/shs_collector.pl *
<OV_Agent_username> <nodename> = NOPASSWD: OASSPI_ADMN, \
OASSPI_COLL, OASSPI_DISC, OASSPI_LFEN, OASSPI_SHSC, \
OASSPI_ADMNP, OASSPI_COLLP, OASSPI_DISCP, OASSPI_LFENP, \
OASSPI_SHSCP
```

　　　　where *<OV_Agent_username>* is the OVO agent user account and *<nodename>* is the name of the managed node.

　　d　Save the file and exit the visudo editor. Type **:wq**

　　▶　Steps 3 and 4 must be performed every time the agent user is switched.

4 Using and Customizing OAS SPI

As you become familiar with the Smart Plug-in for Oracle Application Server (OAS SPI), you can determine which templates are most useful to you and which you might want to change. This chapter assists you by providing more detail on the templates and how to make those changes.

The following topics are covered:

- Basic Template Customizations
- Advanced Template Customizations
- Re-install the OAS SPI Templates
- Use Templates/Applications to View Annotation Reports and Graphs
- Check OAS SPI Nodes for License Count

Basic Template Customizations

After you begin using the OAS SPI, you may decide that specific OAS SPI templates need some modification. Basic customizations, such as changing a threshold (by modifying a metrics template) or modifying alarm generation, are covered in this section.

> Make copies of the default templates so that they remain intact. Otherwise, your customizations are overwritten when you upgrade to the next version.

Modifying Metrics Templates

Many metric attributes can be modified for all monitored instances of Oracle OC4J/OHS servers by following these steps:

1   Open the **Message Source Templates** window.

2   Open the **SPI for Oracle AS** template group.

3   Open the **OASSPI-Metrics** template group.

4   Double-click the desired metric which opens the Message and Suppress Conditions window.

5   Double-click the desired condition to modify (there may be more than one). The Condition window opens.

The following attributes can be modified:

- **Threshold**. Enter a value for the metric data that, when exceeded, would signify a problem either about to occur or already occurring.

- **Duration**. The length of time that the established threshold can be exceeded by the incoming data values for a metric before an alarm is generated.

- **Severity**. The level assigned by the OVO administrator to a message, based on its importance in a given operator's environment. Click **Severity** to select the desired severity setting.

- **Message Text**. Structured, readable piece of information about the status of a managed object, an event related to a managed object, or a problem with a managed object. Be careful not to modify any of the parameters—surrounded by <> brackets, beginning with $—in a message.

- **Actions**. Response to a message that is assigned by a message source template or condition. This response can be automatic or operator-initiated. This section provides the ability to generate Performance Manager graphs or reports, or to add custom programs.

  Automatic action. Action triggered by an incoming event or message. No operator intervention is involved. The automatic action delivered with the OAS SPI generates a snapshot report that shows the data values at the time the action was triggered from an exceeded threshold. You can view the report in the message Annotations.

  Operator-initiated action. Action used to take corrective or preventive actions in response to a given message. Unlike automatic actions, these actions are triggered only when an operator clicks a button. The operator-initiated action delivered with the OAS SPI allows you to view a graph of the metric whose exceeded threshold generated the message along with other related metric values (click **Perform Action** within a message's details window).

  The following illustration of the Condition window shows a threshold setting of 95 for metric OASSPI-0005. This metric monitors the percentage of heap space used in the JVM. A value of more than 95 (but less than 98) for 20 minutes would generate an alarm (a message of the severity major).
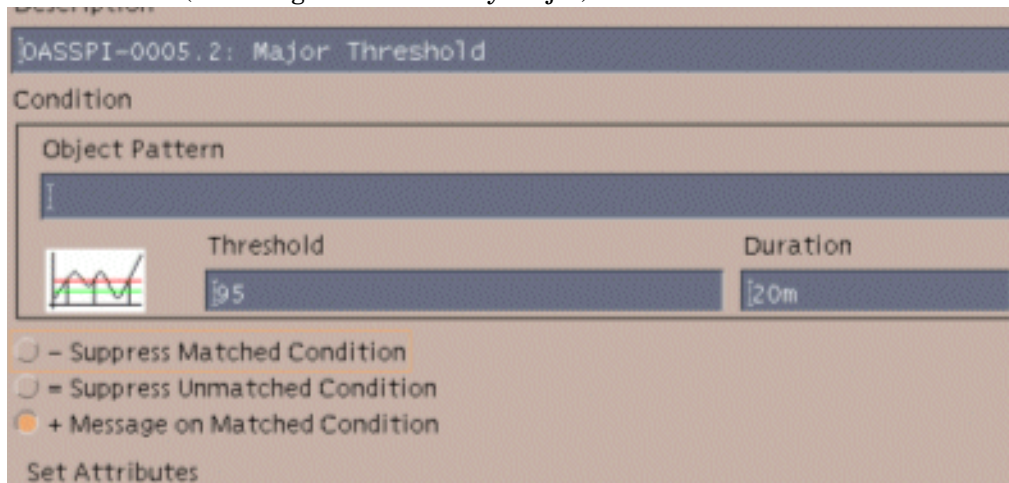
6   Click **OK**.

7   Re-distribute the modified template as described in .

Modifying Alarm Generation

An alarm can be generated once or multiple times, depending on its Message Generation setting in the Modify Threshold Monitor window.

To change the Message Generation, do the following:

1   Open the **Message Source Templates** window.

2   Open the **SPI for Oracle AS** template group.

3   Open the **OASSPI-Metrics** template group.

4   Select the template.

5   Click **Modify**. The Modify Threshold Monitor window opens.
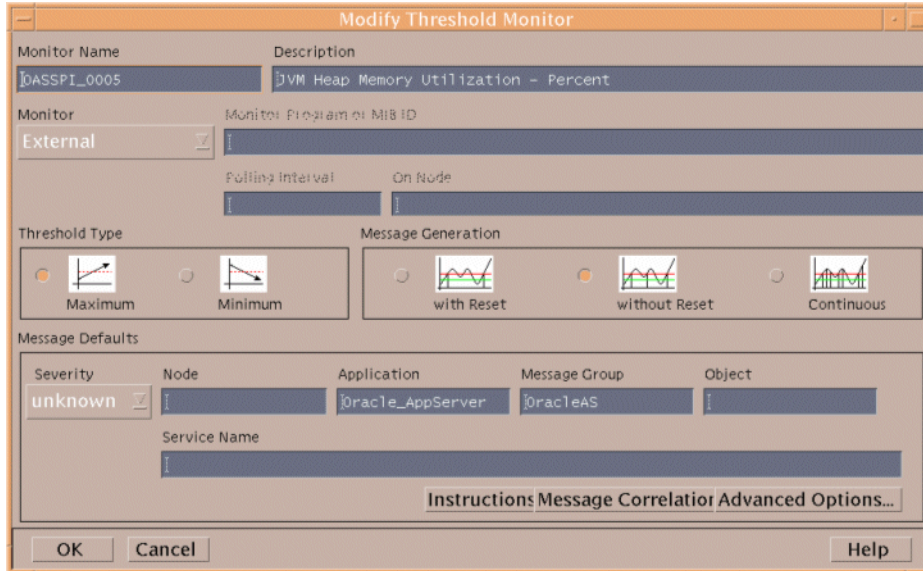
6   Modify the Message Generation:

- **with Reset**: Alarms are generated once when the threshold value is exceeded. At the same time a reset threshold value is activated. Only when the reset threshold value is exceeded, does the original threshold value become active again. Then when the threshold value is again exceeded, another alarm is generated and the process starts all over again.

- **Without Reset**. Alarms are generated once when the monitoring threshold value is exceeded. Alarms reset automatically when metric values are no longer in violation of the thresholds and are generated again when the threshold is exceeded.

- **Continuously**. Messages are sent/alerts generated each time the metric values are collected and the threshold is exceeded.

7   Click **OK**.

8   Re-distribute the modified templates as described in Task 6: Distribute OAS SPI Templates on page 53.

Advanced Template Customizations

The template changes suggested here range from making copies of default template groups in order to customize a few settings, to deleting whole groups of metrics within a template's command line. This section is considered advanced because all changes described here, whether simple or complex, require some advanced knowledge of the OAS SPI metrics.

Choosing Metrics To Customize

Determine which metrics you want to customize and what templates within the group you want to use. Then, do the following:

1   Open the **Message Source Template** window.

2   Select the group you want to use and click **Copy...**.

3   Rename and save the group.

4   Within the renamed template group, copy each original template and rename it.

5   Delete the originals within the renamed template group.

6   Customize the renamed templates within the group as necessary.

Creating a new template group allows you to keep custom templates separate from the original default templates, which you copy and place within the new group.

Using the OAS SPI Collector/Analyzer Command with Parameters

The `wasspi_oas_ca` command is used in every collector template, named according to its collection interval. You can view the default command line parameters within each collector template in the Command box in the Modify Scheduled Action window.

Using the Collector Command Parameters

OAS SPI data collections are started with the `wasspi_oas_ca` command, to which you can add other parameters, as identified in the following table.

Parameter	Function	Syntax with Example
`-e`	(exclude) Allows you to exclude specific servers. This option may not be used with the -i option.	`-e` *<server_name>* Example: `-e server2,server4`
`-i`	(include) Allows you to list specific servers to monitor. This option may not be used with the -e option.	`-i` *<server_name>* Example: `-i server1,server3`
`-m`	(metric) Specifies the metric numbers or number ranges on which to collect data.	`-m` *<metric_number|metric_number_range>* Example: `-m 1,3-5,9-11,15`
`-matchver`	(match version) Specifies the specific Oracle OC4J/OHS server version to monitor. This option may not be used with the `-minver` nor `-maxver` options. If no matching versions are found, the command does not execute.	`-matchver` *<version_number>* Example: `-matchver 10.1.2`
`-maxver`	(maximum version) Specifies the highest Oracle OC4J/OHS server version to monitor. Use with `-minver` to specify a range of versions. If no versions are found, the command does not execute.	`-maxver` *<version_number>* Example: `-maxver 10.1.2`

Parameter	Function	Syntax with Example
-minver	(minimum version) Specifies the lowest Oracle OC4J/OHS server version to monitor. Use with -maxver to specify a range of versions. If no versions are found, the command does not execute.	-minver *<version_number>* Example: -minver 10.1.2
-r	(report) Generate an ASCII report for the specified metric(s).	-r
-t	(tag) Create a new template group by adding a prefix to an existing collector template and specifying the metric number(s).	-t *<prefix>*- Example: wasspi_oas_ca -m 220-223 -t DEV-
-x	Allows you to specify a property/value as follows:	-x *<property>*=*<property_value>*
	alarm: when off, overrides any alarming condition as set up in the metric monitor template.	-x alarm=off
	prefix: Default: JMXUDM_. Specify the prefix of the metric ID.	-x prefix=SALES_
	print: when on, prints the metric name, instance name, and metric value to STDOUT in addition to any configured alarming or logging.	-x print=on
	log: when off, prevents graphing or reporting functions.	-x log=off

Syntax Examples

- To collect specific data on all configured servers:

  wasspi_oas_ca -m 1,2,10,11 -minver 10.0

- To collect data from specific servers only:

  wasspi_oas_ca -m 1,2,10,11 -minver 10.0 -i server1,server2

- To not collect data from specific servers:

  wasspi_oas_ca -m 1,2,10,11 -minver 10.0 -e server1,server2

Changing the Collection Interval for all Metrics

To change the collection interval for all scheduled metrics, change the Polling Interval in the appropriate collector template. For example, to change the collection of default metrics from 5 minutes to 10 minutes for the OASSPI-10-OHS-05min collector template, follow these steps:

1   Select the **Message Source Templates** window.

2   Select the template group **SPI for Oracle AS** and open **OASSPI-Schedule**.

3   Select the collector template **OASSPI-OHS-05min**.

4   Click **Modify...** and change the Scheduled Action Name to `OASSPI-OHS-10min`.

5   Change the polling interval from 5 minutes to 10 minutes. For example, 0, 10, 20...

6   Distribute the new templates (described in Task 6: Distribute OAS SPI Templates on page 53).

Changing the Collection Interval for Selected Metrics

To change the collection interval for selected metrics, copy the appropriate collector template and rename with a name reflecting the new interval, deleting all but the metrics you are changing. Set the new interval. Edit the original template to remove the changing metrics. For example, to change the collection interval to 10 minutes for metrics 10 and 11, you would follow these steps:

| Command | .oas_ca -c OASSPI-OHS-05min -m 1,2,10,11 -type ohs |
| Execute as user | $AGENT_USER |

1   Open the **Message Source Templates** window.

2   Select the template group **SPI for Oracle AS** and open OASSPI-Schedule.

3   Select the schedule template **OASSPI-OHS-05min**.

4   Click **Copy...** and change the name of the schedule template to OASSPI-OHS-10min.

5   In the Command box, delete all metrics after -m except 10 and 11.

6   Change the polling interval to 10 minutes.

7   Click **OK**.

8   Select the **OASSPI-OHS-05min** template.

9   Delete 10, 11 from the Command box.

10 Re-distribute the modified templates as described in Task 6: Distribute OAS SPI Templates on page 53.

Customize the Threshold for Different Servers

Customize the threshold as needed. For example, you may want to set the threshold to 90 for SERVER_1 for metric 0220 and leave the threshold at 100 for all other servers. To do so, copy the existing condition and modify it to serve as the exception. Follow these steps:

1   Double-click to open the metric for customization (for example, OASSPI-0220).

The Message and Suppress Conditions window is displayed.

2   Select the desired condition and click **Copy...** to make a copy of the condition.

3   Name the condition OASSPI-0220.2.

4   In the Object Pattern field, enter the following details:

<ServerName>:<ServerPort>:<NodeName>:<*>:<*>:<*>

For Example: If you want to set threshold for the application server SERVER1, enter the following:

SERVER1:<*>:<*>:<*>:<*>:<*>

5   Click the **Test Pattern Matching…** to test the pattern and verify pattern matching (you must set up a match file first).

6   Change the value in the Threshold field from 100 to 90.

Creating Custom, Tagged Templates

Another advanced customization option is to use the tag option (-t on the command line), which allows the collector/analyzer to recognize customized templates that have a tag attached to the name. This option provides you with the flexibility of using more than a single set of templates to define conditions pertaining to specific installations of Oracle Application Server.

When multiple nodes are managed by a number of groups, this option allows you to create specially tagged templates that are obviously separate from your original setup. In such a case, you would make copies of the templates, rename them with the tag and re-work the collector template to pick up the tagged names, then assign them to the various groups.

For example, you might create a group of templates and change each template name to include CLIENT01 in it. A metric monitor template might be named CLIENT01-OASSPI_0001 (retaining the metric number, which must be used). The collector template name would be named FIRST_CLIENT-OHS-05min. You could then set up another group for SECOND_CLIENT and change all those templates to include the CLIENT02 in the name.

To create the new template group:

1   Copy the original template group. In the Message Source Templates window select the group and click **Copy...**.

2   Name the new group according to how you plan to identify the new schedule and collector templates. For example, if you are including CLIENT01 in the template names, include it within the new template group name.

3   In the Message Source Template window expand the new template group to show all templates and select each template you plan to use, click **Copy...**, and rename it according to your naming scheme.

   • The names you give the new metric monitor templates in the group would contain the new name followed by the original metric number. For example, a copy of OASSPI-0001 could be called CLIENT01-OASSPI_0001.

   • The name you give the new collector monitor template would also contain the identifying name. You would also modify the scheduled collection for the new group by inserting the -t property on the command line. For example:

   ```
   wasspi_oas_ca -m 1 -t CLIENT01-
   ```

4   Delete all original templates from the new group.

Template Variables

The following variables are used by the OAS SPI templates. If you are creating your own templates, you may use these variables.

Name	Description
instancename	The instance for which the metric is being reported for multi-instance metrics. **Example:** `/oc4j/Petstore/EJBs/shoppingcartEjb.jar/TheCart/ejbActivate`
node	The node on which the OC4J/OHS server is running. **Example:** `moo1.hp.com`
servername	The OC4J/OHS server name. Corresponds to the `NAME` configuration property. **Example:** `my server`
service_key	The service ID used to light up the nodes in the service map.

Re-install the OAS SPI Templates

When OAS SPI templates are installed in OVO, the commands shown below automatically uploads them when swinstall is run. Any customized template settings you may have done for the previous installation are overwritten.

To restore the default SPI for Oracle AS template group you had originally installed, delete all current templates first, then run the command:

```
/opt/OV/bin/OpC/opccfgupld -silent¹ -replace
-subentity /var/opt/OV/share/tmp/OpC_appl/wasspi/oas/oas_set
```

[1] Alternatively, you can use the -verbose option instead of the -silent option.

Use Templates/Applications to View Annotation Reports and Graphs

Some templates have actions defined with threshold violations or error conditions that automatically cause reports to appear in the message Annotations. These reports are snapshots of data values collected form the server around the time that the alarm occurred.

Other templates have operator actions associated with them that allow you to generate a graph.

▶ The reports discussed in this section should not be confused with those generated by OpenView Reporter, which show more consolidated, historical data generated as web pages in management-ready presentation format.

You can access the data as follows:
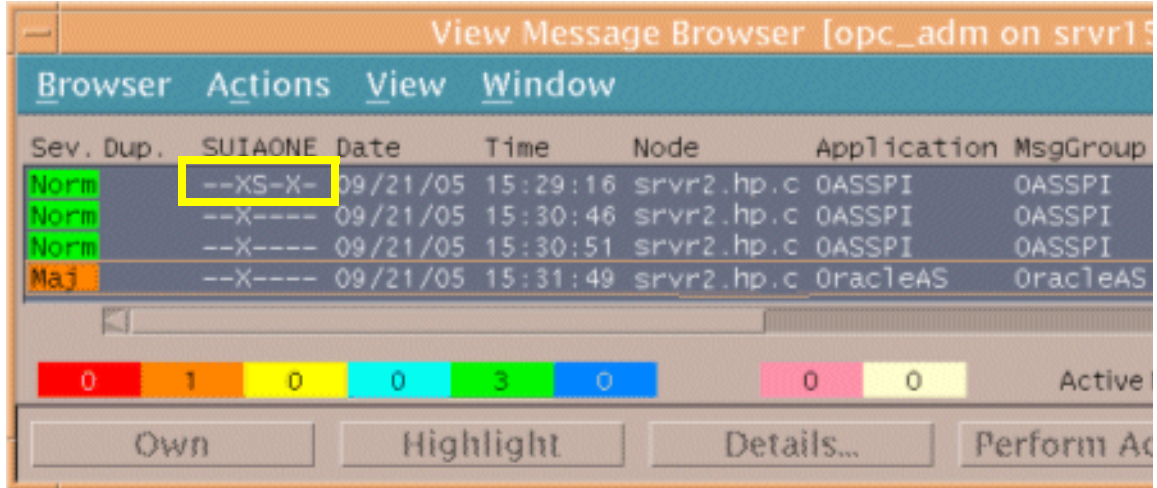
- To view the Message Details, double-click a message in the OVO message browser, or just select the message and click Annotations. You can easily access Annotations by clicking **Annotations**. Reports are available there, showing data values on a single server.

- To view reports, open both the Node Bank and Application Bank windows. Continue to open application windows **OASSPI** → **OASSPI Admin** → **Reports**. Select a node and drag it onto the OASSPI metric report you need. These reports show all server data on a node.

- To view graphs, open both the Node Bank and Application Bank windows. Continue to open application windows **OASSPI** → **OASSPI Admin**. Drag a node onto the View Graphs application to launch your Web browser, which opens the graphing feature available in HP OpenView Performance Manager (which must be purchased separately).

Automatic Action Reports

Many metrics generate Automatic Action Reports. These reports are generated as soon as an alarm is triggered in OVO. Automatic Action reports show the state of the system moments after the alarm occurred.

Viewing an Automatic Action Report

When an Automatic Action Report is executed from OVO, the server is queried for additional data. If your message browser is set to display the SUIAONE column, there is an **S** under the **A** column (see illustration), which indicates that a generated report is available in the Annotations area of the Message Details.

To view the report, click **Annotations...** in the Message Browser. Column descriptions provide further clarification.

Application Bank Reports

You can use Application Bank Reports to manually generate a report similar to an Automatic Action report.

Application Bank reports run for all Oracle OC4J/OHS server instances configured on the managed node, in contrast to Automatic Action Reports which are generated for a single Oracle OC4J/OHS server instance. The reports generated from the Application Bank reflect the current state of Oracle OC4J/OHS server on the managed node.

To generate a report in OVO, simply drag the managed node from the Node Bank window to the desired report in the Application Bank window.

The report below appears in the Annotations area of the message details.

Sample Report

The following example shows the format of a OAS SPI report. This report is automatically generated (automatic action report) for metric C280.

```
                    Report for Application Server OC4J_SECURITY
                              Sep 29, 2005 5:23:49 PM
                           Metric C280_WebCntxtAvRqPrc


Web Context Request              Active Service Threads      Average Service Time (msec
-------------------              ----------------------      --------------------------
/oc4j/default/WEBs/dms           1                           5.55
/oc4j/sso/WEBs/web               0                           1.93


Web Context Session              Active Sessions      Total Active Time (msecs)     Com
-------------------              ---------------      -------------------------     ---
/oc4j/default/WEBs/dms           0                    0                             0
/oc4j/sso/WEBs/web               0                    0                             0



No data available for server HTTP_Server+appsrv.ovrsunr2.rose.hp.com.




                    Report for Application Server OC4J_Portal
                              Sep 29, 2005 5:23:54 PM
                           Metric C280_WebCntxtAvRqPrc


Web Context Request                        Active Service Threads      Average Service
-------------------                        ----------------------      ---------------
/oc4j/default/WEBs/dms                     1                           8.15
/oc4j/UltrasearchAdmin/WEBs/admin          0                           356.77
/oc4j/portal/WEBs/portal                   0                           18.94


Web Context Session                        Active Sessions      Total Active Time (mse
-------------------                        ---------------      ----------------------
/oc4j/default/WEBs/dms                     0                    0
/oc4j/UltrasearchAdmin/WEBs/admin          2                    179,932,834
/oc4j/portal/WEBs/portal                   0                    0
```

Check OAS SPI Nodes for License Count

You can use an OVO reporting utility to check the number of templates you have installed on your managed nodes. In reviewing the number of templates per managed node, you can see if you have consistently installed templates across your managed systems. In addition, by running this report, you can also ensure that the number of licenses you have purchased is in compliance with the report results.

To run the report:

1   At the OVO console select the node or node group that you want to check.

2   From the Actions menu select **Utilities → Reports...**.

3   In the Reports window among the reports listed select **OASSPI License Check**.

4   Select an output destination and click **OK**.

5 Integrating OAS SPI with HP OpenView Reporting and Graphing Products

The Smart Plug-in for Oracle Application Server (OAS SPI) can be integrated with the following HP OpenView reporting and graphing products (these products must be purchased separately):

- HP OpenView Reporter (Reporter)
- HP OpenView Performance Agent (OVPA)
- HP OpenView Performance Manager (OVPM)

HP OpenView Reporter. Reporter produces management-ready, web page reports, showing historical and trending information. This is *not* the version of Reporter that is included with HP OpenView Operations.

Working in conjunction with Reporter, the OAS SPI produces a variety of reports showing consolidated information on the Oracle Application Server.

Refer to Integrating with OV Reporter on page 65 for more information on how to integrate OAS SPI with Reporter. After integrating OAS SPI with Reporter, every night, Reporter generates reports that show the performance and availability of an Oracle Application Server on configured managed nodes.

HP OpenView Performance Agent. OVPA collects, summarizes, time stamps, and detects alarm conditions on current and historical resource data across your system. It provides performance, resource, and end-to-end transaction response time measurements, and supports network and database measurement information. Refer to the *HP OpenView Performance Agent for UNIX User's Manual* for more information about OVPA.

HP OpenView Performance Manager. OVPM provides graphing capability of OAS SPI metrics.

Refer to Integrating with HP OpenView Performance Manager on page 67 for more information on how to integrate OAS SPI with OVPM. After integrating OAS SPI with OVPM, graphs are available the following day.

Integrating with CODA

The OAS SPI can detect if you are using OpenView Performance Agent (OVPA or MeasureWare Agent). If you are, the OAS SPI installation automatically uses it.

If you want to use the HP OpenView Operations subagent (CODA) included with OVO 7.0 or greater, you must configure the managed nodes to do so. Note that there are no advantages to using CODA instead of OVPA.

To use CODA, set up an empty file named `nocoda.opt` and store it on the managed node:

1. On the managed node, create a `nocoda.opt` file in the following directory:

Operating System	File Location
HP-UX, Linux, Solaris	`/var/opt/OV/conf/dsi2ddf/`
AIX	`/var/lpp/OV/conf/dsi2ddf/`
Windows	`\usr\ov\conf\dsi2ddf\`

   If the directory `dsi2ddf` does not exist, create it.

2. Save the empty file.

Integrating with OV Reporter

The OAS SPI must be configured (see Chapter 3, Configuring the OAS SPI) before it can be integrated with Reporter.

The OAS SPI report package must be installed on the Windows system running Reporter:

1 On the Windows client system, insert the Smart Plug-ins DVD-ROM (that contains the reporting packages) into the DVD-ROM drive, and in Windows Explorer, double-click:

    \OV_REPORTER\ORACLEAS_SPI_04.20.000\OASSPI-Reporter-04.20.000.msi

2 Follow the instructions as they appear.

3 Check the Reporter status pane (see the illustration that follows) to note changes to the Reporter configuration.

➤ For Windows 2000 managed nodes, during the installation an error message may appear that indicates the installer has detected an older version of the installer on your system. You can safely ignore the message and continue.

The status pane (at the bottom of the Reporter window) shows you information on the programs running and any errors occurring. You can check the status pane to see that Reporter has been updated with the OAS SPI reports.

You can find instructions in the Reporter Help for assigning OAS SPI reports to the targeted nodes. To access Help, select Reports or Discovered Systems in the left panel of the Reporter main window and right-click. Select Report Help or Discovered Systems Help from the submenu that appears. See the topic "To assign a report definition to a Discovered Systems Group."

4 Add group and single system reports by assigning reports as desired. (See the Reporter Help and the online Concepts Guide for complete information.)

➤ Group and single system OAS SPI reports require that you identify systems by their full name. For example, abc.xyz.com is acceptable while abc is not.

OAS SPI Reports

The reports available through the integration of HP OpenView Reporter and OAS SPI show consolidated data on server performance and availability on Oracle Application Server systems. These reports are available the day following your installation of the OAS SPI report package on the Reporter Windows system. (See Integrating with OV Reporter on page 65 if you have not yet completed the report package installation.)

The tables that follow show all pre-defined reports for groups (one or more managed nodes on which an Oracle Application Server is installed) and single systems.

Table 2   Group Reports

Title	Description	OracleAS Version	Metric
Availability	The percentage of up time of all Oracle Application Servers by day	9.04, 10.1.2, 10.1.3	2
EJB Method Calls Process Rate - Top 20	The number of all EJB method calls processed per minute for the top 20 OC4J servers	9.04, 10.1.2, 10.1.3	22
Servlet Active Threads - Top 20	The number of servlet active threads for the top 20 OC4J servers	9.04, 10.1.2, 10.1.3	42
Servlet Average Execution Time - Top 20	The servlet average execution time for the top 20 OC4J servers	9.04, 10.1.2, 10.1.3	240

Table 3   Single System Reports

Title	Description	OracleAS Version	Metric
HTTP Server and OC4J Availability Details	The percentage of hourly up time per day during the reporting period	9.04, 10.1.2, 10.1.3	2
HTTP Server and OC4J System Resource Utilization	The hourly average of the percentage of CPU utilization and the percentage of system memory utilization per day during the reporting period	9.04, 10.1.2, 10.1.3	10, 11
HTTP Server Connections	The average number of HTTP server connections per day for each application server on the selected system	9.04, 10.1.2, 10.1.3	100
DB Connection Cache Utilization	The hourly average of the percentage of database connection cache utilization per day during the reporting period	9.04, 10.1.2, 10.1.3	260
OC4J WebContext Sessions	The average number of WebContext sessions per day for each OC4J instance	9.04, 10.1.2, 10.1.3	281

Integrating with HP OpenView Performance Manager

To integrate OAS SPI with OVPM, do the following:

1 Install and configure the OAS SPI. Verify that you have completed Task 1: Configure the Management Server to Launch your Web Browser on page 41. Also, verify that you have set the GRAPH_URL property. Refer to Property Definitions on page 180 for more information about the GRAPH_URL property.

2 If you are upgrading the OAS SPI graph package, you must remove the old version before installing the new version. For information on removing the OAS SPI graph package see Task 14: Install the New Graph Package (Optional) on page 29.

3 Install the graph package.

   On a Windows system running OVPM, do the following:

   a Insert the Smart Plug-ins DVD-ROM (that contains the reporting packages) into the DVD-ROM drive, and in Windows Explorer, double-click:

   \OV_PM\ORACLEAS_SPI_04.20.000\WINDOWS\HPOvSpiOasGc-04.20.000.msi

   b Follow the instructions as they appear.

   On an HP-UX system running OVPM that is not the OVO management server, do the following (if OVPM is installed on the OVO management server, the files are already swinstalled):

   a Mount the Smart Plug-ins DVD-ROM (that contains the reporting packages) and type:

   swinstall -s <mount_point>/OV_PM/ORACLEAS_SPI_04.20.000/HPUX/
   HPOvSpiOasGc-04.20.000.sdtape OASSPI-GRAPHS

   On a Solaris system running OVPM that is not the OVO management server, do the following (if OVPM is installed on the OVO management server, the files are already installed):

   a Mount the Smart Plug-ins DVD-ROM (that contains the reporting packages) and type:

   /usr/sbin/pkgadd -d <mount_point>/OV_PM/ORACLEAS_SPI_04.20.000/
   SOLARIS/HPOvSpiOasGc-04.20.000.sparc all

4 To graph any Oracle Application Server metric, use the data source name `OASSPI_METRICS`

Refer to the OVPM documentation for information on how to view the graphs. Graphs are available the day following integration.

Allow sufficient collection intervals to occur before attempting to view graphs (using OpenView Performance Manager).

Data Source Description

Metrics collected by the OAS SPI are stored in the data sources named `OASSPI_METRICS` and `OASSPI_RPT_METRICS`. The values can be viewed for trend analysis.

Class   OASSPI_METRICS

Column	Attribute
1	SERVERNAME
2	OBJECTNAME
3	C005_JVMMEMUTILPCT
4	C010_CPUUTILPCT
5	C011_MEMORYUTILPCT
6	C100_HTTPSVRACTCONN
7	C108_HTTPAVGRESPSZRQ
8	C109_HTTPVHAVRSPSZRQ
9	C020_EJBCLACTTHREADS
10	C021_EJBCLAVGEXECTIM
11	C022_EJBCLCALLSPRCRT
12	C030_EJBWRAPACTTHRDS
13	C031_EJBWRPAVEXECTIM
14	C032_EJBWRPCALLPRCRT
15	C042_SRVLTACTTHREADS
16	C047_JSPACTREQUESTS
17	C050_JMSCONNCREATED
18	C260_JDBCCONPOOLUTIL
19	C280_WEBCNTXTAVRQPRC
20	C281_WEBCNTXTACTSESS

Class	OASSPI_RPT_METRICS

Column	Attribute
1	METRICID
2	VALUE
3	SERVERNAME
4	OBJECTNAME
5	INSTALLATION
6	APPLICATION

Viewing Graphs that Show Alarm Conditions

For graphing purposes, the OAS SPI organizes metrics according to type. When a message is generated for any metric appearing in a table in the section that follows, you can view a chart of its and other metric values.

To view a graph associated with an alarm condition (Operator-initiated action has been defined with the OAS SPI monitor template), complete these steps:

1   In the OVO Message Browser double-click the message.

2   In the Message Details window, click **Perform Action**.

The resulting action displays the metric's OAS SPI graph, which charts its values along with the values of other metrics in the same group.

Viewing Graphs that Show Past/Current Conditions

You can also generate any of the graphs manually by using the View Graphs application.

To manually generate a graph:

1 At the OVO console open both the Node Bank and the Application Bank windows.

2 In the Node Bank window, select the node for which you want the graph generated.

3 In the Application Bank window double-click OASSPI and in the next window double-click OASSPI Admin.

4 Drag and drop the node onto the **View Graphs** application.

OAS SPI Metrics Available for Graphs

The tables that follow show the graphs available for mapping collected metric values. If you are interested in viewing any one of the metrics included in any of these tables, you can use the View Graphs application to launch the graph, which appears in your Web browser.

Title	Description	OracleAS Version	Metric
JVM Memory Utilization	JVM heap memory utilization	9.04, 10.1.2	5
CPU and Memory Utilization	Percentage of server CPU time utilization and server memory size utilization	9.04, 10.1.2	10, 11
HTTP Server Active Connections	Number of active connections to the HTTP server	9.04, 10.1.2	100
HTTP Server Response Data	HTTP server average response data size processed and HTTP server average response data size processed for the virtual host	9.04, 10.1.2	108, 109
OC4J EJB Threads	EJB method client and EJB method wrappers active threads count	9.04, 10.1.2	20, 30
OC4J EJB Execution Time	Average execution time of the EJB method client and EJB method wrappers	9.04, 10.1.2	21, 31
OC4J EJB Calls Process Rate	EJB method client calls and EJB method wrappers calls process rate for the interval	9.04, 10.1.2	22, 32
Servlet Threads	Total number of threads servicing all servlets	9.04, 10.1.2	42
JSP Requests	Number of active JSP requests	9.04, 10.1.2	47

Title	Description	OracleAS Version	Metric
JMS Metrics	Number of JMX connections (local and remote) created by the JMS server during the interval and number of messages in the destination store	9.04, 10.1.2	50, 51
JDBC Connection Pool	Percentage of JDBC connection pool utilization	9.04, 10.1.2	260
OC4J Web Context Requests	OC4J web context average request processing time and number of active sessions	9.04, 10.1.2	280, 281

Launching the Web Page Display with an Operator Action that Generate Graphs

Performance Manager graphs can be generated from most OAS SPI alarm messages by pressing **Perform Action** from the message details, Properties, or the Message Browser. The operator action launches your Web browser, which displays a graph of the metric that generated the message, as well as other related metrics.

Specifying a Date Range

Within the web page display, you can specify a date range of one day, one week, one month, or one year. Refer to the online Help for instructions on changing display settings.

Example Integration

The following is an example of how to graph multi-instance data stored in a data source by reporting each OBJECTNAME for the METRICID for each SERVERNAME. The result is all data for all instances are reported in one graph. The data for each SERVERNAME can also be displayed in a separate graph.

This example also uses the Java interface option of OVPM.

1   Start the Java Interface option of OVPM. The Performance Manager Java Interface window opens.
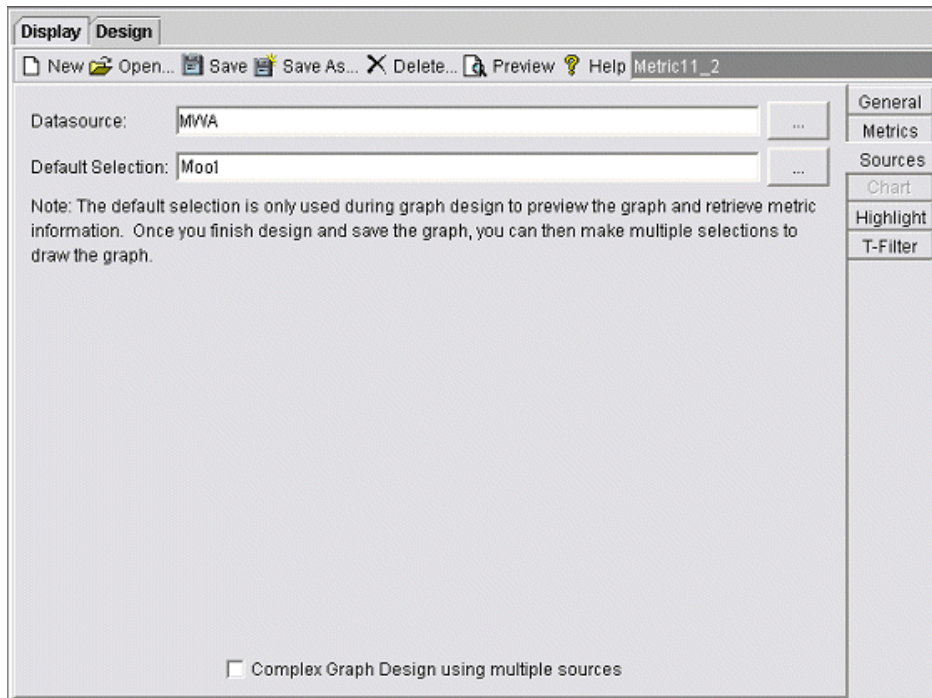
2   From the Performance Manager Java Interface window,

   a   Click the **Display** tab at the top of the window, and then the **Sources** tab at the right of the window.

   b   Click [..] next to the Datasource text box and select a data source (OASSPI_RPT_METRICS).

   c   Click [..] next to the Default Selection text box and select the node on which the data source resides.

3   Click the **General** tab at the right of the window.

Display | Design

New | Open... | Save | Save As... | Delete... | Preview | Help | Metric11_2

Title:

Subtitle:

Type: table

Description:

General
Metrics
Sources
Chart
Highlight
T-Filter

Date Range

Duration: 3   days

Ending: Now   Last

Date: Time:

Jul 26, 2004   00:00

Points Every:

5 minutes

Limit Number of Points to:

Shift

Override Shift Defaults

Start 00:00   Stop 23:59   Skip Holidays

Days Sun Mon Tue Wed Thu Fri Sat

Metric Display Order:

Average data value

Label (alphabetical)

4   From this window,

a   Select **line** from the Type drop-down list. This generates a line graph.

b   Enter a Date Range.

c   Enter an interval using the Points Every drop-down list.

d   Click **Label (alphabetical)** if you want the graph key sorted alphabetically.

5   Click the **Metrics** tab at the right of the window and click **Add**. The Metric Selection window opens.
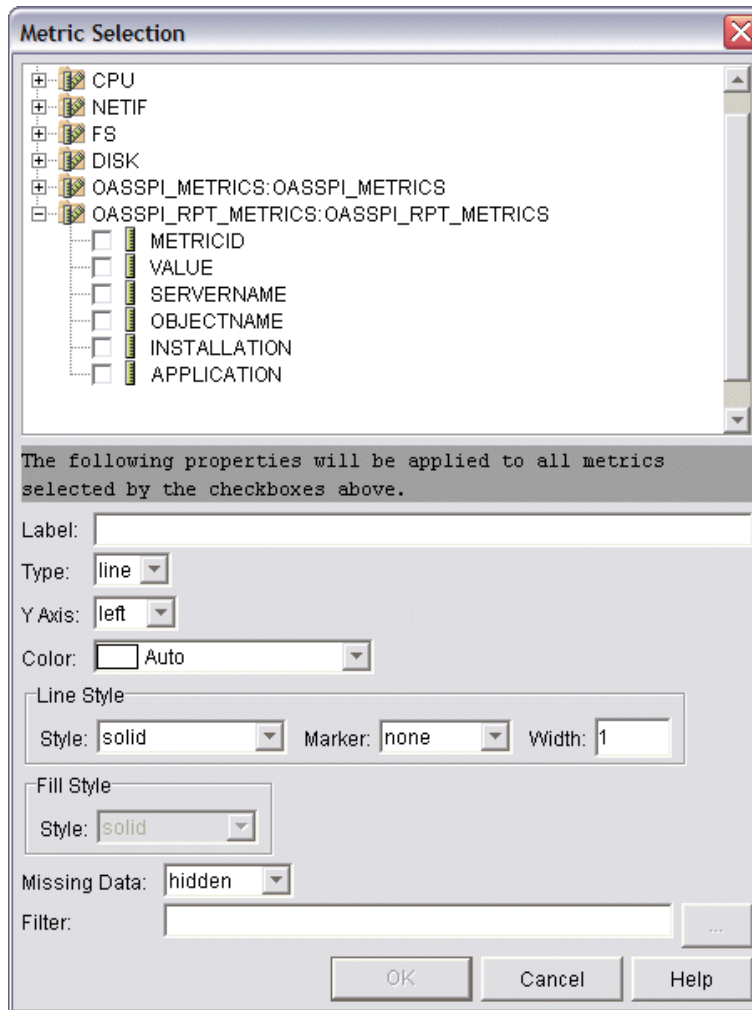
6   From the Metric Selection window,

   a   Next to the `OASSPI_RPT_METRICS` data source, click **+** to expand it in the tree.

   b   Select the VALUE check box.

   c   Click **OK**.

7   In the window with the Metrics tab selected, VALUE is displayed. Select the line on which VALUE is displayed and click **Properties**. The Metric Properties window opens.
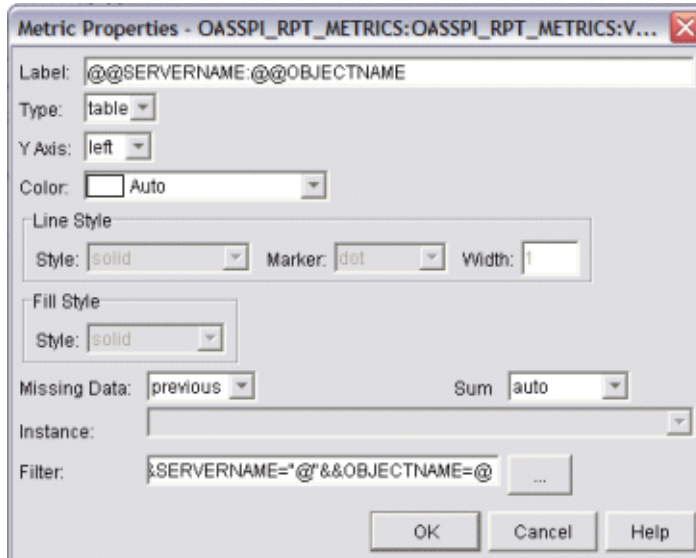
8   From the Metric Properties window,

   a   In the Label text box, enter:

      —   `@@SERVERNAME:@@OBJECTNAME` if you are creating one graph with all SERVERNAMEs

      —   `@@OBJECTNAME` if you are creating one graph with one SERVERNAME

   b   In the Marker drop-down list, select any marker other than none.

   c   In the Missing Data drop-down list, select:

      —   **previous** to use the previous value if data is missing from the data source

      —   **zero** to use the value zero if data is missing from the data source

   d   Click ... next to the Filter text box. The Metric Filter window opens.

9   From the Metric Filter window,

   a   Select **METRICID** from the first drop-down list.

   b   Select **=** from the second drop-down list (if it isn't already selected).

   c   Enter a metric number (for example, 11) in the text box.

   d   Click **OK**.

10 From the Metric Properties window,

   a   In the Filter text box, append the following:

      —   `&&SERVERNAME=@&&OBJECTNAME=@@` if you want one graph to display all SERVERNAME/OBJECTNAME combinations.

— **`&&SERVERNAME="<server_name>"&&OBJECTNAME=@`** if you want one graph to display one SERVERNAME and all OBJECTNAMEs associated with the multi-instance metric.

If you cannot edit the Filter text box, you can edit this item in the graph template file. Refer to step for more information.

b   Click **OK**.

11   Click **Save As** at the top of the window. The Save As window opens.
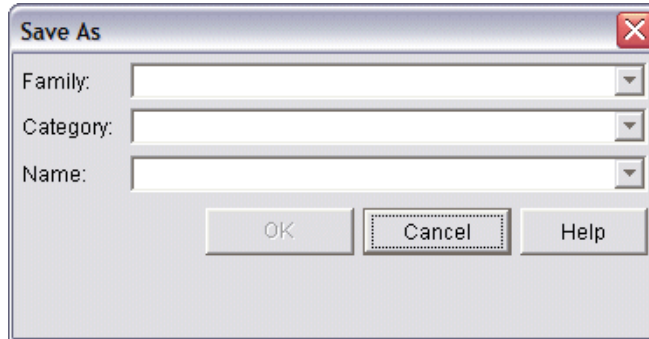
12   From the Save As window,

a   Enter a family (for example, OASSPI_Graphs) in the Family text box. The family name serves as a group to organize the graphs.

b   Enter a name (for example, metric_11) in the Name text box to uniquely identify the graph.

c   Entering text into the Category text box is optional.

d   Click **OK**. The information is saved in a graph template file named `VPI_GraphsUser`*`<family>`*`.txt` (for example, `VPI_GraphsUserOASSPI_Graphs.txt`).

For more information about this window, refer to the online help.

13   Edit the graph template file. The file is located in the OpenView data directory on the system of the OVPM instance on which you are working. The graph file may look similar to Figure 1.

Figure 1

```
#***********************************************
#* OpenView Performance Manager
#* user Defined Graph Templates
#* Last Updated: 07/25/05 04:31_30 AM by [1.2.3.4] moo1
#***********************************************
FAMILY: OASSPI_Graphs

GRAPH: Metric11
GRAPHBACKGROUND: None
DATERANGE: 1 day
GRAPHMULTIPLEGRAPHS: Yes
POINTSEVERY: raw
DATASOURCE: mwa
SYSTEMNAME: moo1

CLASS: OASSPI_RPT_METRICS:OASSPI_RPT_METRICS
METRIC: VALUE
FILTER: METRICID=11&&SERVERNAME=@&&OBJECTNAME=@
LABEL: @@SERVERNAME:@@OBJECTNAME
COLOR: Auto
MARKER: rectangle
MISSINGDATA: previous
END_GRAPH:

#*--------------------------------------------------
GRAPH: Metric11_2
GRAPHBACKGROUND: None
DATERANGE: 1 day
GRAPHMULTIPLEGRAPHS: Yes
POINTSERVERY: raw
DATASOURCE: mwa
SYSTEMNAME: moo1

CLASS: OASSPI_RPT_METRICS:OASSPI_RPT_METRICS
METRIC: VALUE
FILTER: METRICID=11
LABEL: @@SERVERNAME:@@OBJECTNAME
COLOR:Auto
MARKER: rectangle
MISSINGDATA: previous
END_GRAPH:
```

There can be more than one set of data for a graph in the graph template file.

a   Add **SUMFROMRAW:** to the end of the first section of each graph (in the example above, add **SUMFROMRAW:** after SYSTEMNAME: moo1). This allows OVPM to summarized data from the data source and cannot be added using the GUI.

b   If you were unable to edit the Filter text box in the Metrics Properties window in step step 10 on page 74, edit the FILTER field.

c   Save the file. The graph file now contains the following (see Figure 2):

Figure 2

```
#**********************************************
#* OpenView Performance Manager
#* user Defined Graph Templates
#* Last Updated: 07/25/05 04:31_30 AM by [1.2.3.4] moo1
#**********************************************
FAMILY: OASSPI_Graphs
GRAPH: Metric11
GRAPHBACKGROUND: None
DATERANGE: 1 day
GRAPHMULTIPLEGRAPHS: Yes
POINTSEVERY: raw
DATASOURCE: mwa
SYSTEMNAME: moo1
SUMFROMRAW:

CLASS: OASSPI_RPT_METRICS:OASSPI_RPT_METRICS
METRIC: VALUE
FILTER: METRICID=11&&SERVERNAME=@&&OBJECTNAME=@
LABEL: @@SERVERNAME:@@OBJECTNAME
COLOR: Auto
MARKER: rectangle
MISSINGDATA: previous
END_GRAPH:

#*-------------------------------------------------
GRAPH: Metric11_2
GRAPHBACKGROUND: None
DATERANGE: 1 day
GRAPHMULTIPLEGRAPHS: Yes
POINTSERVERY: raw
DATASOURCE: mwa
SYSTEMNAME: moo1
SUMFROMRAW:

CLASS: OASSPI_RPT_METRICS:OASSPI_RPT_METRICS
METRIC: VALUE
FILTER: METRICID=11&&SERVERNAME=@&&OBJECTNAME=@
LABEL: @@SERVERNAME:@@OBJECTNAME
COLOR:Auto
MARKER: rectangle
MISSINGDATA: previous
END_GRAPH:
```

14 From the Performance Manager Java Interface window, click the **Display** tab.
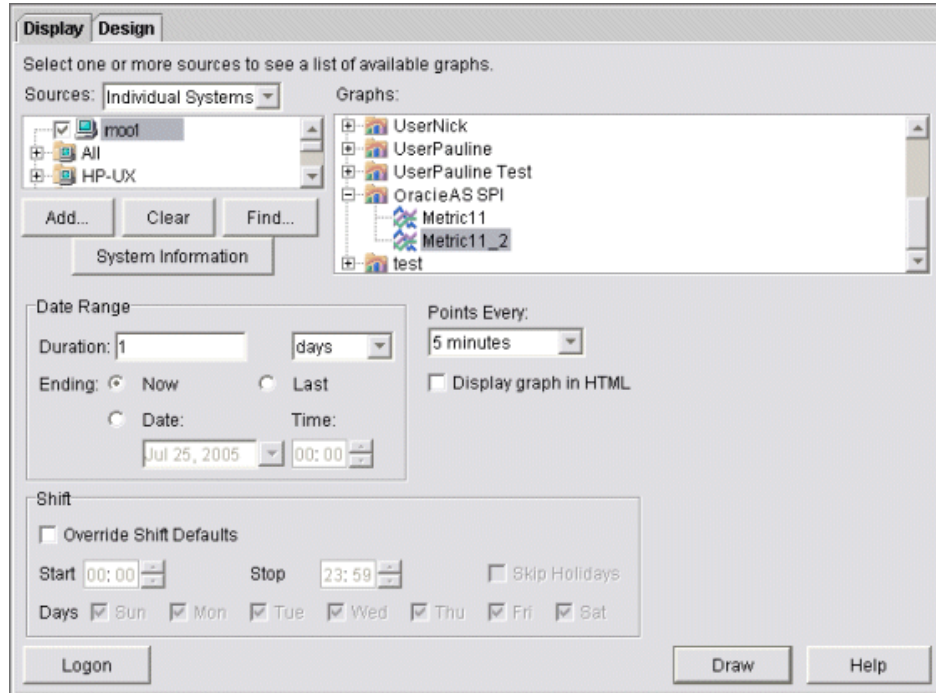
15 In this window,

a   In the window below the Sources text box, navigate to the server on which the data source resides.

b   In the Graphs window, navigate to the family of graphs and select the graph you created.

c   Enter information into the Date Range dialog box and Points Every text box.

d   Click **Draw**. The graph opens.

➤   If you edit the graph from the Design tab, the SUMFROMRAW: entry is deleted from the graph template file. You must edit the graph template file and re-enter this entry.

16 From the SPI, enable graphing

a   From the OVO console, open the Node Bank window and select a node or groups of nodes on which you want to enable graphing.

b   Open the Application Bank window.

c   In the Application Bank window select **OASSPI** → **OASSPI Admin**.

d   Double-click **UDM Graph Enable**.

6 Basic Troubleshooting and Error Messages

Using the Self-Healing Info Application

Preferred troubleshooting method: Troubleshooting information is enhanced with cross-referencing capabilities available through the HP support site: **http://support.openview.hp.com/self_healing.jsp**. To access this information and the search capabilities available on the site, you must first download and configure the Self-Healing Services client software, an added benefit of your HP support contract. A link is then automatically set up to the self-healing services web site, where your SPI problem can be matched to similar SPI problems/solutions for increased troubleshooting effectiveness. Refer to the Self-Healing Services section in the *HP OpenView Smart Plug-ins DVD Installation Guide for UNIX* for information on how to download, configure, and use the software and its automatic link to the HP web site support service.

Alternative troubleshooting method: If self-healing services is not installed/configured on the node, you can use the Self-Healing Info application. This application also gathers SPI troubleshooting data and stores it in a file that you submit to HP support for assistance. Refer to Self-Healing Info on page 195 for more information about using this application.

➤ The file created by the Self-Healing Info application may be hidden on some Windows managed nodes. If you do not see the file, open Windows Explorer and, from the Tools menu, select **Folder Options**. Click the **View** tab. Under Hidden files and folders, select **Show hidden files and folders**.

Log and Trace Files

Management Server

The following log file is found on the management server (typically, */<%OvInstallDir%>/* is `/var/opt/OV`)

File Type	Log
Filename	*/<%OvInstallDir%>/*`WASSPI/oas/log/` `<managed_node>_disc_server.log`
Description	Records the updates done by the OASSPI Discovery policy to the management server's configuration for each managed node. Log files are overwritten each time the discovery policy is run on the managed node. Logging to this file is always enabled.

UNIX Managed Nodes

The following log and trace files are found on the managed nodes running on UNIX (typically, */<OvAgentDir>/* is `/var/opt/OV/` or `/var/lpp/OV/`):

File Type	Log
Filename	*/<OvAgentDir>*`/log/javaagent.log`
Description	OVO discovery agent log file containing the status of the OVO discovery agent. By default, logging to this file is enabled at LOG_LEVEL 3. Set the `LOG_LEVEL` variable in *<OvAgentDir>*`/conf/svcDisc/` `OvJavaAgent.cfg` to 6 or higher (up to 9) to capture troubleshooting information (the higher the number, the more information is collected). To disable this log, set the LOG_LEVEL to 0. Additional information can be configured in this file to define log file size and the number of archived files kept. By default, the log file size is 1MB and five archived versions are kept.

File Type	Log
Directory	*/<OvAgentDir>*`/wasspi/oas/log/config.log`
Description	Records output from the OAS SPI configuration scripts.

File Type	Log
Directory	*/<OvAgentDir>*`/wasspi/oas/log/errorlog`
Description	Records OAS SPI error messages. This log file is monitored by OAS SPI policies.

File Type	Trace
Filename	/*<OvAgentDir>*/wasspi/oas/log/wasspi_oas_discovery.trc (archived files have a three digit number appended to the filename)
Description	Discovery binary trace file used by your HP support representative. By default, tracing to this file is enabled. To disable tracing, in *<OvAgentDir>*/bin/instrumentation/ wasspi_oas_discovery.pl, set the $trace_on variable to 0. To enable this trace, set the $trace_on to 1. When instrumentation is deployed, the wasspi_oas_discovery.pl file is overwritten (therefore, if you disable tracing, it becomes enabled when instrumentation is deployed). Five archived versions are kept. A new trace file is created when the discovery policy is run.

File Type	Trace
Directory	/*<OvAgentDir>*/wasspi/oas/log/trace.log (archived files have a three digit number appended to the filename)
Description	Trace file used by your HP support representative. This file gives information about the CollectorServer, regardless of whether the Collector is set to PERSISTANT or TRANSIENT mode in the SPIConfig file. The default value of the Collector Mode is 'PERSISTENT'.

By default, tracing to this file is disabled. To enable this tracing, use the Start Tracing application. |

File Type	Trace
Directory	/*<OvAgentDir>*/wasspi/oas/log/traceCollectorClient.log (archived files have a three digit number appended to the filename)
Description	Trace file used by your HP support representative. This file gives information about the CollectorClient when the Collector is set to 'PERSISTENT' mode in the SPIConfig file. The default value of the Collector Mode is 'PERSISTENT'.

By default, tracing to this file is disabled. To enable this tracing, use the Start Tracing application. |

Windows Managed Nodes

The following log and trace files are found on the managed nodes running on Windows (typically, *<OvAgentDir>* is
`\Program Files\HP OpenView\Installed Packages\{790 ...}\`):

File Type	Log
Filename	`\`*<OvAgentDir>*`>\log\javaagent.log`
Description	OVO discovery agent log file containing the status of the OVO discovery agent. By default, logging to this file is enabled at `LOG_LEVEL` 3. Set the `LOG_LEVEL` variable in *<OvInstallDir>*`\conf\svcDisc\OvJavaAgent.cfg` to **6** or higher (up to 9) to capture troubleshooting information (the higher the number, the more information is collected). To disable this log, set the LOG_LEVEL to 0. Additional information can be configured in this file to define log file size and the number of archived files kept. By default, the log file size is 1MB and five archived versions are kept.

File Type	Log
Directory	`\`*<OvAgentDir>* `\wasspi\oas\log\config.log`
Description	Records output from configuration scripts.

File Type	Log
Directory	`\`*<OvAgentDir>* `\wasspi\oas\log\errorlog`
Description	Records OAS SPI error messages. This log file is monitored by OAS SPI policies.

File Type	Trace
Filename	`\`*<OvAgentDir>*`\wasspi\oas\log\wasspi_oas_discovery.trc` (archived files have a three digit number appended to the filename)
Description	Discovery binary trace file used by your HP support representative. By default, tracing to this file is enabled. To disable tracing, in `\`*<%OvInstallDir%>*`>\bin\instrumentation\ wasspi_oas_discovery.pl`, set the $trace_on variable to 0. To enable this trace, set the $trace_on to 1. When instrumentation is deployed, the `wasspi_oas_discovery.pl` file is overwritten (therefore, if you disable tracing, it becomes enabled when instrumentation is deployed). Five archived versions are kept. A new trace file is created when the discovery policy is run.

File Type	Trace
Directory	\\<*OvAgentDir*>\\wasspi\oas\log\trace.log (archived files have a three digit number appended to the filename)
Description	Trace file used by your HP support representative. This file gives information about the CollectorServer, regardless of whether the Collector is set to PERSISTANT or TRANSIENT mode in the SPIConfig file. The default value of the Collector Mode is 'PERSISTENT'.
	By default, tracing to this file is disabled. To enable this tracing, use the Start Tracing application.

File Type	Trace
Directory	\\<*OvAgentDir*>\wasspi\oas\log\traceCollectorClient.log (archived files have a three digit number appended to the filename)
Description	Trace file used by your HP support representative. This file gives information about the CollectorClient when the Collector is set to 'PERSISTENT' mode in the SPIConfig file. The default value of the Collector Mode is 'PERSISTENT'.
	By default, tracing to this file is disabled. To enable this tracing, use the Start Tracing application.

Troubleshooting the Discover Process

Problem: The OASSPI-Discovery template does not automatically discover and update the OAS SPI configuration.

Solutions:

1　Check for errors in the message browser of the managed nodes not being discovered. Follow the instruction text of any error messages displayed.

2　Verify that an Oracle OC4J/OHS server is installed on the managed node. If an OC4J/OHS server is not installed, install an OC4J/OHS server, and complete the configuration tasks listed in Chapter 3, Configuring the OAS SPI.

3　Verify the Oracle Application Server status. The application server must be running. See Task 1: Verify the Application Server Status on page 47 for more information.

4　Verify the Java home directory (see Verifying the Java Home Directory on page 85).

5　Verify that the Configure OASSPI application is not running. Only one process can access the configuration at a time. If Configure OASSPI is running, other processes that must access the configuration (like the discovery process) hang until the configuration becomes available.

6　Check if the OVO management server is suppressing duplicate messages:

　　a　From the OVO console, select Actions Server Configure. The Configure Management Server window opens.

　　b　Look for the "Suppress and count duplicate messages" check box. If this box is selected, unselect it.

7　Restart the OVO management server:

　　a　Stop all OVO GUIs that are running by selecting **File → Exit**.

　　b　Stop the OVO management server processes. Enter:
　　　　/opt/OV/bin/ovstop opc ovoacomm

　　c　Delete all OVO temporary files. All pending messages (messages not saved in the database) and all pending actions (automatic actions, operator-initiated actions, scheduled actions, and command broadcast) are lost. Enter:
　　　　rm -f /var/opt/OV/share/tmp/OpC/mgmt_sv/*

　　d　Restart the OVO management server process. Enter:
　　　　/opt/OV/bin/OpC/opcsv -start
　　　　/opt/OV/bin/OpC/opcsv -status

　　e　Restart the OVO GUI. Enter: **opc**

Problem: The OASSPI-Discovery template is adding inaccurate information to the configuration.

Solutions:

1　Verify the Java home directory. Refer to Verifying the Java Home Directory on page 85 for more information.

2　Update the configuration and unselect the AUTO_DISCOVER check box in the configuration editor to prevent the OASSPI-Discovery template from overwriting the configuration information.

Problem: The following error messages display when the Discover OracleAS application is run:

```
/usr/lib/dld.sl: Can't find path for shared library: libiconv.sl
/usr/lib/dld.sl: No such file or directory
sh: 25691 Abort (coredump)
```

Solution:

Install the `libiconv.sl` file on the OVO management server. Download this file from: **http://hpux.connectisl.com/hppd/hpux/Development/Libraries/**

Verifying the Java Home Directory

In order to successfully use the OASSPI-Discovery template, the Java home directory (on both a Windows and UNIX managed node) must be configured correctly.

Although the discover template searches for this information, if it cannot find this information or the information is not accurate, the discover template does not function completely.

On each managed node on which you want to run the discover template, verify one of the following (listed in the order of precedence used by the discover template):

- JAVA_HOME is correctly defined in the configuration. To edit/view the configuration, run the Configure OASSPI application:

    a   At the OVO console, select the node(s) in the Node Bank window.

    b   Select **Application Bank**.

    c   In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Configure OASSPI**. (If the items do not appear, select **Map** → **Reload**.)

    d   The Introduction window opens.

        Click **Next**.

    e   From the configuration editor, set the JAVA_HOME property. Refer to Using the Configuration Editor on page 165 for more information about using the configuration editor.

    f   Click **Save** to save the changes made to the configuration. Once you save your changes, you cannot automatically undo them.

    g   Click **Finish** or **Next** to save any changes and exit the editor.

        If you selected **Next**, the Confirm Operation window opens. Click **OK**.

    ▶   If you click **Cancel** and made changes to the configuration, those changes remain in the configuration on the management server. To make the changes to the selected managed nodes' configuration, you must select those nodes in the Node Bank window, start the Discover OracleAS application, click **Next** from the configuration editor, and then click **OK**.

    h   Run the Discover OracleAS application on the managed nodes on which the JAVA_HOME property was added or edited. Running the Discover OracleAS application updates the service map.

- The JAVA_HOME system variable is correctly defined.

    On a Windows manage node, do the following:

    i   Select **Start** → **Settings** → **Control Panel**.

    j   Double-click **System**.

k   Click the **Advanced** tab.

l   Select **Environment Variables ...**

m   Scroll through the System variables list. Verify the JAVA_HOME value. If JAVA_HOME does not exist, it is not defined.

On a UNIX manage node, do the following:

a   Type `echo $JAVA_HOME`

Verify the output. If no output is returned, JAVA_HOME is not defined.

Troubleshooting the Configuration

Problem: The OASSPI-Discovery template overwrites the configuration with inaccurate information.

Solution: Update the configuration and unselect the AUTO_DISCOVER check box in the configuration editor to prevent the OASSPI-Discovery template from overwriting the configuration information.

Troubleshooting the Applications

- **Problem**: Configuration variable SERVER<*n*>_START_CMD missing for server 'Default Server'

  Solution: Before you can successfully run the Start OracleAS application, you must set the START_CMD and USER properties. Set these properties using the Configure OASSPI application. Refer to Configure OASSPI on page 190 for more information about this application.

- **Problem**: Configuration variable SERVER<*n*>_STOP_CMD missing for server "Default Server"

  Solution: Before you can successfully run the Stop OracleAS application, you must set the STOP_CMD and USER properties. Set these properties using the Configure OASSPI application. Refer to Configure OASSPI on page 190 for more information about this application.

- **Problem**: When launched, the Verify application gives improper output.

  Solution: Before you launch the Verify tool ensure that you have installed the latest version of Self-Healing Service (SHS) component (version 2.20) from the SPI DVD. If you upgrade OAS SPI without the SPI DVD then you must upgrade the SHS component also. You can download the SHS component from **http://support.openview.hp.com/self_healing_downloads.jsp**.

- **Problem**: When launched, the Self-Healing Info application gives improper output.

  Solution: Ensure that you have installed the latest version of Self-Healing Service (SHS) component (version 2.20) from the SPI DVD. If you have upgraded OAS SPI without the SPI DVD then you must upgrade the SHS component also. You can download the SHS component from **http://support.openview.hp.com/self_healing_downloads.jsp**.

- **Problem**: When launching the applications, the applications hang or there is no output.

  Solution: The tools will not work if the memory is low. Check the performance of the node and the management server. The physical memory available must be more than 500 MB.

- **Problem**: View Status application shows a wrong status for a server instance or does not give any output.

  Solution: If a server is up and running but View Status application returns the server status as NOT_RUNNING (or does not give any output), then turn ON the monitoring for that particular server by using the Start Monitoring application.

- **Problem**: Datasource not getting created on RHEL 4.0 platform.

  Solution: Ensure that you have installed the latest version of DSI2DDF component (02.22.000) from the SPI DVD. If you have upgraded OAS SPI without the SPI DVD, then you must upgrade the DSI2DDF component also. You can download the latest DSI2DDF component from: **ftp://ovrntfs.rose.hp.com/prelim/dsi2ddf/02.22/HPUX11.00/ DSI2DDF_A.02.22.00.sdtape**

Error Messages

This section provides detailed information on error messages resulting from conditions detected in the operation of the OAS SPI, not the Oracle Application Server itself. The error messages discussed here are all within the OASSPI Message Group.

In the figure below, the last two messages are a result of errors in the operation of OAS SPI. These errors are identified as belonging to the OASSPI Message Group (see the MsgGrp column in the illustration below).
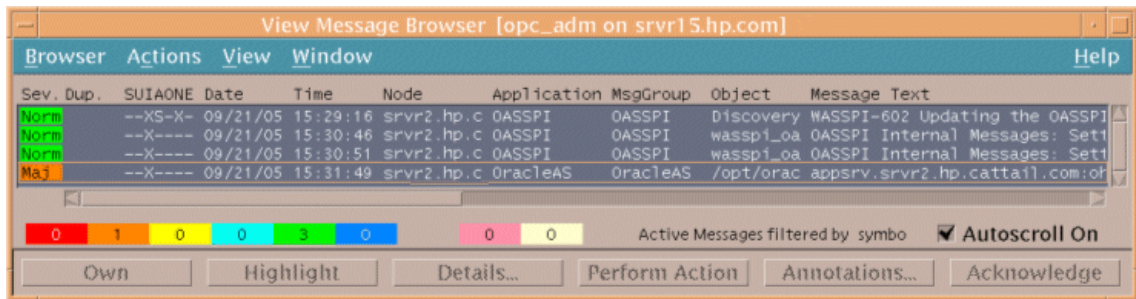
For any given problem, only the most recent error message is displayed (the older error message is automatically acknowledged). This reduces the number of error messages displayed in the message browser.

WASSPI-1

Description	Unable to create the lock file *<filename>*. File already exists.
Severity	Critical
Help Text	**Probable Cause** Temporary lock files are used to avoid collisions if multiple OAS SPI data collector processes attempt to access the same data file. This error occurs when the lock file cannot be created after several attempts because the file already exists. **Suggested Action** If a file by the same name already exists, it may not have been deleted by a previous run of the OAS SPI data collector. You should delete this file manually.

WASSPI-2

Description	Cannot access the SPI configuration.
Severity	Critical
Help Text	**Probable Cause** A OAS SPI configuration file could not be located or accessed. Either the file does not exist or there was a problem reading the file. **Suggested Action** 1 Verify that the collector template that runs the OAS SPI data collector specifies the correct directory on the command line. The option `-Dwasspi.config.dir=`*<configDirectory>* must be specified on command line invocation of the data collector. Refer to Managed Node File Locations on page 161 for configuration directory *<configDirectory>*. 2 Verify that the OAS SPI configuration files, `SiteConfig` and `SPIConfig`, are located in the directory specified on the command line in step 1. If not, run the OAS SPI configuration, accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows, to reinstall the files. 3 Refer to the text following the error message in the OAS SPI error log to help identify the underlying cause of the problem (for example, an I/O exception).You can view the OAS SPI error log for a managed node by using the `View Error File` application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. The error message can be identified by the date/time stamp.

WASSPI-3

Description	Error parsing command line.
Severity	Critical
Help Text	**Probable Cause** The OAS SPI data collector command line is incorrectly specified in a collector template. **Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the data collector command line syntax error. You can view the OAS SPI error log for a managed node by using the `View Error File` application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 If the error occurred in a collector template that shipped with the OAS SPI, reinstall the OAS SPI. 3 If the error occurred in a collector template not shipped with the OAS SPI, correct the collector template that contains the incorrect command line. Refer to Using the OAS SPI Collector/Analyzer Command with Parameters on page 64 for more information on the OAS SPI data collector command line.

WASSPI-4

Description	Error getting the metric definitions.
Severity	Critical
Help Text	**Probable Cause** The OAS SPI data collector could not read the metric definitions XML document. This error can be caused by a missing configuration property, an I/O error, an XML parsing error, a missing file, or a corrupted serialized data file. **Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the underlying cause of the problem. You can view the OAS SPI error log for a managed node by using the View Error File application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 If the UDM_DEFINITIONS_FILE property is missing from the OAS SPI configuration, reinstall the OAS SPI and run the Configure OASSPI application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. 3 If the problem is with the metric definitions file (`MetricDefinitions.xml`) that is shipped with the OAS SPI, then reinstall the OAS SPI. Run the Configure OASSPI application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. 4 If the problem is with a user-defined metric definitions file that is not shipped with the OAS SPI, verify that this XML file adheres to the `MetricDefinitions.dtd` specification. Refer to the *HP OpenView Smart Plug-in User Defined Metrics User Guide* for more information on writing user-defined metrics. Reinstall your user-defined metric definition file. Run the Configure OASSPI application, accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows, and verify that the UDM_DEFINITIONS_FILE property in the SPI configuration, is specified correctly. 5 If the underlying error is `ClassNotFound`, this is an internal error. Report this to your HP support representative.

WASSPI-5

Description	Error processing metric *<metric_number>*.
Severity	Major
Help Text	**Probable Cause** An error occurred while trying to collect data or perform calculations for the specified metric. **Suggested Action** Refer to the text following the error message in the OAS SPI error log to help identify the underlying cause of the problem. The error messages previous to this one provide more information about the problem. You can view the OAS SPI error log for a managed node by using the View Error File application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. The error message can be identified by the date/time stamp.

WASSPI-6

Description	Required property *<property_name>* is missing from the OAS SPI configuration.
Severity	Major
Help Text	**Probable Cause** A required property is missing from the OAS SPI configuration. **Suggested Action** 1 Run the Configure OASSPI application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. Verify that you have specified the correct server information for the Oracle OC4J/OHS servers on this managed node. 2 Verify that the property is specified correctly in the OAS SPI configuration file (`/var/opt/OV/wasspi/oas/conf/SiteConfig` or `/var/opt/OV/conf/oas/SiteConfig` on UNIX platforms or `/usr/OV/wasspi/oas/conf/SiteConfig` on Windows platforms) on the managed node in question.

WASSPI-7

Description	Unable to contact server *<server_name>* at url=*<URL>*, port=*<port>*.
Severity	Major
Help Text	**Probable Cause** The specified server is not running at the specified port. **Suggested Action** 1 Run the Configure OASSPI application, accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. Verify that you have specified the correct server name and port information for the Oracle OC4J/OHS servers on this managed node. 2 Verify that the properties, SERVER*<n>*_NAME and SERVER*<n>*_PORT, are specified correctly in the OAS SPI configuration file (`/var/opt/OV/wasspi/oas/conf/SiteConfig` or `/var/opt/OV/conf/oas/SiteConfig` on UNIX platforms or `/usr/OV/wasspi/oas/conf/SiteConfig` on Windows platforms) on the managed node in question. 3 Verify that the Oracle OC4J/OHS server is running on the managed node.

WASSPI-8

Description	Error saving graphing or reporting data to file *<file_name>*.
Severity	Critical
Help Text	**Probable Cause** The specified graphing or reporting data file could not be found or an I/O error occurred when trying to access the file. **Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the underlying cause of the problem. You can view the OAS SPI error log for a managed node by using the `View Error File` application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 Identify the steps to reproduce the problem. 3 Turn on tracing (by using the `Start Tracing` application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications. Tracing information is saved to `/<OvAgentDir>/wasspi/oas/log/trace.log` (archived files have a three digit number appended to the filename) where `/<OvAgentDir>/` is typically `/var/opt/OV/`. 4 Contact your HP support representative with the information gathered in the previous steps.

WASSPI-9

Description	Unable to retrieve property *<property_name>*.
Severity	Critical
Help Text	**Probable Cause** A required property is missing from one of the OAS SPI configuration files. **Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the missing property. You can view the SPI error log for a managed node by using the `View Error File` application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 From the Application Bank, select **OASSPI → OASSPI Admin → Configure OASSPI** to run the OAS SPI configuration application. Verify that you have specified the correct information for the Oracle OC4J/OHS servers on the managed node in question. 3 Verify that the missing property is specified in the OAS SPI configuration file (`/var/opt/OV/wasspi/oas/conf/SiteConfig` or `/var/opt/OV/conf/oas/SiteConfig` on UNIX platforms or `/usr/OV/wasspi/oas/conf/SiteConfig` on Windows platforms) on the managed node in question.

WASSPI-10

Description	Encountered problem accessing file *<filename>*.
Severity	Critical
Help Text	**Probable Cause** The specified file could not be found, created, or accessed. This file could be a temporary file. **Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the file in question and the underlying cause of the problem. You can view the OAS SPI error log for a managed node by using the View Error File application accessed from the **Application Bank → OASSPI Admin → OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 Verify that you have enough disk space to create temporary files.

WASSPI-11

Description	No servers have been specified in the OAS SPI configuration file.
Severity	Major
Help Text	**Probable Cause** The number of Oracle OC4J/OHS servers specified in the OAS SPI configuration for the managed node in question is 0. **Suggested Action** 1 From the Application Bank, select **OASSPI → OASSPI Admin → Configure OASSPI**to run the OAS SPI configuration application. Verify that you have specified the correct server name and port information for the Oracle OC4J/OHS servers on this managed node. 2 Verify that the property `NUM_SERVERS` in the OAS SPI configuration file (`/var/opt/OV/wasspi/oas/conf/SiteConfig` or `/var/opt/OV/conf/oas/SiteConfig` on UNIX platforms or `/usr/OV/wasspi/oas/conf/SiteConfig` on Windows platforms) is set to the number of Oracle OC4J/OHS servers on this managed node.

WASSPI-12

Description	Opcmon returned an error code of *<error_number>* for the command *<opcmon_command>*.
Severity	Critical
Help Text	**Probable Cause** The opcmon process started by the OAS SPI collector has returned an error (non-zero) exit code. **Suggested Action** 1 Identify the steps to reproduce the problem. 2 Turn on tracing (by using the Start Tracing application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications. Tracing information is saved to `/<OvAgentDir>/wasspi/oas/log/trace.log` (archived files have a three digit number appended to the filename) where `/<OvAgentDir>/` is typically `/var/opt/OV/`. 3 Contact your HP support representative with the information gathered in the previous steps.

WASSPI-13

Description	Exception occurred while running an opcmon process.
Severity	Critical
Help Text	**Probable Cause** The OAS SPI data collector attempted to run a process to execute an opcmon call. Either the process could not be created or was interrupted. **Suggested Action** For UNIX systems, make sure the kernel configurable parameters `NPROC` and `MAXUPRC` are set high enough to allow process creation.

WASSPI-14

Description	Unable to find file *<filename>*.
Severity	Critical
Help Text	**Probable Cause** A file required by the OAS SPI data collector could not be found. **Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the file in question and the underlying cause of the problem.You can view the OAS SPI error log for a managed node by using the View Error File application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 Reinstall the OAS SPI. 3 From the Application Bank, select **OASSPI → OASSPI Admin → Configure OASSPI**to run the OAS SPI configuration application.

WASSPI-15

Description	Error parsing XML document *<filename>*.
Severity	Critical
Help Text	**Probable Cause** An error occurred while parsing the specified XML document. **Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the underlying cause of the problem. You can view the OAS SPI error log for a managed node by using the View Error File application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 If the XML document was provided by the user, correct the document. Refer to the *HP OpenView Smart Plug-in User Defined Metrics User Guide* for more information about the correct format for a user-defined metric definition document. 3 If the XML document is a document that is shipped with the OAS SPI, from the Application Bank, select **OASSPI → OASSPI Admin → Configure OASSPI** to run the OAS SPI configuration application to reinstall the OAS SPI configuration files.

WASSPI-16

Description	A bad filter was specified for metric *<metric_number>*.
Severity	Major
Help Text	**Probable Cause**
	A metric filter is incorrectly specified in the metric definitions XML document.
	Suggested Action
	1 If the metric is specified in an XML document that was provided by the user, correct the document. Refer to the *HP OpenView Smart Plug-in User Defined Metrics User Guide* for more information about the correct format for a user-defined metric definition document.
	2 If the metric is a pre-defined metric that is shipped with the OAS SPI, from the Application Bank, select **OASSPI → OASSPI Admin → Configure OASSPI** to run the OAS SPI configuration application in order to reinstall the OAS SPI configuration files.

WASSPI-18

Description	Error logging to datasource *<datasource_class_name>*. Logging process returned exit code *<exit_code>*.
Severity	Critical
Help Text	**Probable Cause**
	The ddflog process started by the OAS SPI data collector returned a non-zero error code.
	Suggested Action
	1 Identify the steps to reproduce the problem.
	2 Turn on tracing (by using the Start Tracing application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications.
	Tracing information is saved to */<OvAgentDir>*/wasspi/oas/log/trace.log (archived files have a three digit number appended to the filename) where */<OvAgentDir>*/ is typically /var/opt/OV/.
	3 Contact your HP support representative with the information gathered in the previous steps.

WASSPI-19

Description	Encountered problem instantiating XSLT transformer with *<filename>*.
Severity	Major
Help Text	**Probable Cause** The XSL document that specifies the auto action report output contains errors. **Suggested Action** 1 Reinstall the OAS SPI. 2 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application.

WASSPI-20

Description	Encountered problem creating report for metric *<metric_number>*.
Severity	Major
Help Text	**Probable Cause** An error occurred while producing a text report for the specified metric. **Suggested Action** 1 Reinstall the OAS SPI. 2 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application.

WASSPI-21

Description	Encountered problem instantiating factory implementation `'<class name>'`.
Severity	Critical
Help Text	**Probable Cause**: The java property specifying the class name is incorrect or the class does not implement the AppServerFactory interface. **Suggested Action**: Verify that the java property `appserver.implementation` is set to the fully qualified name of the class which implements the AppServerFactory interface.

WASSPI-23

Description	Error initializing collector analyzer for server *<server_name>*.
Severity	Critical
Help Text	**Probable Cause**

Probable Cause

An exception was encountered while preparing to monitor the specified server.

Suggested Action

1 Refer to the text following the error message in the OAS SPI error log to help identify the problem. You can view the SPI error log for a managed node by using the `View Error File` application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. The error message can be identified by the date/time stamp.

2 Identify the steps to reproduce the problem.

3 Turn on tracing (by using the Start Tracing application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications.

   Tracing information is saved to `/<OvAgentDir>/wasspi/oas/log/trace.log` (archived files have a three digit number appended to the filename) where `/<OvAgentDir>/` is typically `/var/opt/OV/`.

4 Run the Gather Info application (by using the `Gather Info` application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows).

5 Contact your HP support representative with the information gathered in the previous steps.

WASSPI-24

Description	Error logging in to server *<server_name>* with login *<login>*.
Severity	Critical
Help Text	**Probable Cause**

Probable Cause

A security exception occurred while logging in to the specified server.

Suggested Action

1 Run the Configure OASSPI application (by using the `Configure OASSPI` application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows).

2 Verify that you have specfied the correct login and password on themanaged node on which the error occurred.

3 Verify the login has appropriate permissions.

WASSPI-26

Description	The data logging process for *<server_name>* timed-out.
Severity	Major
Help Text	**Probable Cause**
	Depending on your configuration, either OVPA or CODA failed to exit before the time-out.
	Suggested Action
	1 Restart OVPA using the command **`mwa restart`**.
	2 Restart CODA using the command **`opcagt -start`**.

WASSPI-27

Description	RMI collector unable to process *<command>*.
Severity	Warning
Help Text	**Probable Cause**
	An exception was encountered while performing an rmid related operation.
	Suggested Action
	1 Refer to the text following the error message in the OAS SPI error log to help identify the problem. You can view the SPI error log for a managed node by using the View Error File application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. The error message can be identified by the date/time stamp.
	2 Identify the steps to reproduce the problem.
	3 Turn on tracing (by using the Start Tracing application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications.
	Tracing information is saved to `/<OvAgentDir>/wasspi/oas/log/trace.log` (archived files have a three digit number appended to the filename) where `/<OvAgentDir>/` is typically `/var/opt/OV/`.
	4 Run the Gather Info application (by using the `Gather Info` application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows).
	5 Contact your HP support representative with the information gathered in the previous steps.

WASSPI-30

Description	Failed to start *<rmid_path>* on port *<port>*.
Severity	Critical
Help Text	**Probable Cause** The specified port is already in use. **Suggested Action** 1 Run the Configure OASSPI application (by using the Configure OASSPI application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows) and set the RMID_PORT property to a port number which is not currently in use.

WASSPI-31

Description	Lost connection to RMI collector while processing *<command>*.
Severity	Warning
Help Text	N/A

WASSPI-32

Description	Unable to retrieve metadata for mbean *<JMX-ObjectName>*.
Severity	Warning
Help Text	N/A

WASSPI-33

Description	No actions matched server *<server_name>*, version *<version>*.
Severity	Warning
Help Text	**Probable Cause** JMXAction element(s) define FromVersion and ToVersion tags which do not match the server version. **Suggested Action** If the action is valid on the server, then either modify the JMXAction definition's FromVersion/ToVersion elements or modify the server's VERSION property.

WASSPI-34

Description	Metric *<metric_id>* does not define any actions.
Severity	Warning
Help Text	**Probable Cause** The metric ID specified with the -m option does not define a JMXActions element. **Suggested Action** Correct the -m option if an incorrect metric ID was specified. Otherwise, add a JMXActions definition to the metric definition.

WASSPI-35

Description	Error executing action *<action_command-line>*.
Severity	Major
Help Text	**Probable Cause** An unexpected error occurred while executing the action. **Suggested Action** View the managed node's error log to determine the cause (follows the error message).

WASSPI-36

Description	MBean *<JMX_objectname>* on server *<server_name>* does not expose operation *<operation_name>*.
Severity	Warning
Help Text	**Probable Cause** An action's JMXCalls element defines an operation not exposed by the specified MBean. **Suggested Action** Correct the JMXCalls element or remove the operation from the element.

WASSPI-37

Description	MBean *\<JMX_objectname\>* on server *\<server_name\>* does not expose attribute *\<attribute_name\>* for write.
Severity	Warning
Help Text	**Probable Cause** An action's JMXCalls element defines a write attribute exposed by the specified MBean as read-only. **Suggested Action** If the specified MBean is a custom MBean, update its management interface so that the attribute is writable. Otherwise, remove the attribute definition from the JMXCalls element.

WASSPI-38

Description	MBean *\<JMX_objectname\>* on server *\<server_name\>* does not expose attribute *\<attribute_name\>*.
Severity	Warning
Help Text	**Probable Cause** An action's JMXCalls element defines an attribute not exposed by the specified MBean ObjectName. **Suggested Action** Correct the JMXCalls element or remove the attribute from the element.

WASSPI-39

Description	Error invoking operation *\<operation_name\>* on MBean *\<JMX_objectname\>*.
Severity	Major
Help Text	**Probable Cause** An unexpected error occurred while invoking an operation on the specified MBean. The managed resource may have thrown an exception. **Suggested Action** View the managed node's error log to determine the cause (follows the error message).

WASSPI-40

Description	Error setting attribute *<attribute_name>* on MBean *<JMX_objectname>*.
Severity	Major
Help Text	**Probable Cause**
	An unexpected error occurred while setting an attribute on the specified MBean. The managed resource may have thrown an exception.
	Suggested Action
	View the managed node's error log to determine the cause (follows the error message).

WASSPI-41

Description	Error getting attribute *<attribute_name>* on MBean *<JMX_objectname>*.
Severity	Major
Help Text	**Probable Cause**
	An unexpected error occurred while getting an attribute from the specified MBean. The managed resource may have thrown an exception.
	Suggested Action
	View the managed node's error log to determine the cause (follows the error message).

WASSPI-42

Description	Error running command *<command>*.
Severity	Critical
Help Text	**Probable Cause**
	A command started by the OAS SPI collector reported an error..
	Suggested Action
	1 Identify the steps to reproduce the problem.
	2 Turn on tracing (by using the Start Tracing application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications.
	Tracing information is saved to /*<OvAgentDir>*/wasspi/oas/log/trace.log (archived files have a three digit number appended to the filename) where /*<OvAgentDir>*/ is typically /var/opt/OV/.
	3 Run the Gather Info application (by using the Gather Info application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows).
	4 Contact your HP support representative with the information gathered in the previous steps.

WASSPI-43

Description	Error publishing event *<event-type>*.
Severity	Major
Help Text	**Probable Cause** An unexpected error occurred while a publisher was handling a metric or collect event. **Suggested Action** View the managed node's error log to determine the cause (follows the error message).

WASSPI-201

Description	File *<filename>* not found.
Severity	Critical
Help Text	**Probable Cause** A configuration file could not be found. **Suggested Action** 1 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. 2 Verify that the correct information has been specified for the Oracle OC4J/OHS servers on the managed node on which the error occurred.

WASSPI-202

Description	Cannot read file *<filename>*.
Severity	Critical
Help Text	**Probable Cause** 1 A file could not be opened or it could not be found. 2 Permissions may be incorrect or a directory may be corrupt. **Suggested Action** 1 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. 2 Verify that you have specified the correct information for the Oracle OC4J/OHS servers on the managed node on which the error occurred. 3 Verify that the permissions are correct for the OVO user to read this file.

WASSPI-203

Description	Cannot write file *<filename>*.
Severity	Critical
Help Text	**Probable Cause** Permissions may be incorrect, or a file or directory may be corrupt. **Suggested Action** 1 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. 2 Verify that you have specified the correct information for the Oracle OC4J/OHS servers on the managed node on which the error occurred. 3 Verify that the permissions are correct for the OVO user to write this file.

WASSPI-204

Description	Error sending opcmsg *<message>*.
Severity	Critical
Help Text	**Probable Cause** There was a problem running opcmsg. "opcmsg" may be missing or not have permissions to execute (OVO installation errors) or the system process table may be full. **Suggested Action** 1 Confirm that OVO is properly installed and deployed to the managed node. 2 Ensure that the process table is not full. If it is, consider having the system administrator increase it.

WASSPI-205

Description	Error sending opcmon *<command>*.
Severity	Critical
Help Text	**Probable Cause** There was a problem running opcmon. "opcmon" may be missing or not have permissions to execute (OVO installation errors) or the system process table may be full. **Suggested Action** 1 Confirm that OVO is properly installed and deployed to the managed node. 2 Ensure that the process table is not full. If it is, consider having the system administrator increase it.

WASSPI-206

Description	Cannot read directory *<directory>*.
Severity	Critical
Help Text	**Probable Cause** The permissions on the directory prevent the OVO user from reading it or the directory is corrupt. **Suggested Action** Verify that the permissions are correct for the OVO user for this directory.

WASSPI-207

Description	Cannot move *<filename>* to *<filename>*.
Severity	Critical
Help Text	**Probable Cause** 1 Insufficient permissions. 2 Insufficient disk space. 3 File table problems. **Suggested Action** 1 Verify that the permissions are correct for the OVO user. 2 Verify that there is enough disk space to create files. 3 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application.

WASSPI-208

Description	OASSPI must be configured before it can be used.
Severity	Critical
Help Text	**Probable Cause** The OAS SPI has not been configured on this node. **Suggested Action** 1 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. 2 Verify that you have specified the correct information for the Oracle OC4J/OHS servers on the managed node on which the error occurred. 3 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **OASSPI Verify** to run the verification application to confirm that the OAS SPI has been successfully configured.

WASSPI-209

Description	Cannot contact Oracle Application Server.
Severity	Critical
Help Text	**Probable Cause** 1 The server could be down or not responding. 2 The OAS SPI may be configured incorrectly. **Suggested Action** 1 Verify that the Oracle OC4J/OHS server is up and running properly. 2 From the Application Bank, select **OASSPI → OASSPI Admin → Configure OASSPI** to run the OAS SPI configuration application. 3 Verify that you have specified the correct information for the Oracle OC4J/OHS servers on the managed node on which the error occurred. 4 From the Application Bank, select **OASSPI → OASSPI Admin → OASSPI Verify** to run the verification application to confirm that the OAS SPI has been successfully configured.

WASSPI-210

Description	Cannot configure OASSPI.
Severity	Critical
Help Text	**Probable Cause** The OAS SPI configuration process failed. **Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the underlying cause of the problem. The error messages previous to this one provide more information about the problem. You can view the OAS SPI error log for a managed node by using the View Error File application accessed from the **Application Bank → OASSPI → OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 Reinstall the OAS SPI. 3 From the Application Bank, select **OASSPI → OASSPI Admin → Configure OASSPI** to run the OAS SPI configuration application.

WASSPI-211

Description	Cannot create directory *<directory>*.
Severity	Critical
Help Text	**Probable Cause** There are insufficient permissions for the OVO user to create the directory or there is insufficient disk space. **Suggested Action** Verify that the permissions are correct for the OVO user for this directory and verify that there is enough disk space.

WASSPI-213

Description	Improper parameters to program *<name>*. Usage: *<usage>*.
Severity	Critical
Help Text	**Probable Cause** The parameters to the program are incorrect. **Suggested Action** Correct the parameters.

WASSPI-214

Description	Cannot run program *<program_name>*.
Severity	Critical
Help Text	**Probable Cause** The program failed to run. It may be missing, permissions may be incorrect, or the process table may be full. **Suggested Action** 1 Verify that the file exists. If it is a OAS SPI program and the file is missing, reinstall the OAS SPI and, from the Application Bank, select **OASSPI → OASSPI Admin → Configure OASSPI** to run the OAS SPI configuration application. 2 Verify that the permissions are correct for the OVO user.

WASSPI-216

Description	Configuration variable *<name>* missing for server *<server_name>*.
Severity	Critical
Help Text	**Probable Cause**
	A required OAS SPI configuration property was not found.
	Suggested Action
	1 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application.
	2 Verify that the correct information has been specified in the configuration for the managed node on which the error occurred.

WASSPI-218

Description	Oracle Application Server monitoring has been turned OFF for *<server_name>*.
Severity	Warning
Help Text	**Probable Cause**
	Collection has been turned off for the specified server.
	Suggested Action
	If desired, collection can be turned on by setting `COLLECT = ON` in the `SiteConfig` file in the OAS SPI configuration directory on the managed node. The configuration directory is `/var/opt/OV/wasspi/oas/conf/` or `/var/opt/OV/conf/oas/` on UNIX platforms or `/usr/OV/wasspi/oas/conf/` on Windows platforms.

WASSPI-219

Description	Oracle Application Server monitoring has been turned ON for *<server_name>*.
Severity	Critical
Help Text	**Probable Cause**
	Collection has been turned on for the specified server.
	Suggested Action
	If desired, collection can be turned off by setting `COLLECT = OFF` in the `SiteConfig` file in the OAS SPI configuration directory on the managed node. The configuration directory is `/var/opt/OV/wasspi/oas/conf/` or `/var/opt/OV/conf/oas/` on UNIX platforms or `/usr/OV/wasspi/oas/conf/` on Windows platforms.

WASSPI-221

Description	*<filename>* does not exist.
Severity	Critical
Help Text	**Probable Cause** The specified file does not exist. If it is a log file, no entries have ever been logged to it. If it is a property file, then it has not been configured. **Suggested Actions** • Log files - If there have never been any entries written to the file, no action is necessary. Otherwise, from the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. • Property files - From the application bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application.

WASSPI-222

Description	*<filename>* is empty.
Severity	Critical
Help Text	**Probable Cause** The specified file is empty. If it is a log file, no entries have ever been logged to it, or the entries have been cleaned out. If it is a property file, then it is not properly configured. **Suggested Action** • Log files - If there have never been any entries written to the file, no action is necessary. Otherwise, from the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. • Property files - From the application bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. • Configuration - From the application bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application.

WASSPI-223

Description	Cannot read *<filename>*.
Severity	Critical
Help Text	**Probable Cause** 1 A file could not be opened or it could not be found. 2 Permissions may be incorrect or a directory may be corrupt. **Suggested Action** 1 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. Verify that you have specified the correct information for the Oracle OC4J/OHS servers on the managed node on which the error occurred. 2 Verify that the permissions are correct for the OVO user to read this file.

WASSPI-224

Description	ddfcomp returned an error configuring *<name>*.
Severity	Critical
Help Text	**Probable Cause** ddfcomp returned an error. Neither MeasureWare nor CODA is installed on the system or MeasureWare or CODA is not configured correctly. **Suggested Action** 1 If MeasureWare and CODA are not installed, this error can be ignored. 2 Identify the steps to reproduce the problem. 3 Turn on tracing (by using the `Start Tracing` application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications. Tracing information is saved to `/<OvAgentDir>/wasspi/oas/log/trace.log` (archived files have a three digit number appended to the filename) where `/<OvAgentDir>/` is typically `/var/opt/OV/`. 4 Contact your HP support representative with the information gathered in the previous steps.

WASSPI-225

Description	No logfiles were found. Did you run OASSPI Config?
Severity	Critical
Help Text	**Probable Cause** The logfile list is empty. **Suggested Action** 1 Reinstall the OAS SPI. 2 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application.

WASSPI-226

Description	Cannot read file *<filename>*.
Severity	Critical
Help Text	**Probable Cause** 1 A file could not be opened or it could not be found. 2 Permissions may be incorrect or a directory may be corrupt. **Suggested Action** 1 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. 2 Verify that you have specified the correct information for the Oracle OC4J/OHS servers on the managed node on which the error occurred. 3 Verify that the permissions are correct for the OVO user to read this file.

WASSPI-227

Description	Cannot read file *<filename>*.
Severity	Critical
Help Text	**Probable Cause** No OpenView agent is installed on the system. **Suggested Action** If you should have a performance agent installed, reinstall the performance agent. Otherwise, this message can be ignored.

WASSPI-228

Description	ddflog returned an error logging *<logfile-name>*: *<system-error-msg>*
Severity	Warning
Help Text	**Probable Cause**
	An error was returned by ddflog. This error could have been caused by the OAS SPI not being properly configured to support logging performance data.
	Suggested Action
	1 Try reconfiguring OAS SPI on the node having the problem.
	2 Otherwise, examine the system error message, if any, for clues to the problem.
	3 Turn on tracing (by using the Start Tracing application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications.
	Tracing information is saved to `/<OvAgentDir>/wasspi/oas/log/trace.log` (archived files have a three digit number appended to the filename) where `/<OvAgentDir>/` is typically `/var/opt/OV/`.
	4 Contact your HP support representative with the information gathered in the previous steps.

WASSPI-229

Description	Cannot connect to directory *<directory_name>*
Severity	Warning
Help Text	**Probable Cause**
	The directory does not exist or the user the agent is running under does not have appropriate permissions to the directory.
	Suggested Action
	If you should have a performance agent installed, reinstall the performance agent. Otherwise, this message can be ignored.

WASSPI-230

Description	Cannot get lock *<filename>* after *<time-interval>*
Severity	Critical
Help Text	**Probable Cause** A OAS SPI process is hung or taking longer than expected. **Suggested Action** 1 Stop the OVO agent on the managed node. Make sure all OVO and Oracle Application Server processes have stopped. 2 Check if the lock file is still there. If it is, remove it. 3 Restart the agent.

WASSPI-231

Description	Cannot start the Java runtime engine.
Severity	Critical
Help Text	**Probable Cause** 1 The JAVA_HOME property in the `SiteConfig` file is not set correctly. 2 Java is not properly installed on your system. **Suggested Action** 1 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. 2 Verify that you have specified the correct JAVA_HOME information on the managed node on which the error occurred.

WASSPI-232

Description	Server *<name>* specified on command line, but not in configuration.
Severity	Critical
Help Text	**Probable Cause** 1 A `-i` or `-e` option was specified on the `wasspi_oas_ca` command line, but the server name specified is not configured in the `SiteConfig` file. 2 Java is not properly installed on your system. **Suggested Action** 1 Specify a correct server name on the command line. 2 From the Application Bank, select **OASSPI** → **OASSPI Admin** → **Configure OASSPI** to run the OAS SPI configuration application. 3 Verify that you have specified the correct server names in the configuration.

WASSPI-234

Description	Error running program *<file>*, return value: *<n>*.
Severity	Critical
Help Text	**Probable Cause** The SPI attempted to run the specified tool or auxiliary program and encountered an error (the return code is specified). **Suggested Action** • If the tool is a SPI tool, make sure the SPI is installed and configured correctly. If not, reinstall or reconfigure the SPI. • If the tool is a system tool, make sure there are no system problems that prevent the tool from running.

WASSPI-235

Description	Restart of MeasurWare agent failed.
Severity	Warning
Help Text	**Probable Cause** The SPI attempted to automatically restart the MeasureWare agent and the automatic attempt failed. **Suggested Action** Restart the MeasureWare agent manually using the command `mwa restart server`.

WASSPI-236

Description	Failure when running XSLT on *<xml>* with stylesheet *<xsl>:<message>*.
Severity	Critical
Help Text	**Probable Cause** The translation of the UDM XML failed (part of setting up graphing for user defined metrics). **Suggested Action** Review the specified message and verify the XML.

WASSPI-237

Description	This is an informational message that an OV_PM or MeasureWare datasource was set up.
Severity	Normal
Help Text	N/A

WASSPI-238

Description	No user defined metrics found.
Severity	Warning
Help Text	**Probable Cause** The UDM Graph Enable application was run, but no UDMs are defined. **Suggested Action** Verify that the UDM XML file is named correctly.

WASSPI-241

Description	Cannot delete file *<file>*.
Severity	Critical
Help Text	**Probable Cause** The SPI failed to delete the specified file. **Suggested Action** Verify the file's permissions allow the user/system to delete the file.

WASSPI-254

Description	Java exited with an error.
Severity	Critical
Help Text	**Probable Cause** While running the collector or other java application, either Java encountered an error or the Java application exited with an error. **Suggested Action** Check for other errors generated at the same time and the SPI's error log for clues about the cause of the problem.

WASSPI-261

Description	XML Parse Error
Help Text	**Probable Cause** The `wasspi_oas_XMLParser` file may be missing or the XML may be malformed.

WASSPI-262

Description	Discovery Error
Help Text	**Probable Cause** Discovery failed. Review the `errorlog` and `wasspi_oas_discovery.trc` files on the managed node.

WASSPI-263

Description	Windows Registry Error
Help Text	**Probable Cause** The Oracle Application Server installation may have failed or is not installed.

WASSPI-261

Description	XML Parse Error
Help Text	**Probable Cause** The wasspi_oas_XMLParser may be missing or the XML may be malformed.

WASSPI-601

Description	Retrieving OAS SPI configuration in OVO server
Severity	Normal
Help Text	**Probable Cause** The managed node has requested a copy of the master `SiteConfig` file.

WASSPI-602

Description	Updating OAS SPI configuration in OVO server
Severity	Normal
Help Text	**Probable Cause** This is a normal operation performed by the discovery application. If the operation is successful, the entry in the "A" (action) column for this message changes from "R" (running) to "S" (success). **Suggested Action** If the operation is not successful, the entry in the "A" (action) column for this message changes from "R" (running) to "F" (fail). Select this node and run the Discover OracleAS application. If the problem persists, configure the OAS SPI manually. Refer to Chapter 3, Configuring the OAS SPI for more information.

WASSPI-603

Description	Updated OracleAS spi configuration in OVO server
Severity	Normal
Help Text	**Probable Cause** The discovery application has discovered some OracleAS instances on the manged node. It has updated the OAS SPI configuration on the OVO management server.

WASSPI-604

Description	OracleAS Discovery Failed
Severity	Critical
Help Text	**Probable Cause** • OracleAS was not installed on the managed node. • There are no OracleAS instances running on the managed node. • Discovery needs more information to find all OracleAS instances running on the managed node. • The OAS SPI does not have the correct configuration information for the OracleAS instances. **Suggested Action** • Install OracleAS or verify that OracleAS is installed on the managed node. • Make sure that all OracleAS instances you want to monitor are up and running before running the Discover OracleAS application. Discovery only finds OracleAS instances that are running. Verify the servers are running from the OracleAS Control Console. • Run the Configure OASSPI application (be sure to select the managed node before starting the application) and set the HOME_LIST property. Then, run the Discover OracleAS application. • Verify the information set for the following properties: LOGIN, PASSWORD, NAME, and HOME_LIST. If you modify information for any of these properties, run he Discover OracleAS application. If the problem persists, configure the OAS SPI manually. Refer to Chapter 3, Configuring the OAS SPI for more information. If manual configuration fails, run the SHS application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. Contact your HP support representative with the gathered information.

WASSPI-605

Description	Could not find OAS home directory: *<directory>*
Severity	Critical
Help Text	**Probable Cause** The specified directory was set in the HOME_LIST property but the directory does not exist. **Suggested Action** 1 Verify that the directory exists on the managed node. 2 Use the Configure OASSPI application to verify that the HOME_LIST property contains the specified directory and modify the value. 3 Run the Discover OracleAS application.

WASSPI-606

Description	OracleAS version not found
Severity	Critical
Help Text	**Probable Cause** The OraclesAS version string was not found. OracleAS may not be installed on the managed node. **Suggested Action** Install OracleAS or verify that OracleAS is installed on the managed node.

All Other Errors

Description	An unknown error appears in the OAS SPI error log.
Severity	Major
Help Text	**Suggested Action** 1 Refer to the text following the error message in the OAS SPI error log to help identify the problem. You can view the SPI error log for a managed node by using the View Error File application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows. The error message can be identified by the date/time stamp. 2 Identify the steps to reproduce the problem. 3 Turn on tracing (by using the Start Tracing application accessed from the **Application Bank** → **OASSPI** → **OASSPI Admin** windows) and reproduce the problem. Refer to Applications on page 17 for more information about available applications. Tracing information is saved to `/<OvAgentDir>/wasspi/oas/log/trace.log` (archived files have a three digit number appended to the filename) where `/<OvAgentDir>/` is typically `/var/opt/OV/`. 4 Contact your HP support representative with the information gathered in the previous steps.

A File Locations

You can find OAS SPI configuration files and error logs in specific directories.

OVO Management Server File Locations

Operating System	File	File Location
HP-UX	Configuration	`/opt/OV/wasspi/oas/conf`
Solaris	Configuration	`/opt/OV/wasspi/oas/conf`

Managed Node File Locations

On DCE-based managed nodes, HTTPS Windows managed nodes, or UNIX managed nodes that were already running the OAS SPI and are being switched to a non-root HTTPS agent environment (UNIX only: if these directories do not exist, refer to the next table for file locations):

Operating System	File	File Location
HP-UX, Solaris, Linux	Configuration	`/var/opt/OV/wasspi/oas/conf`
HP-UX, Solaris, Linux	Error Logs	`/var/opt/OV/wasspi/oas/log`
AIX	Configuration	`/var/lpp/OV/wasspi/oas/conf`
AIX	Error Logs	`/var/lpp/OV/wasspi/oas/log`
Windows (DCE)	Configuration	`\usr\ov\wasspi\oas\conf`
Windows (DCE)	Error Logs	`\usr\ov\wasspi\oas\log`
Windows (HTTPS)	Configuration	`\Program Files\HP OpenView\data\wasspi\oas\conf`
Windows (HTTPS)	Error Logs	`\Program Files\HP OpenView\data\wasspi\oas\log`

On newly configured OAS SPI managed nodes in the non-root HTTPS agent environment (UNIX only):

Operating System	File	File Location
HP-UX, Solaris, Linux	Configuration	`/var/opt/OV/conf/oasspi`
HP-UX, Solaris, Linux	Error Logs	`/var/opt/OV/log/oasspi`
AIX	Configuration	`/var/lpp/OV/conf/oasspi`
AIX	Error Logs	`/var/lpp/OV/log/oasspi`

B The Configuration

This appendix contains information about the configuration structure, how to use the configuration editor, descriptions of the configuration properties, and samples of the configuration.

Structure

See Sample Configurations on page 141 for examples of the configuration. The basic structure of the configuration is (lines preceded by # are treated as comments and are ignored):

```
# Global Properties
property=<value> ...

# GROUP Block
GROUP <group_name>
{
<node_name> ...
}

# NODE Block
NODE <node_name | group_name>
{
property=<value> ...
}
```

Global Properties

```
# Global Properties
<property>=<value> ...
```

Properties defined at the global level apply to all nodes. However, these global properties can be overridden by properties set within a GROUP or NODE block or by server-specific properties.

GROUP Block

```
# GROUP Block
GROUP <group_name>
{
<node_name> ...
}
```

GROUP blocks are used to group nodes together that have common properties.

<group_name> identifies the group of nodes with common properties. If a GROUP block <group_name> is repeated within the configuration, the last definition takes precedence.

<node_name> lists the nodes in the group and is the primary node name configured in OVO.

▶ The node name specified in a GROUP block matches the value returned by the OVO variable $OPC_NODES, which is the primary node name configured in OVO.

Set the common properties of the group using the NODE block.

Using the configuration editor, view, set, or edit GROUP block properties by selecting the Default Properties item in the <Group_Name> folder.

NODE Block

```
# NODE Block
NODE <node_name | group_name>
{
<property>=<value> ...
}
```

Properties set in a NODE block apply to nodes belonging to the group defined by <group_name> (to set common properties for a group) or to the specified <node_name> (to set properties for a single node).

For a group, enter the <group_name> defined by the GROUP block and define the group's common properties.

For a single node, enter the <node_name> and define the properties.

If a property definition is repeated within the NODE block, the last definition takes precedence.

Using the configuration editor, view, set, or edit NODE block properties by selecting the Default Properties item in the <Node_Name> folder.

Server-Specific Properties

Each property specified as SERVER<n>_property refers to a specific Oracle OC4J/OHS server instance. When more than one Oracle OC4J/OHS server instance is running on a given managed node, the number <n> differentiates the servers. Numbering begins at "1" and each Oracle OC4J/OHS server instance is assigned a unique number.

Property Precedence

The order of precedence (highest to lowest) of properties defined in the configuration are:

1   SERVER<n>_property (server-specific)

2   NODE <node_name> {<property>} (property defined for a node)

3   NODE <group_name> {<property>} (property defined for a group)

4   <property> (global property)

Using the Configuration Editor

Use the configuration editor to view and edit the configuration. You must update the configuration using this editor only.

The main features of the configuration editor are:

- Tree
- Buttons
- Actions

Configure OASSPI - Tree

The Configure OASSPI tree, displayed in the left pane of the Configure OASSPI application's main window, displays the OAS SPI configuration in a tree structure.

The following is an example of the tree.

➤ If no OC4J/OHS servers or groups are configured, the "OC4J/OHS Servers" and "Groups" folders are not displayed. If you are running Configure OASSPI for the first time and you did not select any nodes before you launched the tool, the "Nodes" folder is not displayed
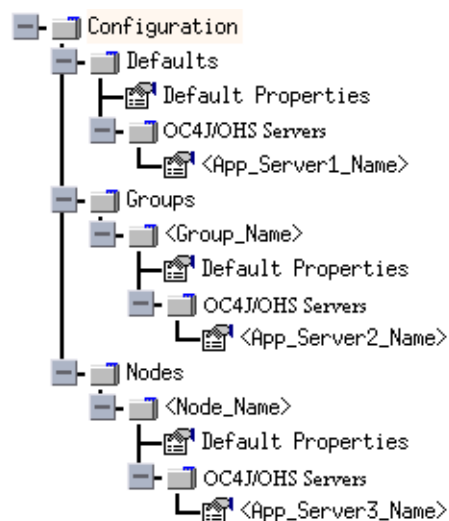
where the icons are defined as follows:

 The configuration properties can be viewed.

 The configuration properties can be viewed and set.

The following table lists each item in the tree and a brief description of the item.

Item Name	Description
OC4J/OHS Servers	A folder that contains a list of all the OC4J/OHS servers. This folder can appear under Defaults (global properties), Group_Name(s) (GROUP block), or Node_Name(s) (NODE block).
<OC4J/OHS_Server_Name>	The name of the OC4J/OHS server.
Configuration	A folder that contains all OAS SPI configuration information for the Oracle Application Server environment.
Default Properties	Lists the configuration properties that have been set. This item appears under Defaults (global properties), Group_Name(s) (GROUP block), or Node_Name(s) (NODE block).
Defaults	A folder that represents the global properties. Default properties set at this level apply to all nodes. However, these properties can be overridden by properties set under the Group_Name and Node_Name folders (refer to Property Precedence on page 126 for more information).
Groups	A folder that represents the GROUP block.
<Group_Name>	A folder that identifies the name of a group of nodes with common properties. Default properties set at this level apply to all nodes that belong to the specified group. These properties can be overridden by properties set under the Node_Name folders (refer to Property Precedence on page 126 for more information).
Nodes	A folder that represents the NODE block.
<Node_Name>	A folder that represents a single node whose name matches the value returned by the OVO variable $OPC_NODES, which is the primary node name configured in OVO. Default properties set at this level apply to the specified node only (refer to Property Precedence on page 126 for more information).

Configure OASSPI - Buttons

The following buttons are available in Configure OASSPI:

Button	Description
Cancel	Exit Configure OASSPI.
	If you set configuration properties without saving them, these changes are not saved.
	If you added or removed an OC4J/OHS server, node, or group without saving the change or if you modified a configuration property, a Confirm Cancel window opens. Click **Save and Exit** to save the changes before exiting, **Exit without Save** to exit without saving the changes, or **Return to Editing** to continue editing the configuration (changes are not saved).
Finish	Exit Configure OASSPI. Appears instead of **Next** if you launched Configure OASSPI without selecting any nodes.
Next	Exit Configure OASSPI. Takes you to the "Confirm Operation" window that lists the nodes you selected before you started Configure OASSPI. The selected managed nodes' configurations are updated with your changes. If you made changes to nodes that were not selected (are not displayed in the "Confirm Operation" window), the changes are saved to the OVO management server's configuration, but to make the changes to those managed node's configuration, you must select those managed nodes from the node bank, restart Configure OASSPI, and then exit.
Save	Save changes to the OVO management server's configuration and continue editing the configuration. You may also select **File** → **Save** to save your changes.

Configure OASSPI - Actions

Actions that you can perform depend upon the item that is selected in the tree and from where you access the action. The following actions can be accessed from the Actions menu, File menu, or by right-clicking on an item in the tree.

Action	Description	Selected Tree Item
Add OC4J/OHS Server	Add an OC4J/OHS server. See Add OC4J/OHS Server on page 130 for more information.	OC4J/OHS Servers Defaults *<Group_Name>* *<Node_Name>*
Add Group	Create a group to which you can assign nodes that have common properties. See Add Group on page 131 for more information.	Any item in the tree Any item in the tree
Add Node	Add a managed node to the Nodes folder. See Add Node on page 131 for more information.	Any item in the tree Any item in the tree

Action	Description	Selected Tree Item
Exit	Exit the Configure OASSPI application. This action is available from the File menu. If any changes were made that have not been saved, the Confirm Cancel window opens.	▣ Any item in the tree ▣ Any item in the tree
Remove OC4J/OHS Server/Remove ALL OC4J/OHS Servers	Remove an OC4J/OHS server or all listed OC4J/OHS servers. See Remove OC4J/OHS Server/Remove ALL OC4J/OHS Servers on page 132 for more information.	▣ OC4J/OHS Servers ▣ *<OC4J/ OHS_Server_Name>*
Remove Group/Remove ALL Groups	Remove a OAS SPI group or all listed OAS SPI groups. See Remove Group/Remove ALL Groups on page 132 for more information.	▣ Groups ▣ *<Group_Name>*
Remove Node/Remove ALL Nodes	Remove a managed node or remove all managed nodes. See Remove Node/Remove ALL Nodes on page 133 for more information.	▣ Nodes ▣ *<Node_Name>*
Save	Save changes to the configuration. This action is available from the File menu only if changes were made to the configuration.	▣ Any item in the tree ▣ Any item in the tree
Set Configuration Properties tab	Set OAS SPI configuration properties. See Set Configuration Settings Tab on page 133 for more information.	▣ *<OC4J/ OHS_Server_Name>* ▣ Default Properties
View Configuration Settings tab	View OAS SPI configuration properties. See View Configuration Settings Tab on page 134 for more information.	▣ Any item in the tree ▣ Any item in the tree

Add OC4J/OHS Server

Add an Oracle OC4J/OHS Server instance at the global properties, GROUP, or NODE level in the OAS SPI configuration.

If a node contains duplicate server names (the NAME property is set to the same value), you are prompted to set the ALIAS property (to uniquely identify each server). Refer to Property Definitions on page 137 for more information about the ALIAS property.

To add an OC4J/OHS server, do the following:

1 Right-click one of the following items in the tree: Defaults (global properties level), OC4J/ OHS Servers (global properties level), *<Group_Name>* (GROUP level), or *<Node_Name>* (NODE level) and select **Add OC4J/OHS Server**.

The Configure OASSPI Application: Add OC4J/OHS Server window opens.

2   Enter the "OC4J/OHS Server Name." This is the name of the OC4J/OHS server as defined in the Oracle Application Server and is case-sensitive. The Oracle Application Server Control Console displays the server names of all configured OC4J/OHS servers in a domain. Use these names for the OC4J/OHS Server Name.

3   Click **OK**.

The NAME property is set.

The OC4J/OHS server is added and its properties are displayed. You may also set additional configuration properties for this server. See Set Configuration Settings Tab on page 133 for more information.

4   Click **Save** to save your changes.

If you do not want to add this OC4J/OHS server, right-click the OC4J/OHS server name, select **Remove OC4J/OHS Server**, and click **Save**.

Add Group

Assign nodes to a group that have common properties in the OAS SPI configuration.

To add a group, do the following:

1   Right-click any item in the tree and select **Add Group**.

The Configure OASSPI Application: Add Group window opens.

2   Enter the Group Name. The group name identifies the group of nodes with common properties and is NOT case-sensitive.

3   Click **OK**.

The group is added and the Set Configuration Properties tab for the group is selected.

4   Select **Add Node to Group**, select one node from the list to add to the group, and click **OK**. Repeat this step until all nodes are added to the group.

5   Set the configuration properties for this group using the **Select a Property to Set** pulldown list. See Set Configuration Settings Tab on page 133 for more information.

6   Click **Save** to save your changes.

If you do not want to add the group, right-click the group name, select **Remove Group**, and click **Save**.

Add Node

Add a managed node to the OAS SPI configuration.

To add a node, do the following:

1   Right-click any item in the tree and select **Add Node**.

If no additional managed nodes are available to add to the configuration, the following message appears:

`All available managed nodes have been added to the configuration.`

Click **OK** to exit this action.

Otherwise, the Configure OASSPI Application: Add Node window opens.

2   From the pulldown menu, select a node to add.

3   Click **OK**.

The node is added and the Set Configuration Properties tab for the node displays.

4   Set the configuration properties for this node using the **Select a Property to Set** pulldown list. See Set Configuration Settings Tab on page 133 for more information.

5   Click **Save** to save your changes.

If you do not want to add the node, right-click the node name, select **Remove Node**, and click **Save**.

Remove OC4J/OHS Server/Remove ALL OC4J/OHS Servers

Remove an OC4J/OHS Server or all listed OC4J/OHS Servers from the OAS SPI configuration.

To remove an OC4J/OHS server, do the following:

1   Right-click the OC4J/OHS server name and select **Remove OC4J/OHS Server**.

The selected OC4J/OHS server name is removed from the list and its configuration properties are removed from the configuration.

2   Click **Save** to permanently remove the OC4J/OHS server.

Click **Cancel** to cancel the removal of the OC4J/OHS server (the OC4J/OHS server name appears the next time you run Configure OASSPI). In the Confirm Cancel window, click **Exit without Save**.

To remove ALL OC4J/OHS servers, do the following:

1   Right-click the OC4J/OHS Servers folder and select **Remove ALL OC4J/OHS Servers**.

The selected OC4J/OHS Servers folder and all OC4J/OHS servers listed in the selected folder are removed (all configuration properties for the listed OC4J/OHS servers are removed from the configuration).

2   Click **Save** to permanently remove the OC4J/OHS servers.

Click **Cancel** to cancel the removal of all OC4J/OHS servers (the OC4J/OHS Servers folder and all OC4J/OHS server names listed in the folder appear the next time you run Configure OASSPI). In the Confirm Cancel window, click **Exit without Save**.

Remove Group/Remove ALL Groups

Remove a OAS SPI group or all listed OAS SPI groups from the OAS SPI configuration.

To remove a group, do the following:

1   Right-click the group server name and select **Remove Group**.

The selected group is removed from the list and its configuration properties are removed from the configuration.

2   Click **Save** to permanently remove the group.

Click **Cancel** to cancel the removal of the group (the group name appears the next time you run Configure OASSPI). In the Confirm Cancel window, click **Exit without Save**.

Remove Node/Remove ALL Nodes

Remove a managed node or all listed managed nodes from the OAS SPI configuration.

To remove a node, do the following:

1   Right-click the node name and select **Remove Node**.

    The selected node is removed from the list and its configuration properties are removed from the configuration.

2   Click **Save** to permanently remove the node.

    Click **Cancel** to cancel the removal of the node (the node name appears the next time you run Configure OASSPI). In the Confirm Cancel window, click **Exit without Save**.

To remove ALL nodes, do the following:

1   Right-click the Nodes folder and select **Remove ALL Nodes**.

    The selected Nodes folder and all nodes listed in the selected folder are removed (all configuration properties for the listed nodes are removed from the configuration).

2   Click **Save** to permanently remove the nodes.

    Click **Cancel** to cancel the removal of all nodes (the Nodes folder and all node names listed in the folder appear the next time you run Configure OASSPI). In the Confirm Cancel window, click **Exit without Save**.

Set Configuration Settings Tab

Set OAS SPI configuration properties at the global properties level or for the selected OC4J/OHS server(s), group(s) (GROUP level), or node(s) (NODE level).

Items with the ⛁ icon are the only items for which you can set configuration properties (Default Properties and *<OC4J/OHS_Server_Name>*).

To set the configuration properties of an item, select the item and click the **Set Configuration Properties** tab in the right pane.

Setting a Property

To set a property in the configuration, do the following:

1   Select a property from the **Select a Property to Set** pulldown menu.

2   Select **Set Property**. The property and an empty value filed appear in the table.

3   Click the empty value field and enter a value.

4   Repeat steps 1 - 3 for each property to set.

5   Click **Save**.

See Configuration Properties on page 135 for more information about individual properties.

Modifying a Property

To modify a property in the configuration, do the following:

1   Select the property from the table.

2   Double-click the value field.

3   Edit the value.

4   If a node contains duplicate server names (the NAME property is set to the same value), you are prompted to set the ALIAS property (to uniquely identify each server). Refer to Property Definitions on page 137 for more information about the ALIAS property.

5   Repeat steps 1 - 3 for each property to modify.

6   Click **Save**.

See Configuration Properties on page 135 for more information about individual properties.

Removing a Property

To remove a property from the configuration, do the following:

1   Select the property from the table.

2   Click **Remove Property**.

3   Repeat steps 1 - 2 for each property to remove.

4   Click **Save**.

AUTO_DISCOVER

The AUTO_DISCOVER check box that appears near the bottom of the window sets the AUTO_DISCOVER property. You can only set this property by selecting or unselecting the check box.

Selecting the check box (default) causes the discovery templates (if distributed) to automatically update the OAS SPI configuration information in the service map and configuration. If the discovery templates are not distributed, the service map is created but not updated.

View Configuration Settings Tab

View all OAS SPI configuration properties set in the configuration on the OVO management server or the OAS SPI configuration properties for the selected OC4J/OHS server(s), group(s), or node(s).

To view the configuration properties of an item, select the item and click the **View Configuration Settings** tab in the right pane.

The following table describes the view when the specified item is selected.

Item Name	Description of View
OC4J/OHS Servers	View all configuration properties set for all the listed OC4J/OHS servers.
<OC4J/OHS_Server_Name>	View all configuration properties set for the OC4J/OHS server (these properties can be modified by selecting the **Set Configuration Properties** tab).
Configurations	View all configuration properties saved in the configuration on the OVO management server.
Default Properties	View all configuration properties that are set (these properties can be modified by selecting the **Set Configuration Properties** tab).
Defaults	View all configuration properties set at the global properties level.

Item Name	Description of View
Groups	View all configuration properties set for all the listed groups.
<Group_Name>	View all configuration properties set for the specific group.
Nodes	View all configuration properties set for the listed nodes.
<Node_Name>	View all configuration properties set for the specific node.

View Inherited Properties

A View Inherited Properties check box appears near the bottom of the window. By selecting this check box, the view of the configuration properties changes to show all inherited properties (those properties defined at a global properties level or GROUP level) that affect the selected item. Inherited properties are denoted by "<*>" appearing after the property.

By unselecting this check box, the view shows only the configuration properties set at that level for the selected item.

Inherited properties can only be modified at the level they are set. If "<*>" appears after the property, the property cannot be modified at that level. For example, if the property HOME is set at the global properties level (under the Defaults folder), it can only be modified in the Default Properties listed under the Defaults folder. Although HOME appears (with "<*>" after it) in a *<Group_Name>*'s Default Properties view, HOME cannot be modified at this level.

Properties set lower in the tree take precedence over those properties set higher in the tree. For example, if the property HOME is set at the global properties level (under the Defaults folder) and the property HOME is set at the GROUP level, the GROUP level property value takes precedence.

Configuration property precedence is as follows (listed from highest to lowest:

1 Server-specific

2 NODE level

3 GROUP level

4 Global properties level

Configuration Properties

Table 4 on page 136 lists all properties by OAS SPI requirements, where:

Property   Name of the property.

Requirements   Lists the property requirements for specific components where:

        R -   Required: the property must be set.

        C -   Conditional: the property may need to be set if certain conditions are met.

	O -	Optional: the property is not required for the component to work.
	blank -	Not Applicable: the property does not affect this component.
OAS SPI	Configuration requirements for the OAS SPI to work.	
Discovery Process	Requirements for the discover process to work.	
Auto-Discovered	The property is automatically set by the discover process.	
Level of Configuration	The level at which this property can be set within the configuration structure.	
Default Properties	The global, group, or node level within the configuration structure.	
Application Server	The server-specific level within the configuration structure.	

Refer to Configuration Properties on page 135 for a description of the property.

Table 4   Properties Listed by OAS SPI Requirements

Property	Requirements		Auto-Discovered	Level of Configuration	
	OAS SPI	Discovery Process		Default Properties	Application Server
HOME	**R**	*C*	✓	✓	✓
JAVA_HOME	**R**		✓	✓	✓
NAME	**R**		✓		✓
ALIAS	*C*				✓
AUTO_DISCOVER	*C*	*C*		✓	✓
GRAPH_URL	*C*			✓	
RMID_PORT	*C*			✓	
RMID_START_TIME	*C*			✓	
START_CMD	*C*			✓	✓
STOP_CMD	*C*			✓	✓
TYPE	*C*		✓		✓
USER	*C*			✓	✓

Table 4   Properties Listed by OAS SPI Requirements

| Property | Requirements | | | Level of Configuration | |
	OAS SPI	Discovery Process	Auto-Discovered	Default Properties	Application Server
VERSION	*C*		✓		✓
MAX_ERROR_LOG_ SIZE	O			✓	
TIMEOUT	O			✓	✓

Property Definitions

Table 5   Configuration Properties

Property	Applicable OAS Version	Required/ Conditional/ Optional	Description
ALIAS	9.04, 10.1.2	*Conditional* Required if more than one application server on a system share the same server name.	Unique name on a managed node assigned to an OC4J/OHS server if more than one OC4J/OHS server on a system share the same server name. The alias, if set, is the name used in messages, reports, and graphs (otherwise, NAME is used). If ALIAS is modified, the data for the old alias is saved but is not mapped to the new alias. **Example**: `NODE petstore.hp.com {` `SERVER1_NAME=dog` `SERVER1_ALIAS=beagle` `SERVER2_NAME=dog` `SERVER2_ALIAS=dachshund` `}` `NODE flying_ace.hp.com {` `SERVER1_NAME=snoopy` `SERVER1_ALIAS=beagle` `SERVER2_NAME=snoopy` `SERVER2_ALIAS=red_baron` `}`

Table 5   Configuration Properties

Property	Applicable OAS Version	Required/ Conditional/ Optional	Description
AUTO_DISCOVER	9.04, 10.1.2	*Conditional* Required if you do *not* want the discovery policy to automatically overwrite the configuration information.	Select the AUTO_DISCOVER check box in the configuration editor to automatically update the Oracle Application Server configuration information in the service map and configuration. Unselect the AUTO_DISCOVER check box in the configuration editor if you are manually configuring the Oracle Application Server configuration and do not want the discovery template to automatically overwrite the configuration information.
GRAPH_URL	9.04, 10.1.2	*Conditional* Required if you want to use the View Graphs application (OVPM must be installed).	The fully-qualified URL used to launch OVPM. Set at the global level only. **Examples**: GRAPH_URL = http://system1.hp.com/HPOV_Reports/ovpm.htm (OVPM 4 on Windows) GRAPH_URL = http://system2.hp.com:8080/OVPM/index.html (OVPM 5 on UNIX and Windows)
HOME	9.04, 10.1.2	**Required**	The directory where the Oracle Application Server is installed. **Example**: HOME = /opt/oracle/infra
JAVA_HOME	9.04, 10.1.2	**Required** Required by the discovery process if there is more than one directory where Java is installed.	The directory where Java is installed that is used by the collector. The java engine is expected to be $JAVA_HOME/bin/java. **Example**: JAVA_HOME = /opt/oracle/jdk
MAX_ERROR_LOG_SIZE	9.04, 10.1.2	Optional	The maximum number of MB allowed for the error log file. When the error log file reaches the maximum limit, it is renamed as a backup file and logging resumes. When a new backup file replaces an old backup file, the old backup is deleted. **Default**: 2MB **Example**: MAX_ERROR_LOG_SIZE = 20

Table 5   Configuration Properties

Property	Applicable OAS Version	Required/ Conditional/ Optional	Description
NAME	9.04, 10.1.2	**Required**	The OC4J instance name. Use the `dcmctl listInstances` command to display all Oracle Application Server instances. This name is used in messages, reports, and graphs unless ALIAS is set. Set ALIAS to uniquely identify each server if more than one OC4J/OHS server on a system share the same name (NAME is the same within a NODE block). **Example**: `SERVER1_NAME = exampleServer`
RMID_PORT	9.04, 10.1.2	*Conditional* Required if the default port on which rmid listens is already in use.	**Default**: Oracle Application Server: 9240; JMX connector: 9241 The port on which rmid listens. By default, if an OVO managed node is monitoring application server(s) and MBean server(s) using the JMX connector, the SPI uses two ports (one for the application server(s) and one for the MBean server(s)). For example, if you are monitoring an Oracle Application Server and an MBean server, the SPI uses ports 9240 and 9241. If RMID_PORT is set, the SPI uses this one port for all servers (this property cannot be set at the application server level). For example, if you are monitoring a Oracle Application Server and an MBean server and set RMID_PORT to 9250, the SPI uses port 9250 only. **Example**: `RMID_PORT = 9250`
RMID_START_TIME	9.04, 10.1.2	*Conditional* Required if rmid takes longer than 30 seconds to start.	**Default**: 30 (seconds) The amount of time, in seconds, to wait for rmid to start before timing out. **Example**: `RMID_START_TIME = 60`
START_CMD	9.04, 10.1.2	*Conditional* Required if you want to start the Oracle Application Server from the OVO console	A fully qualified system command that is run when the OVO Application Bank "Start OracleAS" application is used. This command is run by USER which must be set in order for the "Start OracleAS" application to work. NOTE: This command must exit. That is, the Oracle Application Server process must run in the background or as a service and it must be protected from its parent process dying. **Example**: `SERVER1_START_CMD = /sbin/init.d/oracle start`

Table 5   Configuration Properties

Property	Applicable OAS Version	Required/ Conditional/ Optional	Description
STOP_CMD	9.04, 10.1.2	*Conditional* Required if you want to stop the Oracle Application Server from the OVO console	A fully qualified system command that is run when the OVO Application Bank "Stop OracleAS" application is used. This command is run by USER which must be configured in order for the "Stop OracleAS" application to work. **Example**: `SERVER1_STOP_CMD = /sbin/init.d/oracle stop`
TIMEOUT	9.04, 10.1.2	Optional	**Default**: 120 (seconds). The maximum amount of time, in seconds, OAS SPI tries to connect to the Oracle Application Server. When the specified time is exceeded, OAS SPI sends an alarm to the message browser indicating that the Oracle Application Server is unavailable. If metric C002_ServerStatusRep is being collected, the unavailability of the server is logged. If no time limit is desired, set this property to -1.
TYPE	9.04, 10.1.2	*Conditional* Required if you are configuring a JMX connector	**Default**: ajp13. The type of JMX connector. Set to ajp13 if this is an OC4J server. Set to ohs if this is an OHS (HTTP_Server) server. Set to ovrmi if you are configuring a JMX connector. **Example**: `SERVER1_TYPE=ajp13`
USER	9.04, 10.1.2	*Conditional* Required if you want to start and/ or stop the Oracle Application Server from the OVO console	The system username for starting and stopping the Oracle Application Server from the OVO Application Bank. The default is the username under which the OVO agent runs. **Example**: `USER = ias_admin`
VERSION	9.04, 10.1.2	*Conditional* Required for Oracle Application Server version 10.1.2	The version number of the Oracle Application Server in the format *Major# [Minor#]* where: *Major#* - The primary version number (for example, 10.1) *Minor#* - The service pack installed (for example, 1 for SP1). If *Minor#* is not specified, it defaults to 0 (no service pack installed). **Example**: `SERVER1_VERSION = 10.1 2`

Sample Configurations

The sample OAS SPI configurations with entries contained in this appendix illustrate various features and utilization methods.

Example 1: Single Node/Two Servers

The example below is for a single node running two servers: an OC4J and HTTP servers. The properties HOME, JAVA_HOME, MAP_KEY_PREFIX, and VERSION are global defaults that apply to all servers and nodes.

```
HOME=C:/OraHome_1
JAVA_HOME=C:/OraHome/jdk
MAP_KEY_PREFIX=
VERSION=10.1 2
NUM_SERVERS=2
NODE some_node.hp.com
{
   SERVER1_NAME=HTTP_Server
   SERVER1_TYPE=ohs
   SERVER2_NAME=home
   SERVER2_TYPE=ajp13
}
```

Example 2: Multiple Nodes/Repeated Properties

The example that follows shows how you can configure a group of related systems that have numerous properties in common. Some nodes, however, may have one or two properties that you need to set differently. You can address these kinds of situations in three steps:

1 Use the Add Group action in the configuration editor to name the group, specify the nodes in it, and set the configuration properties. See Add Group on page 131 for more information.

2 Use the Add Node action in the configuration editor to define individual node properties (either for nodes not in the group or for nodes in the group that have some unique/separate properties). See Add Node on page 131 for more information.

▶ Properties set for a node take precedence over the same properties set for a group. See Property Precedence on page 126 for the complete order of property precedence.

In the example, the global default properties HOME, JAVA_HOME, and MAP_KEY_PREFIX are overridden for SERVER4 and SERVER5 of the node group "production" and for node europa.hp.com.

```
HOME = /opt/oracle/appsrv
JAVA_HOME = /opt/oracle/appsrv/jdk
MAP_KEY_PREFIX = /appsrv.hp.com
VERSION = 10.1 2
GROUP production
{
   mercury.hp.com
   venus.hp.com
```

```
     mars.hp.com
     jupiter.hp.com
}
NODE production
{
   SERVER1_NAME = HTTP_Server
   SERVER1_TYPE = ohs
   SERVER1_ALIAS = HTTP_Server+appsrv.hp.com
   SERVER2_NAME = OC4J_Portal
   SERVER2_TYPE = ajp13
   SERVER3_NAME = home
   SERVER3_TYPE = ajp13
   SERVER4_NAME = HTTP_Server
   SERVER4_TYPE = ohs
   SERVER4_ALIAS = HTTP_Server+infra.hp.com
   SERVER4_HOME = /opt/oracle/infra
   SERVER4_JAVA_HOME = /opt/oracle/infra/jdk
   SERVER4_MAP_KEY_PREFIX = /oasspi/infra.hp.com
   SERVER5_NAME = OC4J_SECURITY
   SERVER5_TYPE = ajp13
   SERVER5_HOME = /opt/oracle/infra
   SERVER5_JAVA_HOME = /opt/oracle/infra/jdk
   SERVER5_MAP_KEY_PREFIX = /oasspi/infra.hp.com
}
NODE europa.hp.com
{
   SERVER1_NAME = OC4J_SECURITY
   SERVER1_TYPE = ajp13
   SERVER1_HOME = /opt/oracle/infra
   SERVER1_JAVA_HOME = /opt/oracle/infra/jdk
   SERVER1_MAP_KEY_PREFIX = /oasspi/infra.hp.com
}
```

C Applications

The Smart Plug-in for Oracle Application Server (OAS SPI) applications include configuration and troubleshooting utilities.

OASSPI Admin applications include:

- Configure OASSPI
- Discover OracleAS
- Init Non-Root
- Self-Healing Info
- Start/Stop Monitoring
- Start/Stop Tracing
- Verify
- View Error File
- View Graphs

OracleAS applications include:

- Launch Oracle AS Console
- Start/Stop OracleAS
- View OAS Logs
- View Status

OASSPI Admin

The following applications are found in the OASSPI Admin application group.

Configure OASSPI

Launches the configuration editor and maintains the OAS SPI configuration.

If you are configuring OAS SPI for the first time, use the Discover OracleAS application to automatically set basic configuration properties. Refer to Chapter 3, Configuring the OAS SPI for more information.

Purpose

Launches the configuration editor allowing the OVO administrator to maintain the OAS SPI configuration by viewing, editing, or setting configuration properties.

Function

Configure OASSPI does the following:

- Updates the configuration on the OVO management server and managed nodes.
- Creates the directories and files required by OAS SPI on the selected managed nodes.
- Sets up data sources for reporting and graphing
- Sets up the Oracle Application Server log files and OAS SPI error log file for monitoring

Configuration information for all Oracle Application Servers on all OVO managed nodes is maintained on the OVO management server. Configuration information for a specific Oracle Application Server on an OVO managed node is maintained on that managed node (each managed node maintains a subset of the configuration information maintained on the OVO management server).

When saved, changes made with the configuration editor are always saved on the OVO management server.

If a specific OVO managed node is selected when this application is launched, changes to the configuration affecting any Oracle Application Servers on that managed node are automatically saved on that managed node.

If no managed nodes are selected when this application is launched, changes to the configuration are *not* saved on any managed nodes.

If a specific OVO managed node is selected when this application is launched and changes are made that affect an Oracle Application Server on a non-selected managed node, the changes are saved to the configuration on the OVO management server, but are *not* saved to the non-selected managed node. You must select the affected managed node, re-run this application, and, upon exiting the application, the changes are saved to the managed node.

To Launch Configure OASSPI

1 At the OVO console, select the node(s) in the Node Bank window.

2 Select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Configure OASSPI**. (If the items do not appear, select **Map** → **Reload**.)

4   The Introduction window opens.

Click **Next**.

5   The configuration editor opens. Refer to Using the Configuration Editor on page 165 for more information about using the configuration editor.

6   Optionally, click **Save** to save any changes made to the configuration. Once you save your changes, you cannot automatically undo them.

7   Click **Finish** or **Next to** save any changes and exit the editor.

If you selected **Next**, the Confirm Operation window opens. Click **OK**.

▶   If you click **Cancel** and made changes to the configuration, those changes remain in the configuration on the management server. To make the changes to the selected managed nodes' configuration, you must select those nodes in the Node Bank window, start the Configure OASSPI application, click **Next** from the configuration editor, and then click **OK**.

8   If you have added an application server or added/edited the HOME and/or JAVA_HOME properties, run the Discover OracleAS application on the managed nodes on which the application server/properties were added or edited. Running the Discover OracleAS application updates the service map.

Discover OracleAS

Sets basic configuration properties needed for discovery.

Purpose

Launches the configuration editor allowing the OVO administrator to configure OAS SPI by setting initial configuration properties.

Function

Discover OracleAS does the following:

- Updates the configuration on the OVO management server and selected managed nodes.

Configuration information for all Oracle OC4J/OHS servers on all OVO managed nodes is maintained on the OVO management server. Configuration information for a specific Oracle OC4J/OHS server on an OVO managed node is maintained on that managed node (each managed node maintains a subset of the configuration information maintained on the OVO management server).

When saved, changes made with the configuration editor are always saved on the OVO management server.

An OVO managed node must be selected when this application is launched, and changes to the configuration affecting any Oracle OC4J/OHS servers on that managed node are automatically saved on that managed node.

If a specific OVO managed node is selected when this application is launched and changes are made that affect an Oracle OC4J/OHS server on a non-selected managed node, the changes are saved to the configuration on the OVO management server, but are *not* saved to the non-selected managed node. You must select the affected managed node, re-run this application, and, upon exiting the application, the changes are saved to the managed node.

To Launch Discover OracleAS

1   At the OVO console, select the node(s) in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Discover OracleAS**. (If the above does not appear as described, select **Map** → **Reload**.)

4   The Introduction window opens. This window contains brief information about the Discover OracleAS application.

   Click **Next** to start the Discovery application.

5   The Confirm Operation window opens. Click **OK**.

   ➤   If you click **Cancel** and made changes to the configuration, those changes remain in the configuration on the management server. To make the changes to the selected managed nodes' configuration, you must select those nodes in the Node Bank window, start the Discover OracleAS application, click **Next** from the configuration editor, and then click **OK**.

Init Non-Root

Updates the `/var/opt/OV/bin/instrumentation/wasspi_oas_platdef.pm` file and generates the `wasspi_oas_sudoers` configuration file on the selected managed node(s).

Purpose

Simplifies the configuration of a non-root HTTPS agent on a UNIX managed node (OVO 8.x only). Refer to Configuring a Non-Root HTTPS Agent on a UNIX Managed Node (OVO 8.x Only) on page 56 for all the steps necessary to configure a non-root HTTPS agent on a UNIX managed node.

Function

Init Non-Root does the following for the selected managed nodes:

1   Runs the `wasspi_oas_perl -S wasspi_oas_makePlatdef -force` command to set the proper SPI path configuration and updates the `/var/opt/OV/bin/instrumentation/wasspi_oas_platdef.pm` and `wasspi_oas_platdef.prop` files.

2   Generates the `wasspi_oas_sudoers` configuration file.

To Launch Init Non-Root

1   At the OVO console, select a node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Init Non-Root**.

Self-Healing Info

Collects data to be sent to your HP support representative.

➤   Your HP support contract entitles you to access cross-referenced information through the HP OpenView self-healing services web site (**http://support.openview.hp.com/ self_healing.jsp**), linking you to a database where similar information and subsequent problem solutions increase troubleshooting effectiveness. Refer to the *HP OpenView Smart Plug-ins DVD Installation Guide for UNIX* and the section covering Self-Healing Services for more details.

Required Setup

If you are collecting data for a reproducible problem, do the following before running the Self-Healing Info application:

1   Run the Start Tracing application. Refer to Start/Stop Tracing on page 150 for more information.

2   Reproduce the problem.

Purpose

Allows the OVO administrator to collect data to be used by your HP support representative.

Function

Self-Healing Info does the following for all managed nodes:

* Runs and saves data using the Verify application (see Verify on page 151 for more information).

* Recursively lists all files in the following directories:

  — `<OV_AGT_DIR>/bin/OpC/` (DCE)

  — `<OV_AGT_DIR>/bin/OpC/instrumentation/` (HTTPS)

  — `<OV_AGT_DIR>/wasspi/oas/conf/`

  — `<OV_AGT_DIR>/wasspi/oas/datalog/`

  — `<OV_AGT_DIR>/wasspi/oas/history/`

  — `<OV_AGT_DIR>/wasspi/oas/lib/`

  — `<OV_AGT_DIR>/wasspi/oas/tmp/`

* Copies the following files:

  — `<OV_AGT_DIR>/conf/OpC/le` (DCE)

  — `<OV_AGT_DIR>/conf/OpC/msgi` (DCE)

- — `<OV_AGT_DIR>/conf/OpC/monitor` (DCE)
- — `<OV_AGT_DIR>/conf/OpC/nodeinfo` (DCE)
- — `<OV_AGT_DIR>/wasspi/oas/conf/version` (DCE)
- — `<OV_AGT_DIR>/datafiles/policies/msgi` (HTTPS)
- Runs the following commands:
  - — `codautil -obj` (DCE)
  - — `codautil -status` (DCE)
  - — `codautil -dumpds OASSPI_METRICS` (DCE)
  - — `codautil -dumpds OASSPI_RPT_METRICS` (DCE)
  - — `ovcodautil -obj` (HTTPS)
  - — `ovcodautil -status` (HTTPS)
  - — `ovcodautil -dumpds OASSPI_METRICS` (HTTPS)
  - — `ovcodautil -dumpds OASSPI_RPT_METRICS` (HTTPS)

Self-Healing Info does the following for the management server:

- Copies the following file
  - — `/opt/OV/wasspi/oas/conf/SiteConfig`
- Recursively lists all files in the following directory:
  - — `/opt/OV/wasspi/oas/log/`

Self-Healing Info does the following for Windows managed nodes:

- Recursively lists all files in the following directory:
  - — `<OV_AGT_DIR>/wasspi/oas/log/`
- Copies the following file:
  - — `<OV_AGT_DIR>/conf/dsi2ddf/ddflbd.mwc`
- Runs the following commands:
  - — `wasspi_oas_perl.cmd -S wasspi_oas_spiapps collect_show`
  - — `wasspi_oas_perl.cmd -S wasspi_oas_ca -m 5 -x print=on`
  - — `wasspi_oas_perl.cmd -S wasspi_oas_ca -m 5 -x print=on -debug`
  - — `opcagt.exe - status` (DCE)
  - — `OvGetAA.exe -status` (DCE)
  - — `opctemplate.exe -l` (DCE)
  - — `opcagt.bat` (HTTPS)
  - — `ovconfget.exe` (HTTPS)
  - — `opctemplate.bat` (HTTPS)

Self-Healing Info does the following for UNIX managed nodes:

- Recursively lists all files in the following directory:
  - — `<OV_AGT_DIR>/wasspi/oas/log/`
- Copies the following file:

— `<OV_AGT_DIR>/conf/dsi2ddf/ddflbd.rc`

- Runs the following commands:

  — `wasspi_oas_perl -S wasspi_OAS SPIapps collect_show`

  — `wasspi_oas_perl -S wasspi_oas_ca -m 5 -x print=on`

  — `wasspi_oas_perl -S wasspi_oas_ca -m 5 -x print=on -debug`

  — `wasspi_oas_osinfo`

  — `ps -ef`

  — `opcagt -status`

  — `opctemplate -l` (DCE)

where *<OV_AGT_DIR>*:

- on a UNIX managed node is: `/var/opt/OV`
- on a Windows managed node: depends on the installation of the product

The data is saved in the following file:

- on a UNIX managed node: `/tmp/wasspi_oas_support.tar`
- on a Windows managed node: `wasspi_oas_support.zip` in one of the following directories (the exact location is displayed):

  — `%TEMP%`

  — `%TMP%`

  — `%SystemDrive%\temp\`

  — `C:\temp\`

  — `%temp%` if `JAVA_HOME` or `SERVER<n>_JAVA_HOME` is defined

  — `%temp%\wasspi_oas_support\`

  > This file may be hidden on some Windows managed nodes. If you do not see the file, open Windows Explorer and, from the **Tools** menu, select **Folder Options**. Click the **View** tab. Under Hidden files and folders, select **Show hidden files and folders**.

To Launch Self-Healing Info

1 At the OVO console, select a node in the Node Bank window.

2 From the Window menu, select **Application Bank**.

3 In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Self-Healing Info**.

Start/Stop Monitoring

Starts/stops the collection of metrics for one OC4J/OHS server or all OC4J/OHS servers on a managed node.

Purpose

Allows the OVO administrator to start or stop the OAS SPI from collecting metrics from an OC4J/OHS server.

These metrics generate alarms (when thresholds are exceeded) and are used to create reports (automatically or manually generated) and graphs. The reports and graphs are used to analyze trends in server usage, availability, and performance.

Typically, the OVO administrator would stop monitoring on a managed node if the node is not running for a known reason (for example, the node is down for maintenance). Stopping the monitoring prevents unnecessary alarms from being generated.

Run the Verify application to determine if monitoring is started or stopped. By default, monitoring is on.

Function

Start Monitoring starts the collection of metrics for one or all OC4J/OHS servers on a managed node.

Stop Monitoring stops the collection of metrics for one or all OC4J/OHS servers on a managed node.

To Launch Start/Stop Monitoring

1   At the OVO console, select a node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Start Monitoring** or **Stop Monitoring**.

Start/Stop Tracing

Starts/stops the tracing of the collection of metrics.

Purpose

Starts/stops the tracing of the collection of metrics into a file. Run this application only when instructed by your HP support representative.

Run the Self-Healing Info application to collect the file(s) created by this tool as part of the data to be used by your HP support representative.

Function

Start Tracing saves information about the collection of metrics into a file.

Stop Tracing stops saving information about the collection of metrics.

To Launch Start/Stop Tracing

1   At the OVO console, select a node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** and double-click **Start Tracing** or **Stop Tracing**.

Verify

Verify that OAS SPI is properly installed on the server or managed node.

Purpose

Allows the OVO administrator to verify that the OAS SPI is properly installed on the server or managed node.

Function

Verify does the following for all managed nodes:

- Checks that the following directories exist:
  - `<OV_AGT_DIR>/wasspi/oas/conf/`
  - `<OV_AGT_DIR>/wasspi/oas/datalog/`
  - `<OV_AGT_DIR>/wasspi/oas/history/`
  - `<OV_AGT_DIR>/wasspi/oas/lib/`
  - `<OV_AGT_DIR>/wasspi/oas/log/`
  - `<OV_AGT_DIR>/wasspi/oas/tmp/`

- Checks that the following files exist:
  - `<OV_AGT_DIR>/wasspi/oas/conf/logSetup`
  - `<OV_AGT_DIR>/wasspi/oas/conf/MetricMap`
  - `<OV_AGT_DIR>/wasspi/oas/conf/OVTrace.tcf.on`
  - `<OV_AGT_DIR>/wasspi/oas/conf/SiteConfig`
  - `<OV_AGT_DIR>/wasspi/oas/conf/SPIConfigLogFiles`
  - `<OV_AGT_DIR>/wasspi/oas/conf/version`
  - `<OV_AGT_DIR>/wasspi/oas/lib/castor.jar`
  - `<OV_AGT_DIR>/wasspi/oas/lib/GraphSP.xsl`
  - `<OV_AGT_DIR>/wasspi/oas/lib/JspiCola.jar`
  - `<OV_AGT_DIR>/wasspi/oas/lib/MetricMap.xsl`
  - `<OV_AGT_DIR>/wasspi/oas/lib/SiteConfig`
  - `<OV_AGT_DIR>/wasspi/oas/lib/xalan.jar`
  - `<OV_AGT_DIR>/wasspi/oas/lib/xerces.jar`
  - `<OVOAGT_CMDDIR>/ovtrc3.jar`

- — `<OVOAGT_CMDDIR>/SPI_DiscClient.ps`
- — `<OVOAGT_CMDDIR>/spi_oas.xml`
- — `<OVOAGT_CMDDIR>/wasspi_oas_DiscReg.txt`
- — `<OVOAGT_CMDDIR>/wasspi_oas_platdef.pm`
- — `<OVOAGT_CMDDIR>/wasspi_oas_platdef.prop`
- — `<OVOAGT_CMDDIR>/wasspi_oas_shs_agent_install.xml`
- — `<OVOAGT_CMDDIR>/wasspi_oas_shs_input.xml`
- — `<OVOAGT_CMDDIR>/wasspi_oas_shs_server_install.xml`
- — `<OVOAGT_CMDDIR>/wasspi_oas_shs_task.xml`
- — `<OVOAGT_CMDDIR>/wasspi_oas_traceConfig.xml`
- — `<OVOAGT_CMDDIR>/wasspi_oas_util.vbs`
- — `<OVOAGT_CMDDIR>/wasspi_oas_xalan.jar`
- — `<OVOAGT_CMDDIR>/wasspi_oas_xerces.jar`
- — `<OVOAGT_CMDDIR>/xerces.jar`
- — `<OVOAGT_MONDIR>/wasspi_oas_cat`
- — `<OVOAGT_MONDIR>/wasspi_oas_makePlatdef`

- Checks that the following files exist and the version is A.04 or higher:
  - — `<OV_AGT_DIR>/wasspi/oas/conf/MBeanReports.dtd`
  - — `<OV_AGT_DIR>/wasspi/oas/conf/MBeanReports.xsl`
  - — `<OV_AGT_DIR>/wasspi/oas/conf/MetricDefinitions.dtd`
  - — `<OV_AGT_DIR>/wasspi/oas/conf/ReportsHeader.xsl`
  - — `<OV_AGT_DIR>/wasspi/oas/conf/ReportsUtil.xsl`
  - — `<OV_AGT_DIR>/wasspi/oas/conf/SPIConfig`
  - — `<OV_AGT_DIR>/wasspi/oas/lib/JSpiCola.jar`
  - — `<OVOAGT_CMDDIR>/wasspi_oas_admin`
  - — `<OVOAGT_CMDDIR>/wasspi_oas_discovery.pl`
  - — `<OVOAGT_CMDDIR>/wasspi_oas_spiapps`
  - — `<OVOAGT_MONDIR>/wasspi_oas_ca`
  - — `<OVOAGT_MONDIR>/wasspi_oas_configBasic`
  - — `<OVOAGT_MONDIR>/wasspi_oas_configCheck`
  - — `<OVOAGT_MONDIR>/wasspi_oas_configLogs`
  - — `<OVOAGT_MONDIR>/wasspi_oas_configPerf`
  - — `<OVOAGT_MONDIR>/wasspi_oas_files`
  - — `<OVOAGT_MONDIR>/wasspi_oas_le`
  - — `<OVOAGT_MONDIR>/wasspi_oas_lib.pl`
  - — `<OVOAGT_MONDIR>/wasspi_oas_logdata`
  - — `<OVOAGT_MONDIR>/wasspi_oas_trace.pm`

— `<OVOAGT_MONDIR>/wasspi_oas_udmgraphs`

Verify does the following for the management server:

- Checks that the following directories exist:
  - `/opt/OV/wasspi/oas/conf/`
  - `/opt/OV/wasspi/oas/bin/`
  - `/opt/OV/wasspi/oas/lib/`
- Checks that the following files exist:
  - `/opt/OV/wasspi/oas/conf/SiteConfig`
  - `/opt/OV/wasspi/oas/conf/SPIConfig`
  - `/opt/OV/wasspi/oas/lib/JSpiCola.jar`
  - `/opt/OV/wasspi/oas/lib/wasspi_config_gui.jar`
  - `/opt/OV/wasspi/oas/lib/xalan.jar`
  - `/opt/OV/wasspi/oas/lib/xerces.jar`
  - `/opt/OV/wasspi/oas/lib/MetricDefinitions.dtd`
  - `/opt/OV/wasspi/oas/lib/images/details.gif`
  - `/opt/OV/wasspi/oas/lib/images/properties.gif`
  - `/opt/OV/wasspi/oas/lib/images/OpenView.gif`
  - `/opt/OV/wasspi/oas/lib/help/intro_configure.html`
  - `/opt/OV/wasspi/oas/lib/help/intro_discover.html`
  - `/opt/OV/wasspi/oas/lib/help/instruct_discover.html`
  - `/opt/OV/newconfig/OVPM/VPI_GraphsOASSPI.txt`
  - `/opt/OV/newconfig/OVPM/OASSPI_FormTemplate.txt`
  - `/opt/OV/newconfig/OVPM/OASSPI_FrameTemplate.txt`
  - `/opt/OV/OVPM/webapps/OVPM/OASSPI_Empty.htm`
- Checks that the following files exist and the version is A.04 or higher:
  - `/opt/OV/wasspi/oas/bin/parseDefs.pl`
  - `/opt/OV/wasspi/oas/bin/processWASSPIDiscovMsg.pl`
  - `/opt/OV/wasspi/oas/bin/startOASConsole.pl`
  - `/opt/OV/wasspi/oas/bin/updateMasterConfig.pl`
  - `/opt/OV/wasspi/oas/bin/wasspi_getOpcNodes`
  - `/opt/OV/wasspi/oas/bin/wasspi_oas_app_graphs`
  - `/opt/OV/wasspi/oas/bin/wasspi_oas_editConfig`
  - `/opt/OV/wasspi/oas/bin/wasspi_oas_makePlatdef`
  - `/opt/OV/wasspi/oas/bin/wasspi_oas_optaction_graphs`
  - `/opt/OV/wasspi/oas/bin/wasspi_oas_xterm`
  - `/opt/OV/wasspi/oas/lib/wasspi_oas_serverLib.pm`

Verify does the following for Windows managed nodes:

- Checks that the following files exist:
  - `<OVOAGT_CMDDIR>/spi_oas.cmd`
  - `<OVOAGT_CMDDIR>/spi_oas_runSHSCollector.cmd`
  - `<OVOAGT_MONDIR>/wasspi_oas_opcagt.cmd`
  - `<OVOAGT_MONDIR>/wasspi_oas_perl.cmd`
- Checks that the following files exist and the version is A.04 or higher:
  - `<OVOAGT_CMDDIR>/wasspi_oas_util.vbs`
  - `<OVOAGT_MONDIR>/wasspi_oas_config.cmd`
  - `<OVOAGT_MONDIR>/wasspi_oas_readRegistryKeys.vbs`

Verify does the following for UNIX managed nodes:

- Checks that the following files exist:
  - `<OVOAGT_CMDDIR>/spi_oas.sh`
  - `<OVOAGT_CMDDIR>/spi_oas_runSHSCollector.sh`
  - `<OVOAGT_MONDIR>/wasspi_oas_opcagt`
  - `<OVOAGT_MONDIR>/wasspi_oas_setpath`
- Checks that the following files exist and the version is A.04 or higher:
  - `<OVOAGT_CMDDIR>/wasspi_oas_installFile`
  - `<OVOAGT_CMDDIR>/wasspi_oas_osinfo`
  - `<OVOAGT_CMDDIR>/wasspi_oas_processLib.pl`
  - `<OVOAGT_MONDIR>/wasspi_oas_config`
  - `<OVOAGT_MONDIR>/wasspi_oas_perl`
  - `<OVOAGT_MONDIR>/wasspi_oas_xterm` (DCE)
- Checks that the following files exist and the version is A.01.30.00 or higher:
  - `<OVOAGT_MONDIR>/ddfcomp.exe`
  - `<OVOAGT_MONDIR>/ddfcomp_coda.exe`
  - `<OVOAGT_MONDIR>/ddflog.exe.pl`
  - `<OVOAGT_MONDIR>/ddflog_code.exe`
  - `<OVOAGT_MONDIR>/ddfutil.exe`

Verify does the following for Linux managed nodes:

- Checks that the following files exist and the version is A.01.30.00 or higher:
  - `<OVOAGT_MONDIR>/ddfcomp`
  - `<OVOAGT_MONDIR>/ddfcomp_coda`
  - `<OVOAGT_MONDIR>/ddflog`
  - `<OVOAGT_MONDIR>/ddflog_code`
  - `<OVOAGT_MONDIR>/ddfutil`

Verify does the following for OSF managed nodes:

- Checks that the following files exist and the version is A.01.23.00 or higher:

— `<OVOAGT_MONDIR>/ddfcomp`

— `<OVOAGT_MONDIR>/ddfcomp_coda`

— `<OVOAGT_MONDIR>/ddflog`

— `<OVOAGT_MONDIR>/ddflog_code`

— `<OVOAGT_MONDIR>/ddfutil`

Verify does the following for HP-UX, Solaris, AIX,and other UNIX managed nodes:

- Checks that the following files exist and the version is A.01.20.00 or higher:

    — `<OVOAGT_MONDIR>/ddfcomp`

    — `<OVOAGT_MONDIR>/ddfcomp_coda`

    — `<OVOAGT_MONDIR>/ddflog`

    — `<OVOAGT_MONDIR>/ddflog_code`

    — `<OVOAGT_MONDIR>/ddfutil`

where *<OV_AGT_DIR>* is:

- on a UNIX managed node: `/var/opt/OV`

- on a Windows managed node: depends on the installation of the product

and *<OVO_CMDDIR>*:

- on a DCE managed node is: *<OV_AGT_DIR>*`/bin/OpC/cmds`

- on an HTTPS managed node is: *<OV_AGT_DIR>*`/bin/instrumentation`

and *<OVO_MONDIR>* :

- on a DCE managed node is: *<OV_AGT_DIR>*`/bin/OpC/monitor`

- on an HTTPS managed node is: *<OV_AGT_DIR>*`/bin/instrumentation`

To Launch Verify

1 At the OVO console, select a node in the Node Bank window.

2 From the Window menu, select **Application Bank**.

3 In the Application Bank window select **OASSPI** → **OASSPI Admin** → **Verify**.

   If the Verify application is successful, the following message appears:

   `Installation is clean`

View Error File

View the OAS SPI error log file.

Purpose

Allows the OVO administrator to view the contents of the error log file.

Function

View the contents of the OAS SPI error log file `<OV_AGT_DIR>/wasspi/oas/log/errorlog` where `<OV_AGT_DIR>` typically is:

- `/var/opt/OV` on UNIX managed nodes
- `/Program Files/HP OpenView/Installed Packages/{790 ...}` on Windows managed nodes

To View Error File

1   At the OVO console, select a node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** →   **View Error File**.

View Graphs

View OpenView Performance Manager (OVPM) graphs in a web browser.

Required Setup

OVPM must be installed and you must edit the `ovweb.conf` file (see Task 1: Configure the Management Server to Launch your Web Browser on page 41 for more information) before this application can run successfully.

If you are using Netscape Navigator, use version 6.0 or higher. Do not use Netscape Navigator 4.79 with this application.

Purpose

Allows the OVO administrator to view OAS SPI graphs in OVPM from the OVO console.

Function

Launches a web browser to display OAS SPI metric data in OVPM graphs.

To Launch View Graphs

1   At the OVO console, select a node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OASSPI Admin** → **View Graphs**.

OracleAS

The following applications are found in the OASSPI OracleAS application group.

Launch Oracle AS Console

Starts the Oracle Application Server Control Console, AggreSPY servlet, or Oracle Enterprise Manager Database Control from the OVO console.

Required Setup

You must edit the `ovweb.conf` file (see Task 1: Configure the Management Server to Launch your Web Browser on page 41 for more information) before this application can run successfully.

OracleAS Enterprise Manager must be installed on the managed node in order to launch the Oracle Enterprise Manager Database Control.

Purpose

Allows the OVO administrator to bring up the Oracle Application Server Control Console, run the AggreSPY servlet, or bring up the Oracle Enterprise Manager Database Control from the OVO console.

Function

Launch Oracle AS Console launches one of the following:

- Oracle Application Server Control Console - brings up the console in a web browser for an application server or all application servers on the selected node(s).

- AggreSPY - displays metrics for Oracle Application Server processes organized by areas (DMS spies and metric tables) allowing the OVO administrator to monitor performance of an OC4J/OHS server instance running on a managed node. Refer to the *Oracle Application Server Performance Guide* for more information about the AggreSPY servlet.

- Oracle Enterprise Manager Database Control - launches the Oracle Enterprise Manager Database Control used to manage the Oracle Application Server Metadata Repository database. Refer to the *Oracle Application Server Administrator's Guide* for more information about the Oracle Application Server Metadata Repository.

  OracleAS Enterprise Manager must be installed on the managed node in order to launch the Oracle Enterprise Manager Database Control.

To Launch Launch OracleAS Console

1 At the OVO console, select a node in the Node Bank window.

2 From the Window menu, select **Application Bank**.

3 In the Application Bank window select **OASSPI** → **OracleAS** → **Launch OracleAS Console**.

4 Select an option:

   — 1 - Launch the Oracle Application Server Control Console

— 2 - Launch AggreSPY

— 3 - Launch the Oracle Enterprise Manager Database Control (OracleAS Enterprise Manager must be installed on the managed node for this option to be available)

— q - Quit the application

Start/Stop OracleAS

Starts/stops Oracle Application Servers from the OVO console.

Required Setup

The START_CMD, STOP_CMD, and USER configuration properties *MUST* be set before this tool can run successfully.

Purpose

Allows the OVO administrator to start and stop Oracle Application Servers from the OVO console. The OVO administrator can start and stop an application server or all application servers on the selected managed node(s) and does not have to log in to each Oracle Application Server Control Console to perform these functions.

Function

Start/Stop OracleAS starts or stops an application server or all application servers on the selected managed node(s).

To Launch Start/Stop OracleAS

1   At the OVO console, select a node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OracleAS** → **Start OracleAS** or **Stop OracleAS**.

View OAS Logs

View the Oracle Application Server log files.

Purpose

Allows the OVO administrator to select an Oracle Application Server log file to view without having to log in to the system on which the Oracle Application Server is running.

Function

View OAS Logs does the following:

• When View OAS Logs is run without entering a parameter, a numbered list of available log files for a managed node is presented.

- When View OAS Logs is run with a parameter entered, if the parameter is not valid (a non-numeric value is entered or the number entered does not correspond to the list of available log files), a numbered list of available log files for the managed node is presented.

- When View OAS Logs is run with a valid parameter, the contents of the corresponding log file for the managed node is presented.

You may only enter one numeric value in the parameter field. This is the number used to designate the log file to view for all managed nodes selected. Select one log file per managed node to view each time you launch the application.

If you keep the Application Status window open and re-launch the application, the output in the Application Status window accumulates.

To Launch View OAS Logs

1   At the OVO console, select a node in the Node Bank window.

2   From the Window menu, select **Application Bank**.

3   In the Application Bank window select **OASSPI** → **OracleAS** →
View OAS Logs.

4   Select the managed nodes on which you want to view the Oracle Application Server log file.

5   Click **Launch**. The Edit Parameters window appears. If you know the number of the log file you want to view, enter it into the Parameters field. Otherwise, leave this field blank to list available log files to view.

6   Click **Launch**. The Application Status window opens.

7   In the Launched Applications field, check the Status of the application for each node:

- Started/Starting - The application is running.

- Succeeded - A list of available log files to view opens. Select the node in the Launched Applications field and scroll through the Application Output field to view the list of available log files.

- Failed - The tool did not succeed. Select the node in the Launched Applications field and scroll through the Application Output field for more information about the problem.

8   Double-click **View OAS Logs**.

9   Select the managed nodes on which you want to view the Oracle Application Server log file.

10   Click **Launch**. The Edit Parameters window appears.

11   In the Parameters text box, enter the number of the log file you want to view. Only one log file can be selected.

If you do not remember the number of the log file, go to the Application Status window, select the node in the Launched Applications field, scroll through the Application Output filed to view the list of available log files, and enter the number of the log file you want to view in the Edit Parameters window.

12   Click **Launch**.

13   In the Application Status window, select the node on which to view the selected log file and scroll through the Application Output filed to view the log file.

14 Repeat steps 8-13 for each log file you want to view.

15 Click **Close** to close the Application Status window.

View Status

Displays a status report for the Oracle Application Server(s) on the selected managed node(s).

Purpose

Allows the OVO administrator to quickly check the status of each application server running on a managed node.

Function

View Status displays the Oracle Application Server instance name, hostname, Oracle home, and processes (component, type, process ID, and status) for each application server instance.

To Launch View Status

1 At the OVO console, select a node in the Node Bank window.

2 From the Window menu, select **Application Bank**.

3 In the Application Bank window select **OASSPI** → **OracleAS** → **View Status**.

Glossary

agent

A program or process running on a remote device or computer system that responds to management requests, performs management operations, or sends performance and event notification. An agent can provide access to managed objects and MIB variables, interpret policy for resources and do configuration of resources.

application

Packaged software that provides functionality that is designed to accomplish a set of related tasks. An application is generally more complex than a tool.

ASCII

American Standard Code for Information Interchange.

assigned policy

A policy that has been assigned to one or more resources in the computing environment but which has not yet been deployed or installed on those resources.

automatic action

A pre-configured program or script that is executed in response to an event, message, or a change in information in the management database. without operator intervention.

client

When the context is network systems, a computer system on a network that accesses a service from another computer (server). When the context is software, a program or executable process that requests a service from a server.

client console

An instance of the user interface that appears on the client system while the application runs on a server.

command

An instruction to a computer program that causes a specified operation to be carried out. Commands are typically typed by users on a command line.

configuration

In a network context, the complete set of inter-related systems, devices and programs that make up the network. For example the components of a network may include computer systems, routers, switches, hubs, operating systems and network software. The configuration of the network determines the way that it works and the way that it is used. In a software context, the combination of settings of software parameters and attributes that determine the way the software works, the way it is used, and how it appears.

configuration file

A file that contains specifications or information that can be used for determining how a software program should look and operate.

configure

To define and modify specified software settings to fulfill the requirements of a specified environment, application or usage.

connection

A representation of a logical or physical relationship between objects.

console

An instance of the user interface from which the user can control an application or set of applications.

customization

The process of designing, constructing or modifying software to meet the needs and preferences of a particular customer or user.

customize

To design, construct or modify software to meet the needs and preferences of a particular customer or user.

data type

A particular kind of data; for example database A repository of data that is electronically stored. Typically databases are organized so that data can be retrieved and updated.

deploy

To install and start software, hardware, capabilities, or services so that they work in the business environment.

Deployed application

An application and its components that have been installed and started to work in the business environment.

deployed policy

A policy that is deployed on one or more resources in the computing environment.

deployment

The process of installing and activating software, hardware, capabilities or services so that they work in the business environment.

Deployment package

A software package that can be deployed automatically and installed on a managed node.

error log

An output file containing error messages.

event

An event is an unsolicited notification such as an SNMP trap or WMI notification generated by an agent or process in a managed object or by a user action. Events usually indicate a change in the state of a managed object or cause an action to occur.

HP OpenView

A family of network and system management products, and an architecture for those products. HP OpenView includes development environments and a wide variety of management applications.

Hypertext Transfer Protocol (HTTP).

The protocol that World Wide Web clients and servers use to communicate.

HTTPS

Hypertext Transfer Protocol Secure.

icon

An on-screen image that represents objects that can be monitored or manipulated by the user or actions that can be executed by the user.

managed object

A network, system, software or service object that is both monitored for performance, status and messages and is manipulated by means of actions in the management software.

management console

An instance of the user interface from which the user can control the management application or set of management applications. The console may be on the system that contains the management software or it may be on another system in the management domain.

management server

A server that provides management services, processes, or a management user interface to clients. A management server is a type of management station.

message

A structured, readable notification that is generated as a result of an event, the evaluation of one or more events relative to specified conditions, or a change in application, system, network, or service status.

message browser

A graphical user interface that presents notifications that are generated as a result of an event, the evaluation of one or more events relative to specified conditions or a change in application, system, network, or service status.

message description

Detailed information about an event or message.

message key

A message attribute that is a string used to identify messages that were triggered from particular events.The string summarizes the important characteristics of the event. Message keys can be used to allow messages to acknowledge other messages, and allows for the identification of duplicate messages.

message severity level

A property of a message indicating the level of impact of the event or notification that initiated the message. See also severity level.

metadata

Data that defines data.

metric

A measurement that defines a specific operational or performance characteristic.

Microsoft Management Console (MMC)

A Microsoft product that provides a software framework for the management of IT environments. Management products are added or "snapped into" the management console and thus extend the management capability of the Microsoft Management Console.

module

A self-contained software component that performs a specific type of task or provides for the presentation of a specific type of data. Modules can interact with one another and with other software.

node

When the context is network, a computer system or device (for example, printer, router, bridge) in a network. When the context is a graphical point to point layout, a graphical element in a drawing that acts as a junction or connection point for other graphical elements.

OVO

HP OpenView Operations

OVPA

HP OpenView Performance Agent

OVPM

HP OpenView Performance Manager

parameter

A variable or attribute that may be given an arbitrary value for use during an execution of either a computer program or a procedure within a program.

parameter type

An abstraction or categorization of a parameter that determines the particular kind of data that is valid for the parameter. For example a parameter type could be IP Address which

indicates that parameter values must have 4 numbers separated by decimals with the value for each number being in the range of 0 to 255.

parameter value

A value that is given to a variable.

policy

A set of one or more specifications rules and other information that help automate network, system, service, and process management. Policies can be deployed to various targets (for example, managed systems, devices, network interfaces) providing consistent, automated administration across the network.

Policy management

The process of controlling policies (for example, creating, editing, tracking, deploying, deleting) for the purposes of network, system or service management.

policy type

An abstraction or categorization of policies based on the function of the policy or the services that the policy supports.

port

If the context is hardware, a location for passing information into and out of a network device. If the context is ECS, a location for passing information into and out of a correlation node.

server

If the context is hardware plus software, a computer system that provides a service (for example, management capabilities, file storage capabilities) to other computer systems (clients) on the network. If the context is a software component, a program or executable process that responds to and services requests issued by clients.

severity level

A property of an object indicating the status of the object. Severity level is based on the impact of events or messages associated with the object.

SMART Plug-In (SPI)

Prepackaged software that installs into a management console and provides management capabilities specific to a given type of business application, database, operating system, or service.

trace log

An output file containing records of the execution of application software

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