

Oracle® Enterprise Manager

System Monitoring Plug-In Installation Guide for Exadata Power Distribution Unit

Release 11.1.0.2.0

E20087-03

March 2011

Overview of the Plug-In

This plug-in will be used to monitor PDU's actual current value of Phase1, Phase2, and Phase3 and raises appropriate events if they have crossed the different threshold values. Each PDU will have a plug-in instance added to its own OEM Grid Control agent.

By deploying the plug-in to your Grid Control environment, you gain the following management features:

- Monitor PDU targets.
- Raise alerts and violations based on thresholds set on monitoring and configuration data.
- Provide rich out-of-box metrics and reports based on the gathered data.

Versions Supported

This plug-in supports the following versions of products:

- Oracle Exadata Storage Server 11g Release 2 (11.2) and later
- Enterprise Manager Grid Control 11g Release 1 (11.1) and later (Oracle Management Service and Oracle Management Agent)

Prerequisites

The following prerequisites must be met before you can deploy the plug-in:

- Set and validate the preferred credentials on all Agents where you want to deploy the plug-in. This is essential in order to deploy the plug-in.
- The PDU firmware version must be 1.02 or later. The current version can be obtained by logging into the web interface of the PDU. On the left side of the screen, click **Module Info** to view the PDU firmware version. Software updates for the PDU are available at:

<http://www.oracle.com/technetwork/indexes/downloads/sun-az-index-095901.html>

The firmware is located under the product name Sun Rack II.

PDU Configuration

To enable Grid Control to collect metric data for the PDU target, you must configure the PDU to accept SNMP queries from the Management Agent you deployed the plug-in to. Also, appropriate threshold values for different Phase values needs to be set on the PDU.

This document assumes this is a first time configuration of the PDU. SNMP must be enabled and the trap section completed. Granting SNMP access to a different database server IP address is an example where only the "Trap Host Setup" section needs to be changed.

1. Log in to the PDU network interface.
2. Click **Net Configuration**, then log in again.
3. Scroll down until you reach the SNMP section of the frame.

Note that the network interface for the PDU is a frame within a window. In order to scroll down on this page, you must see the scroll bar for the PDU frame as well as the outside scroll bar for the browser in which you accessed the PDU.

4. If your PDU is not SNMP-enabled, select the **SNMP Enable** check box, then click **Submit**.
5. Scroll to the "NMS" region of the frame.
6. Enter the following in Row 1 under NMS:
 - IP: Enter the IP address of the first database server in your cluster
 - Community: Enter "public"
7. Click **Submit**.
8. For details on configuring the PDU, see *PDU Threshold Settings for Oracle Exadata Database Machine* (Doc ID 1299851.1) in My Oracle Support.

Deploying the Plug-In

After you ensure that the prerequisites are met, follow these steps to deploy the plug-in to the appropriate Management Agents.

1. Download the PDU Plug-In archive file to your desktop or computer on which the browser is launched. You can download the archive from Oracle Technology Network (OTN).
2. Log in to Enterprise Manager Grid Control as SYSMAN.
3. Click **Setup** from the upper-right-corner of the Grid Control Home page, then click **Management Plug-ins** from the left-side menu of the Setup page.
4. Click **Import**.
5. Click **Browse**. Navigate to the directory where you have downloaded the plug-in JAR file. Select the JAR file, then click **OK**.
6. Click **List Archive**. The plug-ins within the selected JAR file appear in a list.
7. Select the check box for the PDU Release 11.1.0.2.0 and click **OK**.
8. Verify that you have set preferred credentials on all Agents where you want to deploy the plug-in.

9. In the Management Plug-ins page, click the icon in the **Deploy** column for the plug-in.

The Deploy Management Plug-in wizard appears.

10. Click **Add Agents**.
11. Select **Agent** from the Target Type pull down menu.
12. Select the Agent(s) you want to deploy the plug-in to, then click **Select**.
13. Click **Next**, then click **Finish**. The plug-in is deployed to the selected Agents.

If you see an error message stating that the preferred credential is not set up, go to the Preferences page and add the preferred credentials for the Agent target type. To go to the Preferences page, click **Preferences** from the top-right corner of the Grid Control page.

Adding PDU Targets for Monitoring

After successfully deploying the plug-in, follow these steps to add the PDU target to Grid Control for central monitoring and management:

1. Click the **Targets** tab, then click **All Targets**.
2. Select **Agent** from the "Search" pull down menu. Enter the server hostname of the first database server name in your cluster in the search field, then click **Go**.
3. Click on the Agent you want to add as a target (for example, sclczdb01.us.oracle.com:3872).
4. Select the **PDU** target type from the "Add" pull down menu, then click **Go**.
5. Enter the following parameters in the Add PDU page:
 - Name: Enter the appropriate name for the first PDU in the rack
 - PDU Module: Enter the designation for the first PDU in the rack; for example, "Module1"
 - IP Address: Enter either the IP address or DNS name for the first PDU in the rack
 - Port: Accept the default value
 - SNMP Read Community String: Accept the default value
 - SNMP Timeout: Accept the default value
 - PDU console URL (optional): URL for the PDU console
6. Repeat the step above for each PDU in the rack.
7. Click **Test Connection** to make sure the parameters you entered are correct.
8. If the test is successful, click **OK**.

Alerts from the PDU

Configuring the PDU as defined in MOS note *PDU Threshold Settings for Oracle Exadata Database Machine* (Doc ID 1299851.1) will cause the PDU to send alerts via SNMP which will be picked up and displayed in the Enterprise Manager Plugin. No additional configuration of alerts is needed in Enterprise Manager.

Verifying the PDU Configuration

Using the `snmwalk` command line utility or equivalent tool, PDU configuration can be verified.

Running the following command should fetch the data from PDU and display them:

```
snmpget -v 1 -c <community_string> <hostname_of_pdu>  
1.3.6.1.4.1.2769.1.2.3.1.1.1.0
```

Note: If the Timeout message is displayed as a output for the above command, then it means that PDU is not yet configured correctly.

Verifying the PDU Plug-in

This section provides the steps to validate that the plug-in can collect the metrics through SNMP queries.

Prerequisites:

- Install the plug-in.
- Configure the PDU for accepting snmp queries from EMAgent.

Verify:

To verify the PDU is configured correctly for responding to SNMP queries from the EMAgent:

- In the EM console, go to the PDU target page.
- The *All metrics* link should show all the data collected.
- The *Alert history* link should show the events generated, if any.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, seven days a week. For TTY support, call 800.446.2398.

System Monitoring Plug-In Installation Guide for Exadata Power Distribution Unit, Release 11.1.0.2.0
E20087-03

Copyright © 2011, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

This software and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

