Oracle Enterprise Manager

System Monitoring Plug-in Installation Guide for Sun Ray Software, Release 12.1.0.1.0

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Oracle Enterprise Manager: System Monitoring Plug-in Installation Guide for Sun Ray Software, Release 12.1.0.1.0

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Abstract

This document provides installation instructions for the Sun Ray Software plug-in used with Oracle Enterprise Manager.

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Preface

This document provides information for the Sun Ray Software 5.4 product.

Audience

This document is intended for users with system administration experience. It is assumed that readers are familiar with Web technologies and have a general understanding of Windows and UNIX platforms.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Related Documents

The entire set of documentation for this product is available at:

http://www.oracle.com/technetwork/server-storage/sunrayproducts/docs

The documentation set includes the following manuals:

- *Sun Ray Software 5.4 Administration Guide*
- *Sun Ray Software 5.4 Release Notes*
- *Sun Ray Software 5.4 Security Guide*
- *Oracle Enterprise Manager System Monitoring Plug-in Installation Guide for Sun Ray Software*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Chapter 1. Overview

Oracle Enterprise Manager System Monitoring Plug-in for Sun Ray Software (referred to as the Sun Ray Software plug-in in this document) extends Oracle Enterprise Manager Cloud Control to help you centrally monitor and manage a Sun Ray Software environment. By deploying the plug-in to your Enterprise Manager environment, you can:

- Monitor the health of Sun Ray servers from the Oracle Enterprise Management Console.
- Collect a set of availability and performance metrics with predefined thresholds.
- Set up notifications for system issues.
- Ensure optimal server performance by monitoring Sun Ray sessions and users.
- Monitor server loading for availability and capacity planning.
- Audit the Sun Ray Software environment to comply with licensing and inventory assessments.

1.1. Metrics Monitored

Metrics are units of measurement used to determine the health of a target. After deploying and enabling this plug-in, you can modify metric threshold values, change metric collection schedules, and disable collection for some metrics.

This plug-in enables you to monitor the following information from a Sun Ray server target in a Sun Ray Software environment:

- Response
- Client Details
- Failover Group Details
- Failover Group Statistics
- Failover Group Status
- Session Activity
- Sessions Per User
- Sun Ray Server DHCP Network
- Sun Ray Server Details
- Sun Ray Server Network Interfaces
- Sun Ray Software Services

For details about each metric, see Chapter 4, *Metrics Reference*.

Chapter 2. Requirements

This chapter provides the supported versions of the required software and the list of prerequisites to deploy and use the plug-in.

2.1. Versions

This plug-in supports the following versions of products:

- Sun Ray Software 5.4
- Enterprise Manager Cloud Control 12c Release 1
- Enterprise Manager Cloud Control 12c Release 2

2.2. Prerequisites

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

- Sun Ray Software 5.4 is installed on the Sun Ray server to be monitored.
- Enterprise Manager Agent for Enterprise Manager Cloud Control 12c Release 1 or Release 2 is installed on the Sun Ray server to be monitored.

It is also assumed that you are familiar with Enterprise Manager Cloud Control 12c and have a general understanding of the product. For detailed information, see the Enterprise Manager Cloud Control 12c Documentation site.

Chapter 3. Installing the Sun Ray Software Plug-in

This chapter provides the major steps required to install the plug-in. For many of the steps, you will be directed to use the instructions already provided in the Oracle Enterprise Manager Cloud Control Administrator's Guide.

3.1. Deploying the Sun Ray Software Plug-in

See the *Plug-in Manager* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for steps to deploy the plug-in:

```
http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm
```

You need to deploy the plug-in on the Sun Ray servers to be monitored.

3.2. Adding Instances for Monitoring

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

1. Log in to Enterprise Manager Cloud Control as `sysman` or as a user that has the appropriate privileges.
2. From the **Setup** menu, select **Add Target**, and then select **Add Target Manually**.
3. On the Add Targets Manually page, select **Add Non-Host Targets by Specifying Target Monitoring Properties**.
4. Choose **Sun Ray Software** for the Target Type.
5. Click the magnifying glass in the Monitoring Agent field to select the agent on the Sun Ray server you want to monitor.
6. Click **Add Manually**.
7. On the Add Sun Ray Software page, enter a unique name for the Target Name and click **OK**.

   For example, you can use the naming convention of `Sun Ray Software Plug-in on` *`server_hostname`*.

3.3. Verifying the Sun Ray Software Plug-in

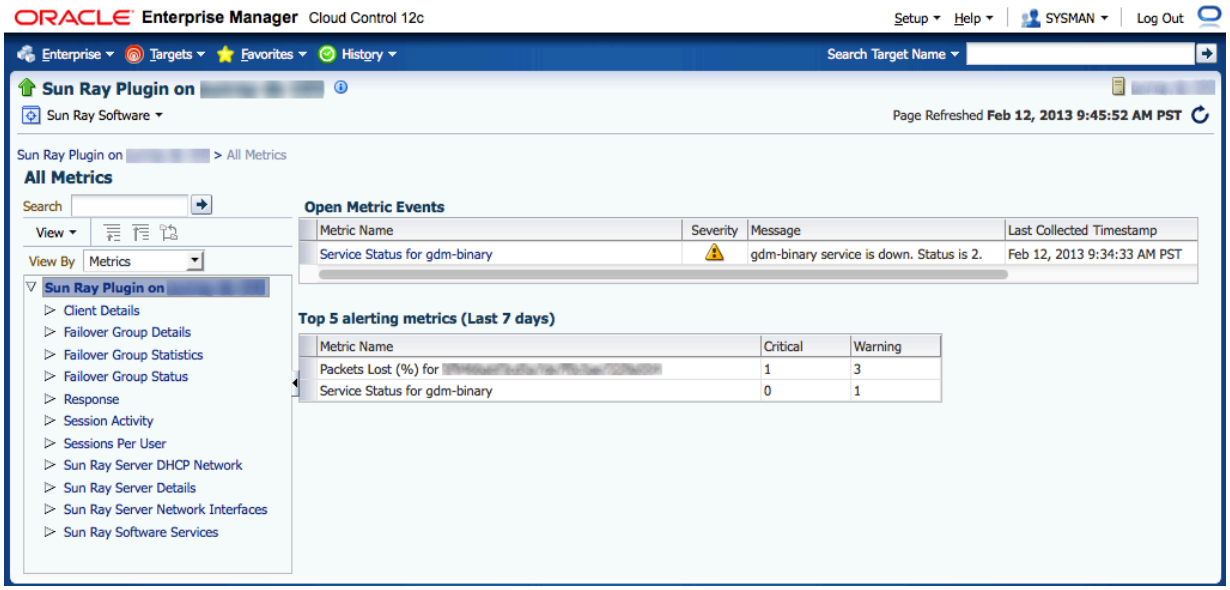
This procedure verifies that Enterprise Manager is properly monitoring the plug-in target. You should wait a few minutes for the plug-in to start collecting data before verification.

1. Log in to Enterprise Manager Cloud Control as `sysman` or as a user that has the appropriate privileges.
2. From the **Targets** menu, select **All Targets**.
3. On the All Targets page, click the Target Name that you want to verify. This is the Target Name you created in Section 3.2, “Adding Instances for Monitoring”.

   The Sun Ray server home page is displayed. You can use the **Search Target Name** field to help you filter the list.
4. From the **Sun Ray Software** menu in the upper-left, select **Monitoring**, and then select **All Metrics**.

You should be able to view the Sun Ray Software metrics being monitored in the left-hand pane, as shown in Figure 3.1, “Sun Ray Software Plug-in All Metrics Page”

Figure 3.1. Sun Ray Software Plug-in All Metrics Page



3.4. Undeploying the Sun Ray Software Plug-in

See the *Plug-in Manager* chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for steps to undeploy the plug-in if necessary:

```
http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGEFADI
```

Chapter 4. Metrics Reference

This chapter provides detailed information about the metrics monitored by the Sun Ray Software plug-in.

Here is the list of metrics:

- Response
  - **Status (Up/Down)** - A standard Enterprise Manager metric that indicates the heartbeat status of the plug-in, which is the overall status of the Sun Ray server in this instance. This metric indicates whether the important Sun Ray Software services are reachable or not.
- Client Details
  - **MAC Address** - The client ID of the desktop client, which is the MAC address for a Sun Ray Client or the MD5 hash of the client key for OVDC. See Client ID Differences Between Oracle Virtual Desktop Clients and Sun Ray Clients for details.
  - **Bytes Received** - The number of bytes the client has received since the client last connected to the authentication server, either since the session initialization or the last hotdesk.
  - **CPU Load (%)** - The percentage of the CPU load on the client.
  - **Firmware Revision** - Installed version of the Sun Ray Operating Software on the Sun Ray Client.
  - **Hardware Model** - The model name for the client. The model names are the same names used in the Sun Ray server's `/tftpboot` directory. The `SunRayS1` model name specifies an Oracle Virtual Desktop Client.
  - **Idle Time (seconds)** - The accumulated time, in seconds, that the client has been idle since the client last connected to the authentication server, either since the session initialization or the last hotdesk.
  - **IP Address** - The IP address of the client.
  - **Latency (milliseconds)** - The network latency between the client and the Sun Ray server.
  - **Location** - The location of the client (user defined). See How to Configure a Client's Location and Information for details.
  - **Optional Data** - General information about the client (user defined). See How to Configure a Client's Location and Information for details.
  - **Packets Lost** - The number of packages lost since the client last connected to the authentication server, either since the session initialization or the last hotdesk.
  - **Packets Lost (%)** - The percentage of the packages lost since the client last connected to the authentication server, either since the session initialization or the last hotdesk.
  - **Packets Received** - The number of packages received since the client last connected to the authentication server, either since the session initialization or the last hotdesk.
  - **Session Status** - The status of the session. Value is 1 (connected) or 2 (disconnected).
  - **Sun Ray Server Ownership** - The Sun Ray server that is providing the session to the client.
- Failover Group Details

    - **Hosts in the Failover Group** - The list of Sun Ray servers in the failover group.
    - **Member Status** - The member status for the Sun Ray server in the failover group, which are the Host Status values as displayed by the `utgstatus` command. This includes `T` for trusted and `N` for online.
    - **Network Interface** - The IP address of the Sun Ray server.
    - **Network Interface Status** - The network interface status for the Sun Ray server in the failover group, which are the Interface Status Flags as displayed by the `utgstatus` command. This includes `U` for Up, `A` for Available, and `M` for Managing.
- Failover Group Statistics
    - **Offline Hosts** - The number of Sun Ray servers in the failover group that are not included in load balancing and normal session creation.
    - **Offline Hosts (%)** - The percent of Sun Ray servers in the failover group that are offline.
    - **Online Hosts** - The number of Sun Ray servers in the failover group that are included in load balancing and normal session creation.
    - **Total Hosts in Failover Group** - The number of Sun Ray servers in the failover group.
- Failover Group Status
    - **Failover Group Server** - The list of Sun Ray servers in the failover group.
    - **Status** - The overall status of the Sun Ray server in the failover group. Value is 1 (up) or 2 (down). Status of 1 means the server is online and is included in load balancing and normal session creation. Status of 2 (down) means the server is offline and is not available for load balancing and normal session creation.
- Session Activity
    - **Connected Clients** - The number of Sun Ray Clients or Oracle Virtual Desktop Clients connected to the server. The connected clients can be non-idle sessions (user logged in) or idle sessions (displaying a login screen). This metric also includes the connected primary and secondary heads from a multihead group.
    - **Connected Sessions** - The number of non-idle sessions (user logged in) connected to clients.
    - **Critical Sessions** - The number of sessions showing packet loss greater than 10%.
    - **Disconnected Sessions** - The number of sessions that are still running on a Sun Ray server but are not connected to a client (not displayed on a client). A user can reconnect to a disconnected session, for example, by inserting a smart card containing the appropriate token into the card reader on a client.
    - **Total Sessions Including Inactive Sessions** - The total number of connected and disconnected sessions on the Sun Ray server.
    - **User Sessions** - The total number of potential users, which equals the number of connected clients minus the number of connected secondary heads from a multihead group.
- Sessions Per User
    - **Sun Ray Users** - The list of users with a session on the Sun Ray server.

- **Sessions List** - The number of sessions per user running on the Sun Ray server.

- Sun Ray Server DHCP Network

Note

This metric is not available for this release.

  - **Network Name** - The name of the DHCP network provided by the Sun Ray server.
  - **Available IP Addresses** - The number of available IP addresses from the Sun Ray server when used as a DHCP server.

- Sun Ray Server Details
  - **Administrator Contact** - The name or contact information for the server administrator.
  - **Current Sun Ray Software Policies** - The current policies applied to the Sun Ray server per the `utpolicy` command.
  - **Last Session Manager Start Time (100ths of a second)** - The time in 100ths of a second since the session manager (`utsessiond`) started.
  - **Primary Server** - Specifies whether the Sun Ray server is the primary server in a failover group.
  - **Sun Ray Software Installation Date** - The time stamp when the Sun Ray Software was installed. Example is `Aug 23, 2012 12:50:10 PM MDT`.
  - **Sun Ray Software Version Installed** - The Sun Ray Software version installed.

- Sun Ray Server Network Interfaces
  - **Interface Name** - The name of the network interface used for the Sun Ray network. Example is `e10000g0`.
  - **IP Address** - The IP address of the Sun Ray server.
  - **LAN Type** - Specifies whether the network interface is part of a local area network, also referred to as a shared network (used `utadm -L on` for network configuration).
  - **Last Packet Seen (100ths of a second)** - A time in 100ths of a second since the last keep-alive packet was detected from the network interface.
  - **Netmask** - The netmask of the network interface.
  - **Network Interface Status** - The status of the network interface. Value is 1 (up) or 2 (down).

- Sun Ray Software Services
  - **Service Name** - The name of the service.
  - **Last Time Changed** - The time when the last warm or cold restart occurred on the Sun Ray server. For services that fork per session (for example, `uttscpd` or `dtlogin`), it is the time when the most recently forked process still running was started.
  - **Service Description** - A short description of the service. For example, Auth Manager is the description for the `utauthd` service.

- **Service List** - The number of instances of the service running on the server.
- **Service Start Time** - The time when the service was started, such as `Thu Sep 13 14:07:27 2012`.
- **Service Status** - The status of the service. Value is 1 (running) or 2 (not running).