

Oracle® Enterprise Manager

System Monitoring Plug-in Installation Guide for EMC Celerra Server

10g Release 2 (10.2)

B28042-01

January 2006

This document provides a brief description about the Oracle System Monitoring Plug-in for EMC Celerra Server, details on the versions the plug-in supports, prerequisites for installing the plug-in, and step-by-step instructions on how to download, install, verify, and validate the plug-in.

Description

The System Monitoring Plug-in for EMC Celerra Server extends Oracle Enterprise Manager Grid Control to add support for managing EMC Celerra Network Attached Storage (NAS) servers. By deploying the plug-in in your Grid Control environment, you gain the following management features:

- Monitor EMC Celerra NAS servers.
- Gather configuration and track configuration changes for NAS servers.
- Raise alerts and violations based on thresholds set on monitoring and configuration data.
- Provide rich out-of-box reports for the user interface based on the gathered data.
- Support monitoring by a remote Agent. For remote monitoring, the Agent does not need to be on the same computer as the Celerra Server.

Versions Supported

This plug-in supports the following versions of products:

- Enterprise Manager Grid Control 10g Release 2 or higher Management Service
- EMC Celerra servers with Clariion (NS 600/700 and NS 700G), and future versions of EMC Celerra servers provided that they are backward-compatible
- Enterprise Manager Grid Control 10g Release 2 or higher Agent on any UNIX platform (such as Linux, HP UX, and Solaris)
- EMC Celerra Software/CLI version 5.3 or later

Prerequisites

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

- Oracle Enterprise Manager Grid Control 10g Release 2 or higher system and Agent.
- The EMC Celerra Plug-in can only be deployed on UNIX Agents, not Windows.
- Secure Shell (SSH) must be configured to bypass the Control Station host user password. See "[Configuring SSH to Bypass the Password](#)" for the procedure.
- SSH should be installed in:


```
/usr/bin:/usr/sbin:/bin:/usr/local/bin
```

Deploying the Plug-in

After you ensure that the prerequisites are met, follow these steps to deploy the plug-in:

1. Download the EMC Celerra Server Plug-in archive to your desktop or computer on which the browser is launched. You can download the archive from the Oracle Technology Network (OTN).
2. Log in to Enterprise Manager Grid Control as a Super Administrator.
3. Click the **Setup** link in the upper right corner of the Grid Control Home page, then click the **Management Plug-ins** link on the left side of the Setup page.
4. Click **Import**.
5. Click **Browse** and select the plug-in archive:
6. Click **List Archive**, which lists the plug-ins from the selected archive.
7. Select the plug-in 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 EMC Celerra Server plug-in. The Deploy Management Plug-in wizard appears.
10. Click **Add Agents**, then select one or more Agents to which you want to deploy the plug-in. The wizard reappears and displays the Agent you selected.
11. Click **Next**, then click **Finish**.

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.

Adding Instances for Monitoring

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

1. From the Agent home page where the EMC Celerra Server Plug-in was deployed, select the **EMC Celerra Server** target type from the **Add** drop-down list, then click **Go**. The Add EMC Celerra Server page appears.

2. Provide the following information for the parameters:
 - **Name** — Name for the plug-in
 - **Celerra Control Station Host or IP Address** — Name/IP address of the Control Station
 - **Celerra Admin User** — Keep the default name if SSH set up for nasadmin, or change the name if SSH is set up for a different user
3. Click **Test Connection** to make sure the parameters you entered are correct.
4. Reenter the encrypted parameters from step 2 if the connection test was successful, then click **OK**.

Note: After you deploy and configure the plug-in to monitor one or more targets in the environment, you can customize the monitoring settings of the plug-in. This alters the collection intervals and threshold settings of the metrics to meet the particular needs of your environment. If you decide to disable one or more metric collections, this could impact the reports that the metric is a part of.

Verifying and Validating the Plug-in

After waiting a few minutes for the plug-in to start collecting data, use the following steps to verify and validate that Enterprise Manager is properly monitoring the plug-in target:

1. Click the EMC Celerra Server target link from the Agent home page Monitored Targets table. The EMC Celerra Server home page appears.
2. Verify that no metric collection errors are reported in the Metrics table.
3. Ensure that reports can be seen and no errors are reported by selecting the **Reports** property page.
4. Ensure that configuration data can be seen by clicking the **View Configuration** link in the Configuration section. If configuration data does not immediately appear, click **Refresh** in the View Configuration page.

Configuring SSH to Bypass the Password

Follow the steps below to set up SSH from the host, where the Enterprise Manager Agent is installed on the EMC Celerra control station.

1. Log in to the host where the Enterprise Manager Grid Control Agent is installed that monitors EMC Celerra. Log in as the user under which the Agent is running.
2. Connect to the EMC Control Station using SSH as shown below. Ensure that the SSH client is installed on the host. If this is the first time you are accessing the Control Station, type **Yes** when the system asks whether you want to save the RSA key of the Control Station to the local file.

```
# ssh -l nasadmin erpcel01-con
The authenticity of host 'erpcel01-con (140.20.176.75)' can't be
established.
RSA key fingerprint is 72:2c:f8:db:76:c9:8d:35:ae:b1:ab:74:30:f5:69:af.
Are you sure you want to continue connecting (yes/no)? yes
```

```
Warning: Permanently added 'erpcel01-con, 140.20.176.75' (RSA) to the
list of known hosts.
nasadmin@ erpcel01-con 's password: [Type the password for nasadmin]
Last login: Sat Oct 15 22:18:21 2005 from stach28.us.oracle.com
EMC Celerra Control Station Linux Thu Mar 24 08:27:43 PST 2005
slot_0 primary control station ***
[nasadmin@erpcel01-con nasadmin]$ [Type exit and exit SSH]
```

3. Generate a pair of authentication keys on the Agent host by entering:

```
# cd ~/.ssh
# ssh-keygen -t dsa -f id_dsa

Generating public/private dsa key pair.
Enter passphrase (empty for no passphrase): [Leave empty]
Enter same passphrase again: [Leave empty]
Your identification has been saved in id_dsa.
Your public key has been saved in id_dsa.pub.
The key fingerprint is:
e2:24:fa:d2:f9:48:e6:1e:85:7e:86:d1:b5:52:79:fb spanchum@
stach28.us.oracle.com
```

4. Upload the public key (id_dsa.pub) to the Control Station in the home directory for user nasadmin.

```
# scp id_dsa.pub nasadmin@erpcel01-con:~/.ssh/
nasadmin@erpcel01-con's password: [Type the password for nasadmin]
id_dsa.pub 100% |*****| 600
00:00
```

5. Log in to the Control Station (erpcel01-con) and rename the uploaded file (id_dsa.pub) to the authorized_keys file. If the file already exists, add the contents of the id_dsa.pub file to the authorized_keys file by entering:

```
# ssh -l nasadmin erpcel01-con
nasadmin@erpcel01-con's password: [Type the password for nasadmin]
Last login: Sat Oct 15 22:53:22 2005 from stach28.us.oracle.com
EMC Celerra Control Station Linux Thu Mar 24 08:27:43 PST 2005
*** slot_0 primary control station ***
[nasadmin@erpcel01-con nasadmin]$ cd .ssh
[nasadmin@erpcel01-con .ssh]$ cat id_dsa.pub >> authorized_keys
[nasadmin@erpcel01-con .ssh]$ logout
Connection to erpcel01-con closed.
```

6. Run the following command to verify that a password is not required for any of the secure programs:

```
# ssh -l nasadmin erpcel01-con date
Sat Oct 15 23:04:46 PDT 2005
```

Undeploying the Plug-in

Follow these steps to undeploy the plug-in from an Agent:

1. Log in to Enterprise Manager Grid Control as a Super Administrator.
2. Select the **Targets** tab, then the **All Targets** subtab. The All Targets page appears.

3. Select the EMC Celerra Server Plug-in target and click **Remove**. You must do this step for all targets of the plug-in.
4. Make sure that the preferred credentials are set on the Agents where the plug-in was deployed.
5. Click the **Setup** link in the upper right corner of the All Targets page, then click the **Management Plug-ins** link on the left side of the Setup page. The Management Plug-ins page appears.
6. Click the icon in the **Undeploy** column for the EMC Celerra Server Plug-in. The Undeploy Management Plug-in page appears.
7. Check all the Agents that are currently deployed with the EMC Celerra Server Plug-in and click **OK**.

You must undeploy the plug-in from every Agent in the system to completely remove it from the enterprise.

8. Select the EMC Celerra Server Plug-in on the Management Plug-ins page and click **Delete**.

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 EMC Celerra Server, 10g Release 2 (10.2)
B28042-01

Copyright © 2006 Oracle. All rights reserved.

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial

property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States 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, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software—Restricted Rights (June 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

Alpha and Beta Draft documentation are considered to be in prerelease status. This documentation is intended for demonstration and preliminary use only. We expect that you may encounter some errors, ranging from typographical errors to data inaccuracies. This documentation is subject to change without notice, and it may not be specific to the hardware on which you are using the software. Please be advised that prerelease documentation is not warranted in any manner, for any purpose, and we will not be responsible for any loss, costs, or damages incurred due to the use of this documentation.