

# **Oracle® Enterprise Manager**

Grid Control Quick Installation Guide for Solaris (SPARC)

10g Release 2 (10.2)

**B31198-02**

May 2009

**ORACLE®**

Copyright © 1996, 2009, 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.

This guide describes how to quickly install Oracle Enterprise Manager Grid Control on Solaris (SPARC) systems. It includes information about the following:

- [Reviewing Information About This Guide](#)
- [System Requirements](#)
- [Mounting the Product Disk](#)
- [Installing Oracle Enterprise Manager Grid Control](#)
- [Other Installation or Upgrade Options](#)
- [Documentation Accessibility](#)

## **Reviewing Information About This Guide**

This guide describes how to perform a basic installation of Oracle Enterprise Manager Grid Control into a new database or into an existing database.

### **Tasks Described in This Guide**

The procedures in this guide describe how to:

- Configure your system to support the following installation types:

- "Enterprise Manager Grid Control Using a New Database" installation type, which installs the Management Service, central Management Agent, and Management Repository database on a single host
- "Enterprise Manager Grid Control Using an Existing Database" installation type, which installs the Management Service and central Management Agent on one host, and installs the Management Repository in an existing, qualified database

---

---

**Note:** For performance reasons, Oracle recommends that you do not install both the Management Service and Management Repository on the same host. Refer to ["Hardware Requirements"](#) for more information.

---

---

- Add a system to the grid, which installs the central Management Agent on a target host
- Mount the product disk
- Install Grid Control using Oracle Universal Installer's interactive mode

- Find more information about other installation scenarios

## **Tasks Not Described in This Guide**

This guide covers only the basic installation type described above and does *not* describe how to complete the following tasks:

- Install Grid Control in any non-interactive mode
- Configure your system to support installation of an additional Management Service or Management Agent
- Upgrade an existing installation to the latest version
- Install Grid Control on Real Application Clusters
- Troubleshoot your installation session
- Configure post-installation settings
- Use Enterprise Manager Grid Control
- Require secure communications between all Management Agents and the secure Management Service

## **Where to Get Additional Installation Information**

For more information about installing Oracle Enterprise Manager Grid Control, including tasks not described in this manual, refer

to *Oracle Enterprise Manager Installation and Basic Configuration* (For Linux x86 systems).

---

---

**Note:** The entire documentation library for Enterprise Manager can be found on the Oracle Technology Network:

<http://www.oracle.com/technology/documentation/oem.html>

This site may contain later versions of all books, including *Oracle Enterprise Manager Installation and Basic Configuration* (For Linux x86 systems). The installation procedures documented in this guide apply to all platforms. For platform specific information, refer to the *Oracle Enterprise Manager Quick Installation Guide* for the specific platform.

---

---

## System Requirements

The system or systems must meet the minimum hardware and software requirements given in the following sections.

Even though Oracle Universal Installer runs prerequisite checks on your system to verify that it meets the listed requirements, to

make sure that prerequisite checks do not fail, you should verify the requirements before running Oracle Universal Installer.

---

---

**Note:** Only requirements for the Management Service and/or Management Repository host(s) are given here. Management Agent and other requirements can be found in *Oracle Enterprise Manager Installation and Basic Configuration* (For Linux x86 systems).

---

---

## Hardware Requirements

The system or systems must meet the minimum hardware requirements for hard disk space, available memory, processor speed, and operating memory.

**Hard Disk Space Requirements** The hard disk requirements are:

- 4.5 GB for the "Enterprise Manager Grid Control Using a New Database" installation type
- 2.5 GB for the "Enterprise Manager Grid Control Using an Existing Database" installation type

**Available Memory Requirements** The available operating memory requirements for installation are:

- To install "Enterprise Manager Grid Control Using a New Database," a minimum of 1 GB of available operating memory for the host
- To install "Enterprise Manager Grid Control Using an Existing Database," a minimum of 1 GB of available operating memory for the node

**Operating Requirements** The hardware requirements to run Enterprise Manager are:

- Minimum of 2 GB of free physical memory for the host running the Management Service
- Minimum of 2 GB of free physical memory for the Management Repository node



Refer to *Oracle Enterprise Manager Grid Control Installation and Basic Configuration* (For Linux x86 systems) for recommended CPU and memory allocation for the Management Service and Management Repository for Enterprise Manager deployments of various size.

## Software Requirements

The system or systems must meet the minimum software requirements for operating system, packages, and kernel parameters.

**Operating System Requirements** The operating system must be one of the following, with the listed (or later) kernel version if you are installing the new database:

---

---

**Note:** Refer to Oracle*Metalink's* "Certify and Availability" page for additional information about these platforms.

---

---

- Solaris 8 Update 7 or later
- Solaris 9 Update 6 or later
- Solaris 10

---

---

**Note:** The listed kernel versions are only required for the "Enterprise Manager Grid Control Using a New Database" installation type. They are not required if you are using an existing, qualified database for your Management Repository.

---

---

**Packages Requirements** The system must be running the following (or later) package versions:

- SUNWarc
- SUNWbtool
- SUNWhea
- SUNWlibm
- SUNWlibms
- SUNWsprot
- SUNWsprox
- SUNWtoo
- SUNWi1of

- SUNWxwfmt
- SUNWi1cs
- SUNWi15cs

To check if the required operating system packages have been installed on your system, enter the following command:

```
prompt> pkginfo SUNWarc SUNWbtool SUNWhea SUNWlibm  
SUNWlibms SUNWsprot SUNWsprox SUNWtoo SUNWi1 of  
SUNWxwfmt
```

---

---

**Note:** If any packages are missing, contact your system administrator.

---

---

## Checking for 32-bit and 64-bit Application Support

Check whether your system is configured to support 32-bit and 64-bit applications by entering the following command:

```
prompt> /usr/bin/isainfo -v
```

## Required Patches

The patches required for the different Solaris versions are listed below:

## Solaris 8

- 108652-74 or higher: X11 6.4.1: Xsun patch
- 108921-18 or higher: CDE 1.4: dtwm patch
- 108940-57 or higher: Motif 1.2.7 and 2.1.1: Runtime library patch
- 108773-18 or higher: IIIM and X input and output method patch
- 111310-01 or higher: /usr/lib/libdhcpagent.so.1 patch
- 109147-26 or higher: Linker patch
- 111308-04 or higher: /usr/lib/libbmtmalloc.so.1 patch
- 111111-03 or higher: /usr/bin/nawk patch
- 112396-02 or higher: /usr/bin/fgrep patch
- 110386-03 or higher: RBAC feature patch
- 111023-02 or higher: /kernel/fs/mntfs and /kernel/fs/sparcv9/mntfs patch
- 108987-13 or higher: Patch for patchadd and patchrm
- 108528-26 or higher: Kernel update patch

- 108989-02 or higher: /usr/kernel/sys/acctctl and /usr/kernel/sys/exaccts patch
- 108993-45 or higher: LDAP2 client, libc, libthread and libnsl libraries patch
- 111023-02 or higher: Unable to load fontset ... iso-1 or iso-15

## **Solaris 9**

- 113096-03 or higher: X11 6.6.1: OWconfig patch
- 112785-35 or higher: X11 6.6.1: Xsun patch

## **Checking for Patches**

To determine the patches that have been installed on the system, follow these steps:

1. Run the `showrev` command with the `-p` option. The following command saves the sorted output to a file called `patchList`.
2. Enter the following command:  

```
prompt> showrev -p | sort > patchList
```
3. Open the file in a text editor and search for the patch numbers.

---

---

**Note:** If the required patches have not been installed, you can download them from <http://sunsolve.sun.com>.

---

---

**Kernel Parameters Requirements** The system must have at least the following recommended kernel parameters:

### **Solaris 8 and 9**

Verify that the following kernel parameters have been set to a equal to or greater than the value specified in this table:

<b>Parameter</b>	<b>Recommended Value</b>
noexec_user_stack	1
semsys:seminfo_semmni	100
semsys:seminfo_semmsl	256
shmsys:shminfo_shmmax	4294967295
shmsys:shminfo_shmmin	1
shmsys_shminfo_shmni	100
shmsys:shminfo_shmseg	10

---

---

**Note:** The following parameters are obsolete in Solaris 9:

- `semsys:seminfo_semmni`
  - `shmsys:shminfo_shmseg`
- 
- 

## Solaris 10

On Solaris 10, verify that the kernel parameters shown in the following table are set to values equal to or greater than the recommended values. The table also lists the resource controls that replace the `/etc/system` file for a specific kernel parameter.

**Table 1** *Solaris 10 Kernel Parameters*

Parameter	Resource Control	Recommended Values
<code>noexec_user_stack</code>	NA	1
<code>semsys:seminfo_semmni</code>	<code>project.max-sem_ids</code>	100
<code>semsys:seminfo_semmsl</code>	<code>project.max-sem-nsems</code>	256
<code>shmsys:shminfo_shmmax</code>	<code>project.max-shm-memory</code>	4294967295



**Table 1 (Cont.) Solaris 10 Kernel Parameters**

Parameter	Resource Control	Recommended Values
shmsys:shminfo_shmni	project.max-shm-ids	100

## Changing the Kernel Parameters

To check and change the kernel parameter, follow the commands listed in these topics:

- Solaris 8 and 9
- Solaris 10

### Solaris 8 and 9

1. To view the current values of the kernel parameters, enter the following commands:

```
# grep noexec_user_stack/etc/system
# /usr/sbin/sysdef | grep SEM
# /usr/sbin/sysdef | grep SHM
```

2. To change any of the current values, follow these steps:
  1. Create a backup copy of the `/etc/system` file, by using a command similar to the following:

```
# cp /etc/system/etc/system.orig
```

2. Open the `/etc/system` file in any text editor, and if required, add lines similar to the following (edit the lines if the file already contains them):

```
set noexec_user_stack=1
set semsys:seminfo_semmini=100
set semsys:seminfo_semmsl=256
set semsys:seminfo_semvmx=32767
set shmsys:shminfo_shmmax=4292967295
set shmsys:shminfo_shmmni=1
set shmsys:shminfo_shmmni=100
set shmsys:shminfo_shmseg=10
```

3. Enter the following command to restart the system

```
# /usr/sbin/reboot
```

4. After you have restarted the system, log into the system and switch to the `root` user.

## Solaris 10

1. To view the current values of the resource control, enter the following commands:

```
#id -p //to verify the project ID
uid = 0 (Root) gid = 0 (Root) projid = 1 (user.root)
#prctl -n project.max-shm-memory -i project user.root
#prctl -n project.max-sem-ids -i project user.root
```

2. If you need to change any of the current values, do the following:

1. To modify the value of max-shm-memory to 6GB:

```
#prctl -n project.max-shm-memory -v 6gb -r -i
project user.root
```

2. To modify the value of max-sem-ids to 256:

```
#prctl -n project.max-sem-ids -v 256 -r -i project
user.root
```

## Mounting the Product Disk

On most Solaris systems, the product disk mounts automatically when you insert it into the drive. If the disk does not mount automatically, follow these steps to mount it manually:

1. Switch user to the root user:

```
$ su - root
```

2. If necessary, enter a command similar to the following to eject the mounted disk, then remove it from the drive:

```
# eject
```

3. Insert the disk into the drive.
4. To verify that the disk mounted automatically, enter a command similar to the following:

```
# ls /dvd/dvd0
```

5. If this command fails to display the contents of the disk, enter a command similar to the following:

```
# /usr/sbin/mount -r -F hsfs /dev/dsk/cxytdzs2 /dvd
```

In this example, `/dvd` is the disk mount point directory and `/dev/dsk/cxytdzs2` is the device name for the disk device - for example, `/dev/dsk/c0t6d0s2`

6. If the Oracle Universal Installer prompts you for the location, enter the disk mount point directory path. For example:
  - Disk is mounted automatically - `/dvd/dvd0`

- Disk mounted manually - /dvd

## Installing Oracle Enterprise Manager Grid Control

Once you have configured your system to meet hardware and software requirements, start Oracle Universal Installer (OUI) and install Grid Control as follows:

1. Start OUI by executing the following commands:
  1. Navigate to the home directory by entering the following command:  
`cd <enter>`
  2. Enter the following command:  
`<mounted location>/Disk1/runInstaller`

For example: Enter the command as follows:

```
/dvd/dvd0/Disk1/runInstaller
```

Alternately, you can change directory to the Parent Directory (the root directory where you will install the

Oracle home) and specify the full path to the runInstaller script.

2. The following table describes the recommended action for each OUI screen for the first two installation types.

If you need more assistance, click **Help** on that screen. If you have trouble with the installation, check out the "Troubleshooting" chapter of *Oracle Enterprise Manager Grid Control Installation and Basic Configuration* (For Linux x86 systems).

Installation Screen	Recommended Action
Specify Installation Type	Select one of the installation types provided. The complete installation type is chosen by default.
Specify Installation Location	Specify the "parent" directory location for the installation. All Oracle homes created during installation will be placed as subdirectories under the parent directory.
Language Selection	Select the languages to run Grid Control in. The language you specify here is not the language of the installation session.

Installation Screen	Recommended Action
Specify Inventory Directory and Credentials	<p>Appears only during the first installation of Oracle products on a system.</p> <p>Specify the full path of the Oracle Inventory directory. Make sure to select the appropriate operating group.</p>
Product-Specific Prerequisite Checks	<p>Verify that all prerequisite checks succeed.</p> <p>OUI checks the system to verify that it is configured correctly to support your Oracle software. If you have met all hardware and software requirements in this guide, all of the checks should pass.</p> <p>If a check fails, review the cause of failure, rectify the problem, and retry the check. You can also choose to manually verify failed checks if you are satisfied that your system meets the requirements.</p>

<b>Installation Screen</b>	<b>Recommended Action</b>
Specify Configuration	<p>Appears only for the "Enterprise Manager Grid Control Using a New Database" installation type.</p> <p>Specify the name of the database you want to create, as well as the location to store the Management Repository files. Choose a file location outside of the Oracle home.</p> <p>Select the OSDBA and OSOPER groups that you are a member of. These memberships are required to grant the SYSDBA and SYSOPER privileges required to create the new database.</p>
Specify Repository Database Configuration	<p>Appears only for the "Enterprise Manager Grid Control Using an Existing Database" installation type.</p> <p>Specify the database connection details for your existing, qualified database, as well as the locations for the new Management Repository tablespaces.</p>



Installation Screen	Recommended Action
Specify Optional Configuration	<p>All parameters can be configured through Grid Control after installation.</p> <p>If you want, set the parameters for email notification, <i>OracleMetaLink</i> credentials, and proxy configuration settings.</p>
Specify Security Options	<p>Appears only for the "Enterprise Manager Grid Control Using a New Database" installation type.</p> <p>Specify password used to secure the Management Service, as well as passwords to secure the Management Repository Database.</p>
Specify Passwords	<p>Appears only for the "Enterprise Manager Grid Control Using an Existing Database" installation type.</p> <p>Specify the password used to secure the Management Service, as well as the SYSMAN password.</p>
Summary	<p>Review the information displayed here, then click <b>Install</b>.</p>
Install	<p>This screen displays status information while the product is being installed.</p>

Installation Screen	Recommended Action
Execute Configuration Scripts	When prompted, read the instructions and run the scripts listed here. You must run the scripts as <code>root</code> from a terminal window.
Configuration Assistants	Displays status information for configuration assistants
End of Installation	<p>Contains important information about your installation, including the URLs configured for your applications. Make a note of these URLs.</p> <p>The port numbers used in these URLs are recorded in the following file:</p> <pre>\$ORACLE_ HOME/install/portlist.ini</pre>

## Other Installation or Upgrade Options

In addition to performing a complete Grid Control installation, either using the embedded database or an existing, qualified one, you can perform the following other installation or upgrade operations:

- Install an additional Management Service.
- Install Management Agents using the Agent Deployment application. This application is part of the Grid Control installation, and can be used to "push" Management Agents from a central location to one or more target hosts in a single operation. Before launching a deployment operation using this method, you must set up SSH connectivity between the Management Service host and all target hosts. To do so, execute the script found at:

```
<OMS ORACLEHOME>/sysman/prov/resources/scripts/  
sshUserSetup.sh
```

To initiate a deployment operation, click the **Install Agent** link on the Grid Control Deployments page. For more details, refer to the "Installing the Management Agent Using Agent Deploy" section in *Oracle Enterprise Manager Installation and Basic Configuration*.

- Install Management Agents using the **agentDownload** script. Launch this script on each target host to "pull" files from a central staging location. The requirements for the **agentDownload** script are:

1. The **agentDownload** script must have execute permission. After you have downloaded the script, change the file permissions as follows:

```
chmod +x agentDownload . <os>
```

2. Ensure that the "jar" command and "wget" is in the system PATH.

To download and run the **agentDownload** script:

1. Log into the target host.
2. Bring up the browser window.
3. Download the **agentDownload** script from:

```
http://mgmthost27.acme.com:4889/agent\_  
download/10.2.0.1.0/<OS>/agentDownload  
.<OS>
```

4. Navigate to the directory where the **agentDownload** script is available.
5. Change the file permissions as follows:

```
chmod +x agentDownload . <OS>
```

6. Execute the **agentDownload** script as follows:

```
run agentDownload . <OS>
```

For example:

```
/agentDownload.linux -b /scratch/agentInstall
```

You can use the `-h` option to see the usage details.

- Upgrade a previous, qualified version of Enterprise Manager Grid Control. Existing versions of Enterprise Manager will be automatically detected.

Refer to *Oracle Enterprise Manager Grid Control Installation and Basic Configuration* (For Linux x86 systems) for detailed information and instructions on all of the above operations.

## Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. 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.

### **Deaf/Hard of Hearing Access to Oracle Support Services**

To reach Oracle Support Services, use a telecommunications relay service (TRS) to call Oracle Support at 1.800.223.1711. An Oracle Support Services engineer will handle technical issues and

provide customer support according to the Oracle service request process. Information about TRS is available at <http://www.fcc.gov/cgb/consumerfacts/trs.html>, and a list of phone numbers is available at <http://www.fcc.gov/cgb/dro/trsphonebk.html>.

