

Oracle® Enterprise Manager

Grid Control Quick Installation Guide for Linux x86

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ORACLE®

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This guide describes how to quickly install Oracle Enterprise Manager Grid Control on Linux x86 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*, which is available on the product disk. To access this book, use a Web browser to open the `index.htm` file located in the top-level directory of the installation media, then select the **Documentation** tab.

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*.

System Requirements

The system or systems must meet the minimum hardware and software requirements.

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: For a complete list of all the system requirements, refer to *Oracle Enterprise Manager Installation and Basic Configuration*.

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 processor speed of 1 GHz for the host running the Management Service
- 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 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.

- Red Hat Enterprise Linux 3.0 (kernel version 2.4.9.25)
- Red Hat Enterprise Linux 4.0 (kernel version 2.6.9)

- SUSE Linux Server Enterprise 9 (kernel version 2.4.9.25)

Notes: 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.

Package Requirements for Enterprise Manager Grid Control The system must be running the following (or later) package versions for Enterprise Manager Grid Control:

- For Red Hat Enterprise Linux 3.0:
 - glibc-2.2.4-31.7
 - make-3.79
 - binutils-2.11.90.0.8-12
 - gcc-2.96
 - openmotif21-2.1.30-11
- For Red Hat Enterprise Linux 4.0:

- glibc-2.3.4-2.9
- make-3.79
- binutils-2.15.92.0.2-13
- gcc-3.4.3-22.1
- libaio-0.3.96
- glibgc-common-2.3.4-2.9
- setarch-1.6-1
- pdksh-5.2.14-30
- openmotif21-2.1.30-11
- sysstat-5.0.5-1
- gnome-libs-1.4.1.2.90-44.1
- libstdc++-3.4.3-22.1
- libstdc++devel-3.4.3-22.1
- compat-libstdc++-296-2.96-132.7.2
- compat-db-4.1.25-9
- control-center-2.8.0-12

- xscreensaver-4.18-5.rhel4.2
- For SUSE Linux Enterprise Server 9:
 - glibc-2.2.4-31.7
 - make-3.79
 - binutils-2.11.90.0.8-12
 - gcc-2.96
 - openmotif21-2.1.30-11

Package Requirements for Management Agent The system must be running the following package versions for Management Agent:

- Red Hat Enterprise Linux 3.0, 4.0, 5.0 and SUSE Linux Enterprise Server 9, 8, 1
 - Make-3.79
 - binutils-2.14
 - gcc-3.2
- Oracle Enterprise Linux 4.0, 5.0:
 - Make-3.79
 - binutils-2.15.92.0.2-13

- gcc-3.4.3-22.1

Note: While installing 10.2.0.1, 10.2.0.2, or 10.2.0.3 Management Agent, the installer may check for other packages. However, it is sufficient to have just these packages running for Management Agent. For the other packages, you can safely ignore the warning and continue with the installation.

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

- Red Hat Enterprise Linux 3.0 and SUSE Linux Enterprise Server 9 require the following kernel parameters:
 - semmsl = 250
 - semmns = 32000
 - semopm = 100
 - semmni = 128
 - shmmax = 2147483648
 - shmmni = 4096

- shmall = 2097152
- shmmin = 1
- shmseg = 10
- filemax = 65536
- Red Hat Enterprise Linux 4.0 requires the following kernel parameters:
 - semmsl = 250
 - semmsl2 = 250
 - semmns = 32000
 - semopm = 100
 - semmni = 128
 - shmmax = 2147483648
 - shmmni = 4096
 - shmall = 2097152
 - filemax = 65536
 - ip_local_port_range = 1024 65000
 - rmem_default = 262144

- rmem_max = 262144
- wmem_default = 262144
- wmem_max = 262144

To check your kernel parameter settings, run the commands listed in the following table.

Parameter	Command
semmsl, semmns, semopm, semmni	# /sbin/sysctl -a grep sem ¹
shmall, shmmax, shmmni	# /sbin/sysctl -a grep shm
file-max	# /sbin/sysctl -a grep file-max
ip_local_port_range	# /sbin/sysctl -a grep ip_local_port_range
rmem_default	# /sbin/sysctl -a grep rmem_default
rmem_max	# /sbin/sysctl -a grep rmem_max
wmem_default	# /sbin/sysctl -a grep wmem_default
wmem_max	# /sbin/sysctl -a grep wmem_max

- ¹ This command displays the value of the four semaphore parameters in the order listed.

To change your kernel parameter settings, use any text editor to create or edit the `/etc/sysctl.conf` file to add or modify the necessary entries. You may need to reboot your system after changing kernel parameters.

Note: Include lines only for the kernel parameter values that you want to change. For the semaphore parameters (`kernel.sem`), you must specify all four values in order.

If the current value of any of your system's kernel parameters is higher than the recommended value, keep your current value.

For example, your `/etc/sysctl.conf` file may look like this:

```
kernel.shmall = 2097152
kernel.shmmax = 536870912
kernel.shmni = 4096
kernel.sem = 250 32000 100 128
```



```
fs.file-max = 65536
net.ipv4.ip_local_port_range = 1024 65000
rmem_default = 262144
rmem_max = 262144
wmem_default = 262144
wmem_max = 262144
```

By specifying the values in the `/etc/sysctl.conf` file, they persist when you restart the system.

On SUSE systems only, enter the following command to ensure that the system reads the `/etc/sysctl.conf` file when it restarts:

```
# /sbin/chkconfig boot.sysctl on
```

Mounting the Product Disk

On most Linux 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 "root" user:

```
$ su - root
```

2. If necessary, eject the currently mounted disk and remove it from the drive. Use a command similar to the following, where `/mnt/dvd` and `/media/dvd` are the mount point directories for the disk drive:
 - Red Hat Linux: `# eject /mnt/dvd`
 - SUSE: `# eject /media/dvd`
3. Insert the disk into the drive.
4. To verify that the disk mounted automatically, change directory to the home directory and enter a command similar to the following:
 - Red Hat Linux: `$ ls /mnt/dvd`
 - SUSE: `$ ls /media/dvd`

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

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

- Red Hat Linux:

```
# mount -t iso9660 /dev/dvd /mnt/dvd
```

- SUSE:

```
# mount -t iso9660 /dev/dvd /media/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: In Red Hat Linux, enter the command as follows:

```
/mnt/dvd/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*.

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.
Specify Inventory Directory and Credentials	Appears only during the first installation of Oracle products on a system. Specify the full path of the Oracle Inventory directory. Make sure to select the appropriate operating group.

Installation Screen**Recommended Action**

Product-Specific Prerequisite Checks

Verify that all prerequisite checks succeed.

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.

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.

Installation Screen	Recommended Action
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, Oracle<i>MetaLink</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 Install.</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	Contains important information about your installation, including the URLs configured for your applications. Make a note of these URLs. The port numbers used in these URLs are recorded in the following file: <code>\$ORACLE_ HOME/install/portlist.ini</code>

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.linux
```

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 detailed information and instructions on all of the above operations.

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