Oracle® Database

Client Quick Installation Guide

10*g* Release 1 (10.1.0.3) for Linux x86

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This guide describes how to quickly install Oracle Client on Linux x86 systems. It includes information about the following:

ORACLE

1 Review Information About this Guide

> **Note:** This guide describes how to install Oracle Client on a system that does not have any Oracle software installed on it. If there is an existing Oracle software installation on this system, see the *Oracle Database Client Installation Guide for UNIX Systems* for more detailed installation instructions.

This guide describes how to complete a default installation of Oracle Client in a new Oracle home directory. It describes how to perform one of the following installation types:

- **Administrator:** Enables applications to connect to an Oracle database on the local system or on a remote system. It also provides tools that allow you to administer an Oracle database.
- **Runtime:** Enables applications to connect to an Oracle database on the local system or on a remote system.
- **Instant Client:** Enables you to install only the shared libraries required by Oracle Call Interface applications that use the Instant Client feature. This installation type requires much less disk space than the other Oracle Client installation types.

  > **See Also:** For more information about the Instant Client feature, see the *Oracle Call Interface Programmer's Guide*.

Where to Get Additional Installation Information

For more detailed information about installing Oracle Client, see the *Oracle Database Client Installation Guide for UNIX Systems*.

This guide is available on the product disc. To access it, use a Web browser to open the `welcome.htm` file, either in the top-level directory of the CD-ROM or in the `client` directory on the DVD-ROM, then select the **Documentation** tab.

2 Log In to the System as root

Before you install the Oracle software, you must complete several tasks as the `root` user. To log in as the `root` user, complete one of the following procedures:

> **Note:** You must install the software from an X window workstation, an X terminal, or a PC or other system with X server software installed.

- If you are installing the software from an X Window System workstation or X terminal:
  1. Start a local terminal session, for example, an X terminal (`xterm`).
  2. If you are not installing the software on the local system, enter the following command to enable remote hosts to display X applications on the local X server:

     ```
     $ xhost +
     ```

3. If you are not installing the software on the local system, use the `ssh`, `rlogin`, or `telnet` command to connect to the system where you want to install the software:

   ```
   $ telnet remote_host
   ```

4. If you are not logged in as the `root` user, enter the following command to switch user to `root`:

   ```
   $ su - root
   password:
   #
   ```

- If you are installing the software from a PC or other system with X server software installed:

   Note: If necessary, see your X server documentation for more information about completing this procedure. Depending on the X server software that you are using, you may need to complete the tasks in a different order.

   1. Start the X server software.
   2. Configure the security settings of the X server software to permit remote hosts to display X applications on the local system.
   3. Connect to the remote system where you want to install the software and start a terminal session on that system, for example, an X terminal (`xterm`).
   4. If you are not logged in as the `root` user on the remote system, enter the following command to switch user to `root`:

      ```
      $ su - root
      password:
      #
      ```

3 Check the Hardware Requirements

The system must meet the following minimum hardware requirements:

Requirement	Minimum Value
Physical memory (RAM)	256 MB (262144 KB)
Swap space	512 MB (524288 KB) or twice the size of RAM On systems with 2 GB or more of RAM, the swap space can be between one and two times the size of RAM
Disk space in `/tmp`	400 MB (409600 KB)
Disk space for software files	Between 150 MB (153600 KB) and 650 MB (665600 KB) of disk space, depending on the installation type that you choose

To ensure that the system meets these requirements, follow these steps:

1. To determine the physical RAM size, enter the following command:

   ```
   # grep MemTotal /proc/meminfo
   ```

   If the size of the physical RAM installed in the system is less than 256 MB, you must install more memory before continuing.

2. To determine the size of the configured swap space, enter the following command:

   ```
   # grep SwapTotal /proc/meminfo
   ```

   If necessary, see your operating system documentation for information about how to configure additional swap space.

3. To determine the amount of free disk space available in the `/tmp` directory, enter the following command:

   ```
   # df -h /tmp
   ```

   If there is less than 400 MB of disk space available in the `/tmp` directory, complete one of the following steps:

   - Delete unnecessary files from the `/tmp` directory to achieve the required disk space.
   - Set the TEMP and TMPDIR environment variables when setting the `oracle` user's environment (described later).
   - Extend the file system that contains the `/tmp` directory. If necessary, contact your system administrator for information about extending file systems.

4. To determine the amount of free disk space available on the system, enter the following command:

   ```
   # df -h
   ```

   This command displays the disk space usage on all mounted file systems. To complete the installation, identify a file system with sufficient disk space.

4 Check the Software Requirements

The system must meet the following minimum software requirements, depending on your Linux distribution and version.

Red Hat Enterprise Linux ES/AS 2.1 (Update 3 or higher)

- Kernel version 2.4.9 errata 34 (e.34) or higher must be installed
- The following packages (or later versions) must be installed:

  ```
  make-3.79
  openmotif-2.1.30
  gcc-2.96-128
  gcc-c++-2.96-128
  libstdc++-2.96-128
  glibc-2.2.4-32
  ```

Red Hat Enterprise Linux ES/AS 3 (Update 2 or higher)

- Kernel version 2.4.21-15 or higher must be installed
- The following packages (or later versions) must be installed:

```
gcc-3.2.3-34
gcc-c++-3.2.3-34
glibc-2.3.2-95.20
make-3.79.1
openmotif21-2.1.30-8
setarch-1.3-1
compat-db-4.0.14-5
compat-gcc-7.3-2.96.128
compat-gcc-c++-7.3-2.96.128
compat-libstdc++-7.3-2.96.128
compat-libstdc++-devel-7.3-2.96.128
```

SUSE Linux Enterprise Server 8 (Service Pack 3 or higher)

- Kernel version 2.4.21-138 or higher must be installed
- The following packages (or higher versions) must be also be installed:

```
gcc-3.2.2-38
gcc-c++-3.2.2-38
glibc-2.2.2-124
make-3.79.1
openmotif-2.2.2-124
```

SUSE Linux Enterprise Server 9

- Kernel version 2.6.5-7.5 or higher must be installed
- The following packages (or higher versions) must be also be installed:

```
gcc-3.3.3-43
gcc-c++-3.3.3-43
glibc-2.3.3-98
libaio-0.3.98-18
libaio-devel-0.3.98-18
make-3.80
openmotif-libs-2.2.2-519.1
```

To ensure that the system meets these requirements, follow these steps:

1. To determine which distribution and version of Linux is installed, enter the following command:

   ```
   # cat /etc/issue
   ```

   Note: Only the listed distributions and versions are currently certified and supported.

2. To determine whether the required packages are installed, enter commands similar to the following:

   ```
   $ rpm -q package_name
   ```

   If a required package is not installed, or if the version is lower than the required version, install the package from your operating system distribution

media or download the required package version from your Linux vendor's Web site.

3. To determine whether the required kernel version is installed, enter the following command:

   ```
   # uname -r
   ```

   If the kernel version is lower than the required version, download and install the required version or a higher version from your Linux vendor's Web site.

5 Create Required UNIX Group and User

The following local UNIX group and user must exist on the system:

- The `oinstall` group (the Oracle Inventory group)
- The `oracle` user (the Oracle software owner)

The `oinstall` group and the `oracle` user may already exist on your system. To determine whether they exist already, and if necessary, to create them, follow these steps:

1. To determine whether the `oinstall` group exists, enter the following command:

   ```
   # grep oinstall /etc/group
   ```

   If the output from this command shows the specified group name, that group already exists.

2. If necessary, enter the following command to create the `oinstall` group:

   ```
   # /usr/sbin/groupadd oinstall
   ```

3. To determine whether the `oracle` user exists and belongs to the correct groups, enter the following command:

   ```
   # id oracle
   ```

   If the `oracle` user exists, this command displays information about the groups to which the user belongs. The output should be similar to the following, indicating that `oinstall` is the primary group:

   ```
   uid=502(oracle) gid=502(oinstall) groups=502(oinstall),503(dba)
   ```

4. If necessary, complete one of the following actions:

   - If the `oracle` user exists, but its primary group is not `oinstall`, enter a command similar to the following, where the `-g` option specifies `oinstall` as the primary group and the `-G` option specifies any existing groups to which the `oracle` user belongs:

     ```
     # /usr/sbin/usermod -g oinstall -G dba oracle
     ```

   - If the `oracle` user does not exist, enter the following command to create it:

     ```
     # /usr/sbin/useradd -g oinstall -G dba oracle
     ```

This command creates the `oracle` user and specifies:

- `oinstall` as the primary group
- `dba` as an optional secondary group

5. Enter the following command to set the password of the `oracle` user:

```
# passwd oracle
```

6 Create an Oracle Base Directory

Create an Oracle base directory with a name similar to the following and specify the correct owner, group, and permissions for it:

```
/u01/app/oracle
```

The Oracle base directory must have between 150 MB (153600 KB) and 650 MB (665600 KB) of free space depending on the installation type you choose:

Installation Type	Requirement for Software Files (MB)
Instant Client	150
Administrator	650
Runtime	350

To determine where to create this directory, follow these steps:

1. Enter the following command to display information about all mounted file systems:

```
# df -h
```

   This command displays information about all of the file systems mounted on the system, including:

   - The physical device name
   - The total amount, used amount, and available amount of disk space
   - The mount point directory for that file system

2. From the display, identify a file system that has sufficient disk space.
3. Note the name of the mount point directory for the file system that you identified.

   In the following examples, `/u01` is the mount point directory used for the software. You must specify the appropriate mount point directory for the file system on your system.

To create the required directory and specify the correct owner, group, and permissions for it, follow these steps:

> **Note:** In the following procedure, replace `/u01` with the appropriate mount point directory that you identified in Step 3 previously.

1. Enter the following command to create subdirectories in the mount point directory that you identified for the Oracle base directory:

   ```
   # mkdir -p /u01/app/oracle
   ```

2. Change the owner and group of the directory that you created to the `oracle` user and the `oinstall` group:

   ```
   # chown -R oracle:oinstall /u01/app/oracle
   ```

3. Change the permissions on the directory that you created to 775:

   ```
   # chmod -R 775 /u01/app/oracle
   ```

7 Mount the Product Disc

The Oracle Database 10*g* software is available on both CD-ROM and DVD-ROM. These discs are in ISO 9660 format with Rockridge extensions.

On most Linux systems, the product disc mounts automatically when you insert it into the drive. To verify that the disc is mounted correctly, follow these steps:

1. If necessary, enter a command similar to following to eject the currently mounted disc, then remove it from the drive:

   - Red Hat:

     ```
     # eject /mnt/cdrom
     ```

   - SUSE:

     ```
     # eject /media/cdrom
     ```

   In this example, `/mnt/cdrom` or `/media/cdrom` is the mount point directory for the CD-ROM drive, depending on your distribution.

2. Insert the disc into the CD-ROM or DVD-ROM drive.

3. To verify that the disc mounted automatically, enter a command similar to the following:

   - Red Hat:

     ```
     $ ls /mnt/cdrom
     ```

   - SUSE:

     ```
     $ ls /media/cdrom
     ```

4. If this command fails to display the contents of the disc, enter a command similar to the following, depending on your distribution:

   - Red Hat:

     ```
     # mount /mnt/cdrom
     ```

   - SUSE:

     ```
     # mount /media/cdrom
     ```

8 Log In as the oracle User and Configure the oracle User's Environment

You run the Installer from the `oracle` account. However, before you start the Installer you must configure the environment of the `oracle` user. To configure the environment, you must:

- Set the default file mode creation mask (umask) to 022 in the shell startup file.
- Set the DISPLAY and ORACLE_BASE environment variables.

To set the `oracle` user's environment, follow these steps:

1. Start another terminal session.
2. Enter the following command to ensure that X Window applications can display on this system:

   ```
   $ xhost +
   ```

3. Complete one of the following steps:
   - If the terminal session is not connected to the system where you want to install the software, log in to that system as the `oracle` user.
   - If the terminal session is connected to the system where you want to install the software, switch user to `oracle`:

     ```
     $ su - oracle
     ```

4. To determine the default shell for the `oracle` user, enter the following command:

   ```
   $ echo $SHELL
   ```

5. Open the `oracle` user's shell startup file in any text editor:
   - Bash shell (`bash`) on Red Hat:

     ```
     $ vi .bash_profile
     ```

   - Bourne shell (`sh`), Bash shell on SUSE, or Korn shell (`ksh`):

     ```
     $ vi .profile
     ```

   - C shell (`csh` or `tcsh`):

     ```
     % vi .login
     ```

6. Enter or edit the following line in the shell startup file, specifying a value of 022 for the default file mode creation mask:

   ```
   umask 022
   ```

7. Save the file and exit from the editor.
8. To run the shell startup script, enter the following command:
   - Bash shell on Red Hat:

     ```
     $ . ./.bash_profile
     ```

- Bourne shell, Bash shell on SUSE, or Korn shell:

  ```
  $ . ./.profile
  ```

- C shell:

  ```
  % source ./.login
  ```

9. If you determined that the `/tmp` directory had insufficient free disk space when checking the hardware requirements, enter the following commands to set the TEMP and TMPDIR environment variables. Specify a directory on a file system with sufficient free disk space.

   - Bourne, Bash, or Korn shell:

     ```
     $ TEMP=/directory
     $ TMPDIR=/directory
     $ export TEMP TMPDIR
     ```

   - C shell:

     ```
     % setenv TEMP /directory
     % setenv TMPDIR /directory
     ```

10. If you are not installing the software on the local system, enter the following command to direct X applications to display on the local system:

    - Bourne, Bash, or Korn shell:

      ```
      $ DISPLAY=local_host:0.0 ; export DISPLAY
      ```

    - C shell:

      ```
      % setenv DISPLAY local_host:0.0
      ```

    In this example, *`local_host`* is the host name or IP address of the system that you want to use to display the Installer (your workstation or PC).

11. Enter commands similar to the following to set the ORACLE_BASE environment variable:

    - Bourne, Bash, or Korn shell:

      ```
      $ ORACLE_BASE=/u01/app/oracle
      $ export ORACLE_BASE
      ```

    - C shell:

      ```
      % setenv ORACLE_BASE /u01/app/oracle
      ```

    In these examples, `/u01/app/oracle` is the Oracle base directory that you created earlier.

12. Enter the following commands to ensure that the ORACLE_HOME and TNS_ADMIN environment variables are not set:

    - Bourne, Bash, or Korn shell:

      ```
      $ unset ORACLE_HOME
      $ unset TNS_ADMIN
      ```

- C shell:

```
% unsetenv ORACLE_HOME
% unsetenv TNS_ADMIN
```

13. To verify that the environment has been set correctly, enter the following commands:

```
$ umask
$ env | more
```

Verify that the `umask` command displays a value of `022` and that the environment variables you set in this section have the correct values.

9 Install Oracle Client

After configuring the `oracle` user's environment, start the Installer and install the Oracle software, as follows:

Note: The following examples show paths to the `runInstaller` script on a CD-ROM. If you are installing the software from DVD-ROM, use a command similar to the following:

```
$ /mount_point/client/runInstaller
```

---

1. To start the Installer, enter the following commands:

   - Red Hat:

```
$ cd /tmp
$ /mnt/cdrom/runInstaller
```

   - SUSE:

```
$ cd /tmp
$ /media/cdrom/runInstaller
```

   If the Installer does not appear, see the *Oracle Database Client Installation Guide for UNIX Systems* for information about how to troubleshoot X display problems.

2. Use the following guidelines to complete the installation:

   - The following table describes the recommended action for each Installer screen.

Note: If you have completed the tasks listed previously, you can complete the installation by choosing the default values on most screens.

   - If you need more assistance, or if you want to choose an option that is not a default, click **Help** for additional information.
   - If you encounter errors while installing or linking the software, see the *Oracle Database Client Installation Guide for UNIX Systems* for information about troubleshooting.

Screen	Recommended Action
Welcome	Click **Next**.
Specify Inventory Directory and Credentials	**Note:** This screen appears only during the first installation of Oracle products on a system. Specify the following information, then click **Next**: **Enter the full path of the inventory directory** Verify that the path is similar to the following, where *oracle_base* is the value that you specified for the ORACLE_BASE environment variable: *oracle_base*/oraInventory **Specify operating system group name** Verify that the group specified is the Oracle Inventory group: oinstall
Run orainstRoot.sh	If prompted, run the following script in a separate terminal window as the root user: *oracle_base*/oraInventory/orainstRoot.sh
Specify File Locations	In the **Destination** section, verify that the **Path** value for the Oracle home directory is similar to the following, then click **Next**: *oracle_base*/product/10.1.0/client_1
Select Installation Type	Select **InstantClient**, **Administrator**, or **Runtime**, then click **Next**.
Summary	Review the information displayed, then click **Install**.
Install	The Install screen displays status information while the product is being installed.
Configuration Assistants	**Note:** This screen appears only during an Administrator or Runtime installation. The Configuration Assistants screen displays status information for the Oracle Net Configuration Assistant that configures Oracle Net.
Oracle Net Configuration Assistant: Welcome	Review the information on the screen, then click **Next**. The Oracle Net Configuration Assistant configures the easy connect naming method. For more information about this naming method, click **Help**.
Oracle Net Configuration Assistant: Done	Click **Finish** to continue.

Screen	Recommended Action
Setup Privileges	**Note:** This screen appears only during an Administrator or Runtime installation. If prompted, run the following script in a separate terminal window as the `root` user: *oracle_home*`/root.sh` In this example, *oracle_home* is the directory where you installed the software. The correct path is displayed on the screen. Press Return to accept the default values for each prompt displayed by the script. When the script finishes, click **OK**.
End of Installation	To exit from the Installer, click **Exit**, then click **Yes**.

10 What to Do Next

After you have successfully installed Oracle Client, see Chapter 4 in the *Oracle Database Client Installation Guide for UNIX Systems* for information about required and optional post-installation steps.

11 Documentation Accessibility

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