

Oracle® Database

Client Quick Installation Guide

10g Release 2 (10.2) for hp-ux Itanium

B25296-01

January 2006

This guide describes how to quickly install Oracle Database Client on hp-ux Itanium systems. It includes information about the following:

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1 Reviewing 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, then refer to *Oracle Database Client Installation Guide for hp-ux Itanium* for more detailed installation instructions.

This guide describes how to complete a default installation of Oracle Database Client on a system that does not have any Oracle software installed on it. It describes how to install one of the following installation types:

- **Administrator:** Enables applications to connect to an Oracle Database instance on the local system or on a remote system. It also provides tools that enable you to administer Oracle Database.
- **Runtime:** Enables applications to connect to an Oracle Database instance on the local system or on a remote system.
- **Instant Client:** Enables you to install only the shared libraries required by Oracle Call Interface (OCI), Oracle C++ Call Interface (OCCI), Pro*C, or Java

database connectivity (JDBC) OCI applications. This installation type requires much less disk space as compared to the other Oracle Database Client installation types.

See Also: *Oracle Call Interface Programmer's Guide* for more information about the Instant Client feature

This guide does not describe how to install the Custom installation type.

Where to Get Additional Installation Information

For more detailed information about installing Oracle Database Client, refer to *Oracle Database Client Installation Guide for hp-ux Itanium*.

This guide is available on the product disc. To access it, use a Web browser to open the `welcome.htm` file located in the top-level directory of the installation media, and then select the **Documentation** tab.

2 Logging In to the System as root

Before you install Oracle Database Client, 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 System 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, then:

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

```
$ xhost fully_qualified_remote_host_name
```

For example:

```
$ xhost somehost.us.acme.com
```

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

```
$ telnet fully_qualified_remote_host_name
```

4. If you are not logged in as the `root` user, then 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, then:

Note: If necessary, refer to 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, then enter the following command to switch user to `root`:

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

3 Checking the Hardware Requirements

The system must meet the following minimum hardware requirements:

- 512 MB of physical RAM
- The following table describes the relationship between installed RAM and the configured swap space requirement.

RAM	Swap Space
Up to 512 MB	2 times the size of RAM
Between 513 MB and 726 MB	1.5 times the size of RAM
More than 726 MB	0.75 times the size of RAM

- The minimum client installation `TMP` space required is 115 MB. The minimum disk space requirement in the `/tmp` directory depends on the installation type you have selected. The following table lists the minimum disk space requirements for the `/tmp` directory in each type of installation.

Installation Type	Disk Space Required for the <code>/tmp</code> Directory (MB)
Admin	850
Runtime	470
Custom (all components selected)	780
Instant	150

- Up to 5 GB of disk space for the Oracle software, depending on the installation type

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

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

```
# grep "Physical:" /var/adm/syslog/syslog.log
```

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

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

```
# /usr/sbin/swapinfo -a
```

If necessary, refer to the 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:

```
# bdf /tmp
```

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

- Delete unnecessary files from the `/tmp` directory to meet the disk space requirement.
 - Set the `TMP` 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:

```
# bdf
```

The following table shows the approximate disk space requirements for software files for each installation type:

Installation Type	Requirement for Software Files
Instant Client	96 MB
Administrator	1.9 GB
Runtime	1.5 GB
Custom (maximum)	2.0 GB

Note: If you want to configure only the Instant Client Light component of Instant Client, then you need 34 MB of disk space to store the related files.

5. To determine whether the system architecture can run the software, enter the following command:

```
# /bin/getconf KERNEL_BITS
```

This command should return the following output:

If you do not see the expected output, then you cannot install the software on this system.

4 Checking the Software Requirements

The system must meet the following minimum software requirements.

- The operating system version must be HP-UX 11i v2 (11.23).

For the Oracle products that you want to install, the system must meet the following product-specific requirements:

- Pro*C/C++, Oracle Call Interface, Oracle C++ Call Interface, Oracle XML Developer's Kit (XDK), GNU Compiler Collection (GCC):
 - HP C/ANSI C Compiler (A.06.00)
 - HP aC++ Compiler (A.06.00)
 - GCC compiler gcc 3.4.2
- Pro*COBOL:
 - Micro Focus Server Express 4.0 SP1 or later
- Pro*FORTRAN:
 - HP FORTRAN 90 (B11.23.20)
- Oracle JDBC/OCI Drivers:

You can use the following optional Java SDK versions with the Oracle JDBC/OCI drivers, however they are not required for the installation:

- HP JDK 1.5.0
- HP JDK 1.4.2.07
- HP JDK 1.3.1.16

Note: Java SDK 1.4.2_07 is installed with this release.

To ensure that the system meets these requirements:

1. To determine which version of HP-UX is installed, enter the following command:

```
# uname -a
HP-UX hostname B.11.23 ia64 109444686 unlimited-user license
```

In this example, the version of HP-UX 11i is 11.23.

2. To determine whether a bundle, product, or fileset is installed, enter a command similar to the following, where *level* is bundle, product, or fileset:

```
# /usr/sbin/swlist -l level | more
```

If a required bundle, product, or fileset is not installed, then you must install it. Refer to your operating system or software documentation for information about installing products.

In addition, you need to verify that the following patches, or their later versions, are installed on the system. The procedure following the table describes how to check these requirements.

Note: There may be more recent versions of the patches listed installed on the system. If a listed patch is not installed, then determine whether a more recent version is installed before installing the version listed.

- For all installations on HP-UX 11i v2 (11.23), the following patches are required:
 - BUNDLE11i B.11.23.0409.3: Patch Bundle for HP-UX 11i V2
Note: You must have the August 2004 version of BUNDLE11i B.11.23.0408.1 for HP-UX 11i v2 on your system prior to updating to the HP-UX 11i v2 September 2004 or later release.
 - PHCO 32426: Reboot(1M) cumulative patch
 - PHKL 32646: wsio.h header file patch
 - PHKL 32632: Message Signaled Interrupts (MSI and MSI-X)
 - PHKL 32645: SIO (IO) subsystem MSI/MSI-X/WC Patch
 - PHKL 33552: VM Copy on write data corruption fix
 - PHSS_31850: 11.23 assembler patch
 - PHSS_31851: 11.23 Integrity Unwind Library
 - PHSS_31854: 11.23 milli cumulative patch
 - PHSS_31855: 11.23 aC++ Runtime (IA: A.05.60, PA A.03.60)
 - PHSS_33275: 11.23 linker + fdp cumulative patch
 - PHSS_33276: 11.23 Math Library Cumulative Patch
- The following JDK patches are required:
 - PHCO_31553: s700_800 11.23 pthread library cumulative patch
 - PHKL_31500: s700_800 11.23 sept04 base patch
 - PHSS_32213: s700_800 11.23 aries cumulative patch

Note: Refer to the following Web site for information about additional patches that may be required by JDK 1.4.2:

<http://www.hp.com/products1/unix/java/patches/index.html>
- For PL/SQL native compilation and installation of Pro*C/C++, Oracle Call Interface, Oracle C++ Call Interface, or Oracle XML Developer's Kit (XDK) , the following patches are required:
 - PHSS_33278: aC++ Compiler
 - PHSS_33279: aC++ Compiler
 - PHSS_33277: HP C Compiler
 - PHSS_33279: HP C Compiler

To ensure that the system meets these requirements:

1. To determine whether a patch is installed, enter a command similar to the following:

```
# /usr/sbin/swlist -l patch | grep PHSS_28880
```

Alternatively, to list all installed patches, enter the following command:

```
# /usr/sbin/swlist -l patch | more
```

If a required patch is not installed, then download it from the following Web site and install it:

<http://itresourcecenter.hp.com>

If the Web site shows a more recent version of the patch, then download and install that version.

5 Creating Required Operating System Group and User

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

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

To determine if this group and user already exist, and if required, to create them, follow these steps:

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

```
# more /var/opt/oracle/oraInst.loc
```

If the `oraInst.loc` file exists, then the output from this command is similar to the following:

```
inventory_loc=/u01/app/oracle/oraInventory
inst_group=oinstall
```

The `inst_group` parameter shows the name of the Oracle Inventory group (`oinstall`).

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, then 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=440(oracle) gid=200(oinstall) groups=201(dba),202(oper)
```

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

- If the `oracle` user exists, but its primary group is not `oinstall`, then 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, then 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 Creating an Oracle Base Directory

Before you create an Oracle base directory, you must identify an appropriate file system with disk space.

To identify an appropriate file system:

1. Use the `df` command to determine the free disk space on each mounted file system.
2. From the display, identify a file system that has appropriate free space.
3. Note the name of the mount point directory for the file system that you identified.

To create the Oracle base directory and specify the correct owner, group, and permissions for it:

1. Enter commands similar to the following to create the recommended subdirectories in the mount point directory that you identified and set the appropriate owner, group, and permissions on them:

```
# mkdir -p /mount_point/app/oracle_sw_owner
# chown -R oracle:oinstall /mount_point/app/oracle_sw_owner
# chmod -R 775 /mount_point/app/oracle_sw_owner
```

For example, if the mount point you identify is `/u01` and `oracle` is the user name of the Oracle software owner, then the recommended Oracle base directory path is as follows:

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

2. When you configure the `oracle` user's environment later in this chapter, set the `ORACLE_BASE` environment variable to specify the Oracle base directory that you have created.

7 Configuring the oracle User's Environment

You run Oracle Universal Installer from the `oracle` account. However, before you start Oracle Universal 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 environment variable.

To set the oracle user's environment:

1. Start a new terminal session, for example, an X terminal (xterm).
2. Enter the following command to ensure that X Window applications can display on this system:

```
$ xhost fully_qualified_remote_host_name
```

For example:

```
$ xhost somehost.us.acme.com
```

3. If you are not already logged in to the system where you want to install the software, then log in to that system as the oracle user.
4. If you are not logged in as the oracle user, then switch user to oracle:

```
$ su - oracle
```

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

```
$ echo $SHELL
```

6. Open the oracle user's shell startup file in any text editor:

- C shell (csh or tcsh):

```
% vi .login
```

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

```
umask 022
```

8. If the ORACLE_SID, ORACLE_HOME, or ORACLE_BASE environment variable is set in the file, then remove the appropriate lines from the file.

9. Save the file, and exit from the editor.

10. To run the shell startup script, enter one of the following commands:

- Bash shell:

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

- Bourne or Korn shell:

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

- C shell:

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

11. If you are not installing the software on the local system, then enter a command similar to the following 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 Oracle Universal Installer (your workstation or PC).

12. If you determined that the `/tmp` directory has less than 400 MB of free disk space, then identify a file system with at least 400 MB of free space and set the `TMP` and `TMPDIR` environment variables to specify a temporary directory on this file system:

- a. Use the `bd` command to identify a suitable file system with sufficient free space.
- b. If necessary, enter commands similar to the following to create a temporary directory on the file system that you identified, and set the appropriate permissions on the directory:

```
$ su - root
# mkdir /mount_point/tmp
# chmod a+wr /mount_point/tmp
# exit
```

- c. Enter commands similar to the following to set the `TMP` and `TMPDIR` environment variables:

- * Bourne, Bash, or Korn shell:

```
$ TMP=/mount_point/tmp
$ TMPDIR=/mount_point/tmp
$ export TMP TMPDIR
```

- * C shell:

```
% setenv TMP /mount_point/tmp
% setenv TMPDIR /mount_point/tmp
```

13. 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 or identified earlier.

14. 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
```

Note: If the ORACLE_HOME environment variable is set, then Oracle Universal Installer uses the value that it specifies as the default path for the Oracle home directory. However, if you set the ORACLE_BASE environment variable, then Oracle recommends that you unset the ORACLE_HOME environment variable and choose the default path suggested by Oracle Universal Installer.

15. 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 22, 022, or 0022 and the environment variables that you set in this section have the correct values.

8 Mounting the Product Disc

On most hp-ux Itanium systems, the product disc mounts automatically when you insert it into the drive. If the disc does not mount automatically, follow these steps to mount it:

1. Switch user to root:

```
$ su - root
```

2. If necessary, enter the following command to unmount the currently mounted disc, then remove it from the drive:

```
# /usr/sbin/umount /SD_DVD
```

In this example, `/SD_DVD` is the mount point directory for the disc drive.

3. Insert the appropriate disc into the disc drive, then enter a command similar to the following to mount it:

```
# /usr/sbin/mount -F cdfs -o rr /dev/dsk/cxydz /SD_DVD
```

In this example, `/SD_DVD` is the disc mount point directory and `/dev/dsk/cxydz` is the device name for the disc device, for example `/dev/dsk/c0t2d0`.

4. If Oracle Universal Installer is displaying the Disk Location dialog box, enter the disc mount point directory path, for example:

```
/SD_DVD
```

9 Installing Oracle Database Client

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

1. To start Oracle Universal Installer, complete one of the following steps depending on the location of the installation files:

- If the installation files are on disc, enter commands similar to the following, where `directory_path` is the path of the `db` directory on the DVD:

```
$ cd /tmp
$ /directory_path/runInstaller
```

- If the installation files are on the hard disk, change directory to the `db` directory and enter the following command:

```
$ ./runInstaller
```

If Oracle Universal Installer does not start, then refer to *Oracle Database Client Installation Guide for hp-ux Itanium* for information about how to troubleshoot X display problems.

2. The following table describes the recommended action for each Oracle Universal Installer screen. Use the following guidelines to complete the installation:

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

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

Screen	Recommended Action
Select Installation Method	The Basic Installation option is selected by default. Specify the directory path of the Oracle home. Ensure that the UNIX DBA group <code>oinstall</code> is selected. If you want to create a starter database, then specify a name and password for it. Then, click Next .
Specify Inventory Directory and Credentials	This screen is displayed only during the first installation of Oracle products on a system. Specify the full path of the Oracle Inventory directory. Ensure that the operating system group selected is <code>oinstall</code> . Then, click Next .

Screen	Recommended Action
Product-Specific Prerequisite Checks	<p>Verify that all of the prerequisite checks succeed, then click Next.</p> <p>Oracle Universal Installer checks the system to verify that it is configured correctly to run Oracle software. If you have completed all of the preinstallation steps in this guide, all of the checks should pass.</p> <p>If a check fails, then review the cause of the failure listed for that check on the screen. If possible, rectify the problem and rerun the check. Alternatively, if you are satisfied that your system meets the requirements, then you can select the check box for the failed check to manually verify the requirement.</p>
Summary	Review the information displayed on this screen, and then click Install .
Install	This screen displays status information while the product is being installed.
Configuration Assistants	This screen displays status information for the configuration assistants that configure the software and create a database. When the message is displayed at the end of this process, click OK to continue.
Execute Configuration Scripts	When prompted, read the instructions and then run the scripts mentioned on this screen. Click OK to continue.
End of Installation	<p>The configuration assistants configure several Web-based applications, including Oracle Enterprise Manager Database Control. This screen displays the URLs configured for these applications. Make a note of the URLs used. The port numbers used in these URLs are also recorded in the following file:</p> <p><code>oracle_home/install/portlist.ini</code></p> <p>To exit from Oracle Universal Installer, click Exit and then click Yes.</p>

10 What to Do Next?

After you have successfully installed Oracle Client, refer to *Oracle Database Client Installation Guide for hp-ux Itanium* for information about required and optional postinstallation steps.

11 Documentation Accessibility

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B25296-01

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