

Oracle® Database

Client Quick Installation Guide

11g Release 2 (11.2) for HP-UX PA-RISC (64-Bit)

E10867-01

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This guide describes how to quickly install Oracle Database Client on HP-UX PA-RISC systems. It includes information about the following:

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1 Reviewing Information About this Guide

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*.

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.example.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 -  
password:  
#
```

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

Note: If necessary, refer to the X server documentation for more information about completing this procedure. Depending on the X server software that you are using, you must 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 -
password:
```

3 Checking the Hardware Requirements

The system must meet the following minimum hardware requirements:

- [Memory Requirements](#)
- [Disk Space Requirements](#)

3.1 Memory Requirements

The following are the memory requirements for installing Oracle Database 11g Release 2 (11.2):

- At least 256 MB of physical RAM

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

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

If the size of the physical RAM is less than the required size, then you must install more memory before continuing.

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

Available RAM	Swap Space Required
Between 0 MB and 256 MB	3 times the size of RAM
Between 256 MB and 512 MB	2 times the size of RAM
Between 512 MB and 2 GB	1.5 times the size of RAM
Between 2 GB and 16 GB	Equal to the size of RAM
More than 16 GB	16 GB

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.

Note: Oracle recommends that you take multiple values for the available RAM and swap space before finalizing a value. This is because the available RAM and swap space keep changing depending on the user interactions with the computer.

3.2 Disk Space Requirements

The following are the disk space requirements for installing Oracle Database 11g Release 2 (11.2):

- The minimum disk space requirement for a client install in the `/tmp` directory is 130 MB

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

```
# bdf /tmp
```

If the free disk space available in the `/tmp` directory is less than what is required, 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 the system administrator for information about extending file systems.
- To determine the amount of free disk space 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 (MB)
Instant Client	405 MB
Administrator	2.86 GB
Runtime	2.30 GB
Custom (maximum)	2.88 GB

4 Checking the Software Requirements

Depending on the products that you intend to install, verify that the following software is installed on the system.

- [Operating System Requirements](#)
- [Compiler Requirements](#)
- [Patch Requirement](#)
- [Additional Software Requirements](#)

4.1 Operating System Requirements

The following are the operating system requirements for Oracle Database 11g Release 2 (11.2):

- HP-UX 11i V3 patch Bundle Sep/ 2008 (B.11.31.0809.326a) or higher

To determine the distribution and version of HP-UX installed, enter the following command:

```
# uname -a
```

```
HP-UX hostname B.11.31 U ia64 4156074294 unlimited-user license
```

In this example, the version of HP-UX 11i is 11.31.

```
# /usr/sbin/swlist -l bundle |grep QPK
```

The QPK (Quality Pack) bundles have version numbers of the form B.11.31.0809.326a (for the September 2008 release), B.11.31.0903.334a (for the March 2009 release), and so on.

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.

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.

4.2 Compiler Requirements

The following are the compiler requirements for Pro*C/C++, Oracle Call Interface, Oracle C++ Call Interface, and Oracle XML Developer's Kit (XDK) with Oracle Database 11g Release 2 (11.2):

- HP ANSI C B.11.31.04 (Swlist Bundle - C.11.31.04) - September 2008
- aC++ A.03.85 (Swlist Bundle - C.11.31.04) - September 2008

4.3 Patch Requirement

In addition, you must verify that the following patches are installed on the system.

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.

The following are operating system patches for HP-UX PA-RISC:

For HP-UX 11i V3 (11.31):

- PHCO_40381 11.31 Disk Owner Patch
- PHKL_38038 VM patch - hot patching/Core file creation directory
- PHKL_38938 11.31 SCSI cumulative I/O patch
- PHKL_39351 Scheduler patch : post wait hang
- PHSS_37959 Libcl patch for alternate stack issue fix (QXCR1000818011)
- PHSS_39094 11.31 linker + fdp cumulative patch

- PHSS_38141 11.31 aC++ Runtime

For HP-UX 11i V3 (11.31) VERITAS File System:

PHKL_39773: 11.31 VRTS 5.0 GARP6 VRTSvxfS Kernel Patch.

Note: This patch has no other dependencies. It is included in the September 2009 update of HP-UX 11.31. It is needed only when VxFS 5.0 is installed.

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_37959
```

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

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

2. 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 displays a recent version of the patch, then download and install that version.

4.4 Additional Software Requirements

Depending on the components you want to use, you must ensure that the following software are installed:

- [Oracle JDBC/OCI Drivers](#)
- [Oracle ODBC Drivers](#)
- [Separate 32-Bit Client Software for 64-Bit Ports](#)
- [Browser Requirements](#)
- [Programming languages](#)

4.4.1 Oracle JDBC/OCI Drivers

You can use the following JDK versions:

- HP-UX JDK 6.0.05
- HP-UX JDK 5.0.15

4.4.2 Oracle ODBC Drivers

If you intend to use ODBC, then you should build and install the most recent ODBC Driver Manager. You can download and install the Driver Manager from the following link:

<http://www.unixodbc.org>

You do not require ODBC Driver Manager to install Oracle Database.

To use ODBC, you must also install gcc 3.4.5 or later

4.4.3 Separate 32-Bit Client Software for 64-Bit Ports

Starting with Oracle Database 11g Release 2 (11.2), the 64-bit client software does not contain any 32-bit client binaries. If you require 32-bit client binaries on 64-bit ports, then install the 32-bit binaries from the respective 32-bit client software.

See Also: "Bit-Length Support for Client Applications" in *Oracle Database Administrator's Reference for Linux and UNIX-Based Operating Systems*

4.4.4 Browser Requirements

Web browsers must support Java Script and the HTML 4.0 and CSS 1.0 standards. The following Web browsers are supported for Oracle Enterprise Manager Database Control:

- Netscape Navigator 8.1
- Netscape Navigator 9.0
- Microsoft Internet Explorer 6.0 SP2
- Microsoft Internet Explorer 7.0
- Microsoft Internet Explorer 7.0 SP1
- Microsoft Internet Explorer 8.0
- Firefox 2.0
- Firefox 3.0.7
- Safari 3.0.4
- Safari 3.1
- Safari 3.2

4.4.5 Programming languages

The following products are certified for use with:

- **Pro* COBOL**
Micro Focus Server Express 5.1
- **Pro* FORTRAN**
HP FORTRAN/90 - Sep 2008 - release

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 output of this command shows the `oinstall` group name, then the group already exists.

Note: In Oracle documentation, Oracle Inventory group is called `oinstall`. However, it is not mandatory to use the same name, you can enter a different name for the group.

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 create the Oracle base directory:

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

```
# df
```

This command displays information about all 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 either one or two file systems that meet the disk space requirements mentioned earlier in this section.
 3. Note the name of the mount point directory for each file system that you identified.
 4. 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 /mount_point/oradata
# chown oracle:oinstall /mount_point/oradata
# chmod 775 /mount_point/oradata
```

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.

Note: Ensure that the `PATH` variable contains `$ORACLE_HOME/bin` before `/usr/X11R6/bin`.

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.example.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 computer, then run the following command on the remote computer to set the `DISPLAY` variable:

- Bourne, Bash or Korn shell:

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

- C shell:

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

In this example, `local_host` is the host name or IP address of the local computer that you want to use to display Oracle Universal Installer.

Run the following command on the remote computer to check if the shell and the `DISPLAY` environmental variable are set correctly:

```
echo $SHELL  
echo $DISPLAY
```

Now to enable X applications, run the following commands on the local computer:

```
$ xhost + fully_qualified_remote_host_name
```

To verify that X applications display is set properly, run a X11 based program that comes with the operating system such as `xclock`:

```
$ xclock_path
```

In this example, `xclock_path` is the directory path. For example, you can find `xclock` at `/usr/X11R6/bin/xclocks`. If the `DISPLAY` variable is set properly, then you can see `xclock` on your computer screen.

See Also: PC-X Server or Operating System vendor documents for further assistance.

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 `bdf` 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 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 -
password:
```

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 Client

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

- To start Oracle Universal Installer, enter the following command:

```
$ /mount_point/db/runInstaller
```

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

- 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 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 Installation Guide* 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.
 - In Oracle documentation, Oracle Inventory group is called `oinstall`. However, it is not mandatory to use the same name, you can enter a different name for the group.
-
-

1. In the Select Installation Type screen, select the type of installation that you want: Instant Client, Administrator, Runtime, or Custom and click **Next**.

2. The Select Product Languages screen enables you to select the language in which you want to run the product.

Select the product language from the Available Languages list, transfer it to the Selected Languages list. Click **Next**.

This screen is not displayed if you select Instant Client as the type of installation in Step 1.

3. In the Specify Install Location screen, enter the following details:

Oracle Base: This path appears by default. You can change the path based on your requirement. The Oracle Base section is not displayed if you select Instant Client as the type of installation in Step 1.

In the **Software Location** section, accept the default values or enter the Oracle home name and directory path in which you want to install Oracle components. The directory path should not contain spaces. Click **Next**.

4. In the Create Inventory screen, you are prompted by the installer to specify the directory path for central inventory the first time you install Oracle Database on your computer. Enter the **Inventory Directory** path, and click **Next**.

Note: By default, the Oracle Inventory directory is not installed under the Oracle Base directory. This is because all Oracle software installations share a common Oracle Inventory, so there is only one Oracle Inventory for all users, whereas there is a separate Oracle Base for each user.

5. The Perform Prerequisite Checks screen verifies if your computer meets the minimum system requirements to install the desired product. Click **Next**.

6. Review the information displayed in the Summary screen, and click **Finish**.

Note: Starting with Oracle Database 11g Release 2 (11.2), you can save all the installation steps into a response file by clicking **Save Response File** in the Summary screen. Later, this file can be used for a silent installation.

7. The Install Product screen states the progress of a client installation. After Oracle Database Client is installed, you are prompted to execute the root configuration script for new inventory as a `root` user. Execute the `root.sh` script as a `root` user to complete the installation, and click **OK**.

10 Installing Oracle Database Examples

If you plan to use the following products or features, then download and install the products from the Oracle Database Examples media:

- Oracle JDBC Development Drivers
- Oracle Database Examples
- Oracle Context Companion
- Various Oracle product demonstrations

For information about installing software and various Oracle product demonstrations from the Oracle Database Examples media, refer to *Oracle Database Examples Installation Guide*.

11 What to Do Next?

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

12 Documentation Accessibility

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