Oracle® Database

Client Quick Installation Guide

11*g* Release 1 (11.1) for HP-UX Itanium

B32330-05

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

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.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 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 -
password:
```

3 Checking the Hardware Requirements

The system must meet the following minimum hardware requirements:

- Memory Requirements
- System Architecture
- Disk Space Requirements

3.1 Memory Requirements

The following are the memory requirements for installing Oracle Database 11g release 1:

- At least 256 MB of physical RAM

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

  ```
  # /usr/contrib/bin/machinfo  | grep -i Memory
  ```

  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
Up to 256 MB	3 times the size of RAM
Between 257 MB and 512 MB	2 times the size of RAM
More than 726 MB	0.75 times the size of RAM

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.

3.2 System Architecture

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

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

Note: The expected output of this command is 64. If you do not see the expected output, then you cannot install the software on this system.

3.3 Disk Space Requirements

The following are the disk space requirements for installing Oracle Database 11g release 1:

- Between 150 and 400 MB of disk space in the `/tmp` directory

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

  ```
  # bdf /tmp
  ```

  If there is less than 400 MB of free 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 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	206
Administrator	1.76 (GB)
Runtime	1.34 (GB)
Custom (maximum)	1.67 (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.

4.1 Operating System Requirements

The following are the operating system requirements for Oracle Database 11*g* release 1:

- HP-UX 11i v2 (11.23)
- HP-UX 11i v3 (11.31)

To determine the distribution and version of HP-UX 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.

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 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.

4.2 Compiler Requirements

The following are the compiler requirements for HP-UX on Itanium Pro*C/C++, Oracle Call Interface, Oracle C++ Call Interface, and Oracle XML Developer's Kit (XDK) with Oracle Database 11*g* Release 1:

- HP C/ANSI C Compiler (A.06.14)

  HP ANSI C compiler (C.06.10) - June 2006 (AR0606) release

- HP aC++ Compiler (A.06.14)

  C++ (aCC) compiler (C.06.10) - June 2006 (AR0606) release

4.3 Patch Requirement

In addition, you need to 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 on Itanium:

For HPIA 11.23:

- Mar '07 Patch bundle for HP-UX 11iV2- B.11.23.0703
- PHKL_35478: s700_800 11.23 shmget(2) cumulative patch
- PHCO_36673: s700_800 11.23 libc cumulative patch
- PHKL_36853 : s700_800 11.23 pstat patch
- PHSS_37958: 11.23 Libcl patch

> **Note:** HP Serviceguard is supported with Oracle Database 11g Release 1 only if the HP-UX Serviceguard patch `PHSS_34824` is not installed.
>
> If you have an existing HP-UX 11.23 installation with patch `PHSS_34824` installed, then you must deinstall this patch before installing or upgrading to Oracle Database 11g Release 1. If you do not remove this patch, then Oracle Database installation fails.

For HPIA 11.31:

- PHKL_35900: 11.31 evacd performance, kvaddr leak panic
- PHKL_36248: 11.31 esctl cumulative patch
- PHKL_36249: 11.31 esdisk cumulative patch
- PHKL_35936: 11.31 call to read(2) or write(2) may incorrectly return -1
- PHKL_38038: ABORT CORRUPTION HANG OTHER PANIC
-

Refer to the following Web site for information about additional java patches:

`http://www.hp.com/products1/unix/java/patches/index.html`

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.

4.4 Additional Software Requirements

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

- Oracle ODBC Drivers
- Oracle JDBC/OCI Drivers
- Programming languages
- Browser Requirements

4.4.1 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

4.4.2 Oracle JDBC/OCI Drivers

You can use Java SDK 5.0 as an optional software with the Oracle JDBC/OCI drivers. However, this is not required for the installation.

4.4.3 Programming languages

The following products are certified for use with:

- Pro*COBOL

  Micro Focus Cobol 5.0
- Pro*FORTRAN

  HP FORTRAN 90 (B11.23.20)

4.4.4 Browser Requirements

Web browsers must support Java Script and the HTML 4.0 and CSS 1.0 standards. The following browsers meet these requirements:

- Netscape Navigator 7.2
- Netscape Navigator 8.1
- Mozilla version 1.7
- Microsoft Internet Explorer 6.0 SP2
- Microsoft Internet Explorer 7.0
- Firefox 1.0.4
- Firefox 1.5
- Firefox 2.0

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 create the Oracle base directory:

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

   ```
   # bdf
   ```

   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.

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 machine 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 machine 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 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 -
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/cxtydz /SD_DVD
```

In this example, /SD_DVD is the disc mount point directory and /dev/dsk/c*x*t*y*d*z* 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 as follows:

> **Note:** If you have an existing HP-UX 11.23 installation with patch `PHSS_34824` installed, then you must deinstall this patch before installing or upgrading to Oracle Database 11g Release 1. If you do not remove this patch, then Oracle Database installation fails.

- 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 Linux* 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 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 Installation Guide for Linux* 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.

  1. In the Select a Product to Install screen, select the product that you want to install: Oracle Database 11g, Oracle Client, or Oracle Clusterware.

     In order to install Oracle Client, select **Oracle Client** and click **Next**.
  2. In the Select Installation Type screen, select the type of installation that you want: Instant Client, Administrator, Runtime, or Custom and click **Next**.
  3. In the Product-specific Prerequisite Checks screen, correct any errors that Oracle Universal Installer may have found, and then click **Next**.
  4. In the Summary screen, check the installed components listing and click **Install**.
  5. If you have selected the Administrator or Runtime installation type, then Net Configuration Assistant is invoked as a part of the installation. Click **Next** to complete the installation You should then start the Net Configuration Assistant to complete configuration process.
  6. In the Oracle Net Configuration Assistant: Welcome screen, either select **Perform typical configuration** to use a default configuration, or select the **Naming Methods** configuration option. Then click **Next**. (The remaining steps in this procedure assume you are using Naming Methods.)
  7. Answer the remaining prompts to complete the configuration.
  8. On the Execute Configuration Scripts screen, read the instructions and then run the script mentioned on this screen. Click **OK** to continue.
  9. In the End of Installation screen, click **Exit**, then click **Yes** to exit from Oracle Universal Installer.

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 Itanium* for information about required and optional postinstallation steps.

12 Documentation Accessibility

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