

# Oracle® Database

Quick Installation Guide

12c Release 1 (12.1) for HP-UX Itanium

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This guide describes how to quickly install Oracle Database 12c Release 1 (12.1) on HP-UX Itanium systems. It includes information about the following:

- [Reviewing Information About This Guide](#)
- [Logging In to the System as root](#)
- [Configuring Servers for Oracle Database](#)
- [Reviewing Operating System Security Common Practices](#)
- [About Operating System Requirements](#)
- [Operating System Requirements for HP-UX Itanium Systems](#)
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## 1 Reviewing Information About This Guide

This guide describes how to install Oracle Database by using the default installation options.

### Tasks Described in This Guide

The procedures in this guide describe how to:

- Configure your system to support Oracle Database
- Install Oracle Database on a local file system by using the Typical Installation option

- Configure a general-purpose Oracle Database installation that uses the local file system for database file storage

### Results of a Successful Installation

After you successfully install Oracle Database:

- The database that you created and the default Oracle Net listener process run on the system.
- Oracle Enterprise Manager Database Express runs on the system and can be accessed using a web browser.

### Tasks Not Described in This Guide

This guide covers the Basic Installation scenario and does *not* describe how to complete the following tasks:

- Using the Advanced Installation option to install the software
- Installing the software on a system that has an existing Oracle software installation
- Installing Oracle Grid Infrastructure and Oracle Real Application Clusters
- Enabling Enterprise Manager e-mail notifications or automated backups
- Enabling core file creation
- Setting UDP and TCP kernel parameters manually
- Using alternative storage options such as Oracle Automatic Storage Management
- Installing and configuring Oracle Grid Infrastructure
- Removing Oracle database software

### Where to Get Additional Installation Information

For more information about installing Oracle Database, including information about the tasks not described in this guide, refer to one of the following guides:

- If you want to install the software on a single system, then refer to *Oracle Database Installation Guide for HP-UX Itanium*.
- If you want to perform a Oracle Real Application Clusters installation, then refer to *Oracle Grid Infrastructure Installation Guide for HP-UX Itanium* and *Oracle Real Application Clusters Installation Guide for Linux and UNIX*. These guides describe how to install Oracle Clusterware and Oracle Real Application Clusters. Oracle clusterware is a prerequisite for Oracle Real Application Clusters installations.

The product documentation for Oracle Database products is available in both HTML and PDF formats online:

<http://docs.oracle.com/>

## 2 Logging 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:

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**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

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- Following are the steps for 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, 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:  
#
```

- Following are the steps for installing the software from a PC or other system with X server software:

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**Note:** If necessary, refer to your X server documentation, or contact your X server vendor or system administrator 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.

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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 Configuring Servers for Oracle Database

This section describes the following operating system tasks that you must complete before you install Oracle Database:

- [Checking Server Hardware and Memory Configuration](#)
- [General Server Minimum Requirements](#)
- [Server Storage Minimum Requirements](#)
- [Server Memory Minimum Requirements](#)

### 3.1 Checking Server Hardware and Memory Configuration

Run the following commands to check your current system information:

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

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

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

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

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

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**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.
  - Contact your operating system vendor for swap space allocation guidance for your server. The vendor guidelines supersede the swap space requirements listed in this guide.
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3. To determine the amount of disk space available in the `/tmp` directory, enter the following command:

```
# bdf /tmp
```

If the free 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.
  - Extend the file system that contains the `/tmp` directory.
4. To determine the amount of free disk space on the system, enter the following command:

```
# bdf
```

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

```
# uname -m
```

Verify that the processor architecture matches the Oracle software release to install. For example, you should see the following for a x86-64 bit system:

```
ia64 (itanium)
```

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

6. To view the shared memory kernel parameters (`shmmni`, `shmseg`, and `shmmax`) and determine if any changes are necessary for your system., run the following command:

```
# kctune -v shmmni
# kctune -v shmseg
# kctune -v shmmax
```

Use the `kctune shmmni=1024` command to set the memory kernel parameter to the required value.

## 3.2 General Server Minimum Requirements

Ensure the following general minimum requirements on your system:

- Ensure that the system is started with run level 3.
- Ensure display cards provide at least 1024 x 768 display resolution, so that Oracle Universal Installer displays correctly while performing a system console-based installation.

## 3.3 Server Storage Minimum Requirements

Ensure that your system meets the following storage requirements:

- Ensure that your system meets the disk space requirement for software files described in the following table:

**Table 1 Disk Space Requirements for Software Files on HP-UX Itanium Systems**

Installation Type	Disk Space (GB)
Enterprise Edition	8.3
Standard Edition	8.1
Standard Edition One	8.1
Standard Edition 2	8.1

- At least 1 GB of space in the `/tmp` directory.

If the free 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.
- Extend the file system that contains the `/tmp` directory.

### 3.4 Server Memory Minimum Requirements

Ensure that your system meets the following memory requirements:

**Minimum:** 1 GB of RAM

**Recommended:** 2 GB of RAM or more

The following table describes the relationship between installed RAM and the configured swap space recommendation:

**Table 2** *Swap Space Requirements*

RAM	Swap Space
Between 1 GB 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

## 4 Reviewing Operating System Security Common Practices

Secure operating systems are an important basis for general system security. Ensure that your operating system deployment is in compliance with common security practices as described in your operating system vendor security guide.

## 5 About Operating System Requirements

Depending on the products that you intend to install, verify that you have the required operating system kernel and packages installed.

Requirements listed in this document are current as of the date listed on the title page. To obtain the most current information about kernel requirements, see the online version at the following URL:

<http://docs.oracle.com/>

Oracle Universal Installer performs checks your system to verify that it meets the listed operating system package requirements. To ensure that these checks complete successfully, verify the requirements before you start Oracle Universal Installer.

## 6 Operating System Requirements for HP-UX Itanium Systems

The compiler and patches listed in this section are supported on HP-UX Itanium systems for Oracle Database and Oracle Grid Infrastructure 12c:

### 6.1 Supported HP-UX Release on Itanium

Use the following table to check the minimum supported HP-UX Itanium operating system requirements for Oracle Database:

**Table 3 HP-UX Itanium Minimum Operating System Requirements**

Item	Minimum Requirement
HP-UX 11.31 operating system	HP-UX 11i V3 patch Bundle Sep/ 2008 (B.11.31.0809.326a) or higher
Patches for HP-UX 11.31	The following packages (or later versions) must be installed: PHCO_43503 - 11.31 diskowner(1M) cumulative patch PHKL_38038 - 11.31 vm cumulative patch PHKL_38938 - 11.31 SCSI cumulative I/O patch PHKL_40941 - 11.31 scheduler cumulative patch PHSS_36354 - 11.31 assembler patch PHSS_37042 - 11.31 hppac PHSS_37959 - Libcl patch for alternate stack issue fix (QXCR1000818011) PHSS_38141 - 11.31 aC++ Runtime PHSS_39094 - 11.31 linker + fdp cumulative patch PHSS_39100 - 11.31 Math Library Cumulative Patch PHSS_39102 - 11.31 Integrity Unwind Library

## 7 Additional Drivers and Software Packages for HP-UX Itanium Systems

You are not required to install additional drivers and packages, but you may choose to install or configure drivers and packages in the following list:

- [Installation Requirements for Open Database Connectivity](#)
- [Installation Requirements for Oracle Messaging Gateway](#)
- [Installation Requirements for Programming Environments](#)
- [Installation Requirements for Web Browsers](#)

**See Also:** "Oracle Application Express Installation Requirements" and "Recommended Pre-installation Tasks" in *Oracle Application Express Installation Guide*

### 7.1 Installation Requirements for Open Database Connectivity

Review the following sections if you plan to install Open Database Connectivity (ODBC):

- [About ODBC Drivers and Oracle Database](#)
- [Installing ODBC Drivers for HP-UX Itanium Systems](#)

#### 7.1.1 About ODBC Drivers and Oracle Database

Open Database Connectivity (ODBC) is a set of database access APIs that connect to the database, prepare, and then run SQL statements on the database. An application that uses an ODBC driver can access non-uniform data sources, such as spreadsheets and comma-delimited files.

#### 7.1.2 Installing ODBC Drivers for HP-UX Itanium Systems

Oracle ODBC driver on HP-UX Itanium is certified with ODBC Driver Manager 2.3.1. To use ODBC, you must also install `gcc 4.2.3` or later.

You do not require ODBC drivers for Oracle Clusterware or Oracle Database.

Download and install the ODBC Driver from the following website:

<http://www.unixodbc.org/>

## 7.2 Installation Requirements for Oracle Messaging Gateway

Review the following sections to install Oracle Messaging Gateway:

- [About Oracle Messaging Gateway](#)
- [Installing Oracle Messaging Gateway](#)

### 7.2.1 About Oracle Messaging Gateway

Oracle Messaging Gateway is a feature of Oracle Database. It enables communication between applications based on non-Oracle messaging systems and Oracle Streams Advanced Queuing.

Oracle Messaging Gateway supports the integration of Oracle Streams Advanced Queuing (AQ) with applications based on WebSphere and TIBCO Rendezvous. For information on supported versions see *Oracle Database Advanced Queuing User's Guide*.

### 7.2.2 Installing Oracle Messaging Gateway

Oracle Messaging Gateway is installed with the Enterprise Edition of Oracle Database.

Check My Oracle Support Certification for current requirements:

<https://support.oracle.com>

If you require a CSD for IBM WebSphere MQ, then see the following website for download and installation information:

<http://www.ibm.com>

## 7.3 Installation Requirements for Programming Environments

Review the following sections to install programming environments:

- [About Programming Environments and Oracle Database](#)
- [Configuring Support for Programming Environments](#)

### 7.3.1 About Programming Environments and Oracle Database

Oracle Database supports multiple programming languages for application development in different environments. Some languages require that you install additional compiler packages for the operating system.

Programming environments are options. They are not required for Oracle Database.

**See Also:** *Oracle Database Development Guide* for an overview of programming environments

### 7.3.2 Configuring Support for Programming Environments

Ensure that your system meets the requirements for the programming environment you want to configure:



**Table 4 Requirements for Programming Environments**

<b>Programming Environments</b>	<b>Support Requirements</b>
Java Database Connectivity (JDBC) / Oracle Call Interface (OCI)	Use JDK 6 (1.6.0.16) or JDK 7 (1.7.0.00) or later with the JNDI extension with Oracle Java Database Connectivity and Oracle Call Interface drivers. JDK 6 (1.6.0.16) is installed with this release. <b>Note:</b> These are not mandatory for the database installation.
Pro*C/C++, Oracle Call Interface, Oracle C++ Call Interface, Oracle XML Developer's Kit (XDK)	<b>Compiler Version:</b> A.06.20 (HP C/aC++ Swlist Bundle - C.11.31.04) - Sep 2008 Patch for HP-UX 11i V3 (11.31) on HP-UX Itanium: PHSS_39824 - 11.31 HP C/aC++ Compiler (A.06.23) patch PHSS_39826 - 11.31 u2comp/be/plugin (C.06.23) patch  Additional patches may be needed depending on applications you deploy.
VERITAS File System	PHKL_39773 - 11.31 VRTS 5.0 GARP6 VRTSvxfis Kernel Patch  <b>Note:</b> The VERITAS file system is optional. This patch is required only if you want to use a VERITAS File System 5.0.
Pro*FORTRAN	HP FORTRAN/90 - Sep 2008 - release
Pro*COBOL	Micro Focus Server Express 5.1

## 7.4 Installation Requirements for Web Browsers

Web browsers are required only if you intend to use Oracle Enterprise Manager Database Express and Oracle Enterprise Manager Cloud Control. Web browsers must support Java Script, and the HTML 4.0 and CSS 1.0 standards. For a list of browsers that meet these requirements see the Enterprise Manager certification matrix on My Oracle Support:

<https://support.oracle.com>

**See Also:** *Oracle Enterprise Manager Cloud Control Basic Installation Guide* for steps on how to access the Enterprise Manager certification matrix

## 8 Checking the Software Requirements

To check the software requirements, perform the following steps:

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

```
# uname -a
```

The output of this command is similar to the following:

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

In this example, the version of HP-UX is 11.31 and the processor is Itanium.

2. To determine the compiler installed, enter the following command:

```
# /usr/sbin/swlist -l product | grep -i compiler
```

3. To determine if 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
```

If a required patch is not installed, then download it from the HP Support Center website and install it:

<http://www.hp.com/>

If the website has a recent version of the patch, then download and install that version.

4. To verify if the system meets the minimum patch bundle requirements, use the following command:

```
# /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. See your operating system or software documentation for information about installing products.

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**Note:** There may be more recent versions of the patches listed in the preceding paragraph that are installed on the system. If a listed patch is not installed, then determine if a more recent version is installed before installing the version listed.

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5. If you require a CSD for WebSphere MQ, then refer to the following website for download and installation information:

<http://www.ibm.com>

## 9 Creating Required Operating System Groups and Users

The following local operating system groups and users are required if you are installing Oracle Database:

- The Oracle Inventory group (oinstall)
- The OSDBA group (dba)
- The Oracle software owner (oracle)

To determine whether these groups and users already exist, and if necessary, to create them, follow these steps:

1. To determine whether 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.

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**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.

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

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

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

2. To determine whether the `dba` group exists, enter the following command:

```
# grep dba /etc/group
```

If the output from this command shows the `dba` group name, then the group already exists.

3. If necessary, enter the following commands to create the `oinstall` and `dba` groups:

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

4. 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 and `dba` is a secondary group:

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

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

- If the `oracle` user exists, but its primary group is not `oinstall` or it is not a member of the `dba` group, then enter the following command:

```
# /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` (for example) as the primary group and `dba` as the secondary group.

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

```
# passwd oracle
```

## 10 Configuring Kernel Parameters

During installation, you can generate and run the Fixup script to check and set the kernel parameter values required for successful installation of the database. This script updates required kernel packages if necessary to minimum values.

If you cannot use the Fixup scripts, then verify that the kernel parameters shown in the following table are set to values greater than or equal to the minimum value shown. The procedure following the table describes how to verify and set the values manually.

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**Note:** The kernel parameter values shown in this section are recommended values only. For production database systems, Oracle recommends that you tune these values to optimize the performance of the system. See your operating system documentation for more information about tuning kernel parameters.

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Parameter	Minimum Value
executable_stack	0
ksi_alloc_max	32768
max_thread_proc	1024
maxdsiz	1073741824 (1 GB)
maxdsiz_64bit	2147483648 (2 GB)
maxfiles	1024
maxfiles_lim	63488
maxssiz	134217728 (128 MB)
maxssiz_64bit	1073741824 (1 GB)
maxuprc	3686
msgmni	4096
msgtql	4096
ncsize	35840
nfllocks	4096
ninode	34816
nkthread	7184
nproc	4096
semmni	4096
semmns	8192
semmnu	4092
semvmx	32767
shmmax	1073741824
shmmni	4096
shmseg	512
tcp_largest_anon_port	65500

Parameter	Minimum Value
udp_largest_anon_port	65500

**See Also:** "Verifying UDP and TCP Kernel Parameters" in the *Oracle Database Installation Guide for HP-UX Itanium*

**Note:** If the current value for any parameter is higher than the value listed in this table, then do not change the value of that parameter.

The following kernel parameters are obsolete. You need not specify values for these parameters:

- msgmap
- msgseg

If you do not use HFS, then retain the default `ninode` value.

To view the current value or formula specified for these kernel parameters, and to change them if necessary:

1. Enter the following command to start the `kcweb` application:

```
# /usr/sbin/kcweb -F
```

2. Check the value or formula specified for each of these parameters and, if necessary, modify that value or formula.

If necessary, refer to the `kcweb` online Help for more information about completing this step.

**Note:** If you modify the value of a parameter that is not dynamic, then you must restart the system.

## 11 Creating Required Directories

Create directories with names similar to the following, and specify the correct owner, group, and permissions for them:

- The Oracle base directory
- An optional Oracle data file directory

The Oracle base directory must have appropriate free disk space if you choose not to create a separate Oracle data file directory.

**Note:** If you do not want to create a separate Oracle data file directory, then you can install the data files in a subdirectory of the Oracle base directory. However, this is not recommended for production databases.

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
```

## 12 Configuring Oracle Software Owner 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.

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**Caution:** Use shell programs supported by your operating system vendor. If you use a shell program that is not supported by your operating system, then you can encounter errors during installation.

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To set the `oracle` user's environment:

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

```
$ xhost + RemoteHost
```

where `RemoteHost` is the fully qualified remote host name. For example:

```
$ xhost + somehost.example.com
```

3. If you are not 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. 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
```

7. 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
```

- C shell:

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

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

8. 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. To determine the free disk space on each mounted file system, use the following command:

```
# df -k
```

- 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:

```
$ sudo mkdir /mount_point/tmp
$ sudo 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
```

9. If you have had an existing installation on your system, and you are using the same user account to install this installation, then unset the `ORACLE_HOME`, `ORACLE_BASE`, `ORACLE_SID`, `TNS_ADMIN` environment variables and any other environment variable set for the Oracle installation user that is connected with Oracle software homes.

Enter the following commands to ensure that the `ORACLE_HOME`, `ORACLE_BASE`, `ORACLE_SID` and `TNS_ADMIN` environment variables are not set:

- Bourne, Bash, or Korn shell:

```
$ unset ORACLE_HOME
$ unset ORACLE_BASE
$ unset ORACLE_SID
$ unset TNS_ADMIN
```

- C shell:

```
% unsetenv ORACLE_HOME
% unsetenv ORACLE_BASE
% unsetenv ORACLE_SID
% unsetenv TNS_ADMIN
```

Use the following command to check the `PATH` environment variable:

```
$ echo $PATH
```

Ensure that the `$ORACLE_HOME/bin` path is removed from your `PATH` environment variable.

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**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. 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.

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10. 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.

## 13 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, then 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
```

## 14 Installing Oracle Database

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

1. Log on as the Oracle software owner user (typically, `oracle`) to the computer on which to install Oracle components.
2. If you are installing the software from installation media, then mount the disk if it is not mounted.
3. 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 HP-UX Itanium* for information about how to troubleshoot X Window display problems.

4. 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 the 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 HP-UX Itanium* for information about troubleshooting.

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

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Screen	Recommended Action
Configure Security Updates	<p>Enter your e-mail address, preferably your My Oracle Support e-mail address or user name in the <b>Email</b> field.</p> <p>You can select the <b>I wish to receive security updates via My Oracle Support</b> check box to receive security updates.</p> <p>Enter your My Oracle Support password in the <b>My Oracle Support Password</b> field.</p> <p>Click <b>Next</b>.</p>
Select Installation Option	<p>Select <b>Create and configure a database</b> from the following list of available options, then click <b>Next</b>:</p> <ul style="list-style-type: none"> <li>■ Create and configure a database</li> <li>■ Install database software only</li> <li>■ Upgrade an existing database</li> </ul>
System Class	<p>Select <b>Server Class</b> from the following options to install the database, and click <b>Next</b>.</p> <ul style="list-style-type: none"> <li>■ Desktop Class: Choose this option if you are installing on a laptop or desktop class system.</li> <li>■ Server Class: Choose this option if you are installing on a server class system, such as what you would use when deploying Oracle in a production data center.</li> </ul>
Grid Installation Options	<p>Select <b>Single instance database installation</b> for the type of database installation you want to perform, and click <b>Next</b>.</p> <ul style="list-style-type: none"> <li>■ Single instance database installation: This option installs the database and the listener.</li> <li>■ Real Application Clusters database installation: This option installs Oracle Real Application Clusters.</li> <li>■ Oracle RAC One Node database installation: This option installs the Oracle RAC One Node database.</li> </ul>
Select Install Type	<p>Select <b>Typical Install</b> as the installation type from the following options, and click <b>Next</b>:</p> <ul style="list-style-type: none"> <li>■ Typical Install: This installation method is selected by default. It lets you quickly install Oracle Database using minimal input.</li> <li>■ Advanced Install: This installation method enables to perform more complex installations.</li> </ul>

Screen	Recommended Action
Typical Install Configuration	<p>Enter the following information according to your requirements:</p> <p>Oracle base: The Oracle base path appears by default. You can change the path based on your requirement.</p> <p>Software location: In the <b>Software Location</b> section, accept the default value or enter the Oracle home directory path in which you want to install Oracle components. The directory path should not contain spaces.</p> <p>Storage Type: Select <b>File System</b>, or <b>Oracle Automatic Storage Management</b> as the database storage option.</p> <p>Database file location: If you select File System as your storage type, then click <b>Browse</b> and specify a database file location.</p> <p>Database edition: Select the database edition to install.</p> <p>OSDBA Group: The OSDBA group is selected by default. You can also select the OSDBA group from the list.</p> <p>Global database name: Specify the Global Database Name using the following syntax:</p> <p><i>database_name.domain</i></p> <p>For example, <i>sales.us.example.com</i></p> <p>Administrative password: Enter the password for the privileged database account.</p> <p>Confirm Password: Reenter, and confirm the password for the privileged database account.</p> <p>Select the <b>Create as Container database</b> option to create the database as a multitenant container database (CDB) that can support one or more pluggable databases (PDBs). If you want Oracle Universal Installer to create a PDB when it creates the CDB, specify the PDB name in the <b>Pluggable Database Name</b> field.</p> <p>Click <b>Next</b> to continue.</p>
Create Inventory	<p>This screen is displayed only during the first installation of Oracle products on a system.</p> <p>Specify the full path of the Oracle Inventory directory. Ensure that the operating system group selected is <code>oinstall</code>. Click <b>Next</b> to continue.</p>
Perform Prerequisite Checks	<p>Verify that all the prerequisite checks succeed, and then click <b>Next</b>.</p> <p>Oracle Universal Installer checks the system to verify that it is configured correctly to run Oracle software. If you have completed all the preinstallation steps in this guide, all 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> <p><b>Note:</b> Oracle recommends that you use caution in checking the Ignore All option. If you check this option, then Oracle Universal Installer may not confirm if your system can install Oracle Database successfully.</p>
Summary	<p>Review the information displayed on this screen, and then click <b>Install</b>.</p> <p><b>Note:</b> You can save all the installation steps into a response file by clicking <b>Save Response File</b>. Later, this file can be used for a silent installation.</p>

Screen	Recommended Action
Install Product	<p>This screen displays the progress of a database installation. During this process, the Execute Configuration Scripts window appears. Do not click OK until you run the scripts mentioned in this screen as the root user. Click <b>Next</b>.</p> <p>This screen then displays the status information for the configuration assistants that configure the software and create a database.</p> <p>A message is displayed at the end of Database Configuration Assistant process. Review the database information, specially the Oracle Enterprise Manager Database Express URL, and click <b>OK</b>.</p>
Finish	<p>This screen is displayed automatically when all the configuration tools are successful.</p> <p>Click <b>Close</b>.</p>

## 15 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 Text Knowledge Base
- 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*.

## 16 What to Do Next?

To become familiar with this release of Oracle Database, it is recommended that you complete the following tasks:

- Log in to Oracle Enterprise Manager Database Express using a web browser.  
Oracle Enterprise Manager Database Express 12c is a web-based management tool built into Oracle Database without any need for special installation or management. You can use Oracle Enterprise Manager Database Express to manage a single Oracle Database installation. The default URL for Oracle Enterprise Manager Database Express is similar to the following:

`http://host.domain:1158/em/`

To log in, use the user name `SYS` and connect as `SYSDBA`. Use the password that you specified for this user during the Oracle Database installation.

- Refer to *Oracle Database Installation Guide for HP-UX Itanium* for information about required and optional postinstallation tasks, depending on the products to use.
- Refer to *Oracle Database Installation Guide for HP-UX Itanium* for information about how to use Oracle Enterprise Manager Database Express to learn about the configuration of your installed database.
- To learn more about using Oracle Enterprise Manager Database Express to administer a database, refer to *Oracle Database 2 Day DBA*.

## 17 Additional Information

This section contains information about the following:

- [Product Licenses](#)
- [Purchasing Licenses and Version Updates](#)
- [Contacting Oracle Support Services](#)
- [Locating Product Documentation](#)

### Product Licenses

You are welcome to install and evaluate the products included in this media pack for 30 days under the terms of the Trial License Agreement. However, you must purchase a program license if you want to continue using any product after the 30 day evaluation period. See the following section for information about purchasing program licenses.

### Purchasing Licenses and Version Updates

You can purchase program licenses and updated versions of Oracle products from the Oracle Store website:

<https://shop.oracle.com>

### Contacting Oracle Support Services

If you have purchased Oracle Product Support, you can call Oracle Support Services for assistance 24 hours a day, seven days a week. For information about purchasing Oracle Product Support or contacting Oracle Support Services, go to the Oracle Support Services website:

<http://www.oracle.com/us/support/index.html>

### Locating Product Documentation

Product documentation includes information about configuring, using, or administering Oracle products on any platform. The product documentation for Oracle Database products is available in both HTML and PDF formats online:

<http://docs.oracle.com/>

## 18 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

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