Oracle® Database

Quick Installation Guide

11*g* Release 1 (11.1) for Solaris Operating System

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This guide describes how to quickly install Oracle Database 11*g* on Solaris systems. It includes information about the following:

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 Basic 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 Control are running and can be accessed by 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 Clusterware and Oracle Real Application Clusters (RAC) on a cluster
- Enabling Enterprise Manager e-mail notifications or automated backups
- Using alternative storage options such as Automatic Storage Management or raw devices for database storage

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 Solaris Operating System*.
- If you want to perform a RAC installation, then refer to *Oracle Real Application Clusters Installation Guide for Solaris Operating System*. This guide also describes how to install Oracle Clusterware, which is a prerequisite for RAC installations.

Both these guides are available on the product disc. To access them, 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, 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 11*g* Release 1:

- At least 1 GB of RAM

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

```
# /usr/sbin/prtconf | grep "Memory size"
```

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:

RAM	Swap Space
Between 1024 MB and 2048 MB	1.5 times the size of RAM
Between 2049 MB and 8192 MB	Equal to the size of RAM
More than 8192 MB	0.75 times the size of RAM

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

```
# /usr/sbin/swap -s
```

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

- To determine the available RAM and swap space, enter the following command:

```
# sar -r -i n
```

where, n is the number of seconds to delay for the next iterations and i is the number of iterations you want to test.

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

3.2 System Architecture

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

```
# /bin/isainfo -kv
```

> **Note:** This command displays the processor type. Verify that the processor architecture matches the Oracle software release that you want to install. 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 11*g* Release 1:

- Between 225 and 275 MB of disk space in the `/tmp` directory

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

On Solaris 10:

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

Other Solaris Platforms:

```
# df -k /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:

  On Solaris 10:

  ```
  # df -h
  ```

  Other Solaris Platforms:

  ```
  # df -k
  ```

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

Installation Type	Requirement for Software Files (GB)
Enterprise Edition	4.68
Standard Edition	4.62
Custom (maximum)	4.71

- Between 1.5 GB and 2 GB of disk space is required for preconfigured database that uses file system storage (optional)

  Note: The disk space requirement for databases that use Automatic Storage Management is described later in this chapter.

  Additional disk space, either on a file system or in an Automatic Storage Management disk group, is required for the flash recovery area if you choose to configure automated backups.

4 Checking the Software Requirements

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

> **Note:** Oracle Universal Installer performs checks on the system to verify that it meets the listed requirements. To ensure that these checks pass, verify the requirements before you start Oracle Universal Installer.

4.1 Operating System Requirements

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

- Solaris 9 Update 7
- Solaris 10

To determine the distribution and version of Solaris installed, enter the following command:

```
# uname -r
5.9
```

In this example, the version shown is Solaris 9 (5.9). If necessary, refer to your operating system documentation for information about upgrading the operating system.

4.2 Package Requirements

The following packages (or later versions) must be installed:

```
SUNWarc
SUNWbtool
SUNWhea
SUNWlibC
SUNWlibm
SUNWlibms
SUNWsprot
SUNWtoo
SUNWi1of
SUNWi1cs
SUNWi15cs
SUNWxwfnt
SUNWsprox
```

Note: The `SUNWsprox` package is not supported on Solaris 10.

You may also require additional font packages for Java, depending on your locale. Refer to the following Web site for more information:

`http://java.sun.com/j2se/1.4.2/font-requirements.html`

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

```
# pkginfo -i SUNWarc SUNWbtool SUNWhea SUNWlibm SUNWlibms SUNWsprot \
 SUNWsprox SUNWtoo SUNWi1of SUNWi1cs SUNWi15cs SUNWxwfnt
```

If a package is not installed, then install it. Refer to your operating system or software documentation for information about installing packages.

4.3 Compiler Requirements

The following are the compiler requirements for Pro*C/C++, Oracle Call Interface, Oracle C++ Call Interface, Oracle XML Developer's Kit (XDK):

- Sun ONE Studio 8 (C and C++ 5.5)
- gcc 3.4.2

See Also: If you plan to use GNU Compiler Collection as the primary compiler, then refer to *Oracle Database Installation Guide for Solaris Operating System* for instructions on configuring the primary compiler.

4.4 Additional Software Requirements

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

- Oracle Messaging Gateway
- Oracle JDBC/OCI Drivers
- Browser Requirements

4.4.1 Oracle Messaging Gateway

Oracle Messaging Gateway supports the integration of Oracle Streams Advanced Queuing (AQ) with the following software:

- IBM MQSeries V6, client and serve
- TIBCO Rendezvous 7.2

If you require a CSD for WebSphere MQ, then refer to the following Web site for download and installation information:

`http://www-306.ibm.com/software/integration/wmq/support`

4.4.2 Oracle JDBC/OCI Drivers

You can use the following optional JDK versions with the Oracle JDBC/OCI drivers. However, these are not mandatory for the installation:

Sun JDK 1.5.0

4.4.3 Browser Requirements

Web browsers must support Java Script and the HTML 4.0 and CSS 1.0 standards. The following browsers meet these requirements. On Oracle Enterprise Manager Database Control:

- 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

4.5 Patch Requirements

The following are the list of patches required for Oracle Database 11*g* Release 1.

4.5.1 Operating system-specific patches

Installation Type or Product	Requirement
All installations	**Patches for Solaris 9:** ■ 112233-11, SunOS 5.9: Kernel Patch ■ 111722-04, SunOS 5.9: Math Library (libm) patch ■ 112874-39 SunOS 5.9 : `libc` patch The following additional patches are required for Numa Systems: ■ 115675-01, SunOS 5.9: liblgrp API ■ 113471-08, SunOS 5.9: Miscellaneous SunOS Commands Patch ■ 115675-01, SunOS 5.9: `/usr/lib/liblgrp.so` Patch **Patch for Solaris 10:** 127111-02 SunOS 5.10: libc patch
Pro*C/C++, Pro*FORTRAN, Oracle Call Interface, Oracle C++ Call Interface, Oracle XML Developer's Kit (XDK)	**Patch for Solaris 9 :** 112760-05, C 5.5: Patch for S1S8CC C compiler **Patches For Solaris 10:** ■ 117837-05: C++ compiler optimizer patch ■ 117846-08: C++ compiler Optimization patch ■ 118682-01

Note: The following patches are not required for silent installations:

- 108652-66, X11 6.4.1: Xsun patch
- 108773-18, SunOS 5.8: IIIM and X I/O Method patch
- 108921-16, CDE 1.4: dtwm patch

To determine whether an operating system patch is installed, enter a command similar to the following:

```
# /usr/sbin/patchadd -p | grep patch_number(without version number)
```

For example, to determine if any version of the 111713 patch is installed, use the following command:

```
# /usr/sbin/patchadd -p | grep 111713
```

If an operating system patch is not installed, then download it from the following Web site and install it:

```
http://sunsolve.sun.com
```

5 Creating Required Operating System Groups and User

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`)
- An unprivileged user (`nobody`)

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.

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

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

   If the output from this commands 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 -a oracle
```

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

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

```
# passwd -r files oracle
```

7. To determine whether the nobody user exists, enter the following command:

```
# id nobody
```

If this command displays information about the nobody user, then you do not have to create the user.

If the nobody user does not exist, then enter the following command to create it:

```
# /usr/sbin/useradd nobody
```

6 Configuring Kernel Parameters

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

Verify that the kernel parameters shown in the following table are set to values greater than or equal to the recommended value shown on Solaris 9 operating systems. The procedure following the table describes how to verify and set the values.

6.1 Configuring Kernel Parameters On Solaris 9

On Solaris Operating System (SPARC 64-bit) installations running Solaris 9, verify that the kernel parameters shown in the following table are set to values greater than or equal to the recommended value:

Parameter	Recommended Value
noexec_user_stack	1
semsys:seminfo_semmni	100
semsys:seminfo_semmns	1024
semsys:seminfo_semmsl	256
semsys:seminfo_semvmx	32767
shmsys:shminfo_shmmax	4294967296
shmsys:shminfo_shmmni	100

Use the following procedure to view the current value specified for resource controls, and to change them if necessary:

1. To view the current values of these parameters, enter the following commands:

```
# grep noexec_user_stack /etc/system
# /usr/sbin/sysdef | grep SEM
# /usr/sbin/sysdef | grep SHM
```

2. If you must change any of the current values, then:

   a. Create a backup copy of the `/etc/system` file, for example:

```
# cp /etc/system /etc/system.orig
```

   b. Open the `/etc/system` file in any text editor and, if necessary, add lines similar to the following (edit the lines if the file already contains them):

```
set noexec_user_stack=1
set semsys:seminfo_semmni=100
set semsys:seminfo_semmns=1024
set semsys:seminfo_semmsl=256
set semsys:seminfo_semvmx=32767
set shmsys:shminfo_shmmax=4294967296
set shmsys:shminfo_shmmni=100
```

   c. Enter the following command to restart the system:

```
# /usr/sbin/reboot
```

   d. When the system restarts, log in and switch user to `root`.

3. Repeat this procedure on all other nodes in the cluster.

6.2 Configuring Kernel Parameters on Solaris 10

On Solaris 10, verify that the kernel parameters shown in the following table are set to values greater than or equal to the recommended value shown. The table also contains the resource controls that replace the `/etc/system` file for a specific kernel parameter. As Oracle Database does not set project information when starting processes, some `/etc/system` processes that are deprecated but not removed must still be set for Oracle Database.

> **Note:** In Solaris 10, you are not required to make changes to the `/etc/system` file to implement the System V IPC. Solaris 10 uses the resource control facility for its implementation. However, Oracle recommends that you set both resource control and `/etc/system/` parameters. Operating system parameters not replaced by resource controls continue to affect performance and security on Solaris 10 systems. For further information, contact your Sun vendor.

Parameter	Replaced by Resource Control	Recommended Value
noexec_user_stack	NA	1
semsys:seminfo_semmni	project.max-sem-ids	100
semsys:seminfo_semmns	NA	1024
semsys:seminfo_semmsl	project.max-sem-nsems	256
semsys:seminfo_semvmx	NA	32767
shmsys:shminfo_shmmax	project.max-shm-memory	4294967296
shmsys:shminfo_shmmni	project.max-shm-ids	100

On Solaris 10, use the following procedure to view the current value specified for resource controls, and to change them if necessary:

1. To view the current values of the resource control, enter the following commands:

```
# id -p // to verify the project id
uid=0(root) gid=0(root) projid=1 (user.root)
# prctl -n project.max-shm-memory -i project user.root
# prctl -n project.max-sem-ids -i project user.root
```

2. If you must change any of the current values, then:

   a. To modify the value of max-shm-memory to 6 GB:

```
# prctl -n project.max-shm-memory -v 6gb -r -i project user.root
```

   b. To modify the value of max-sem-ids to 256:

```
# prctl -n project.max-sem-ids -v 256 -r -i project user.root
```

Note: When you use the `prctl` command (Resource Control) to change system parameters, you do not need to restart the system for these parameter changes to take effect. However, the changed parameters do not persist after a system restart.

Use the following procedure to modify the resource control project settings, so that they persist after a system restart:

1. By default, Oracle instances are run as the `oracle` user of the `dba` group. A project with the name group.dba is created to serve as the default project for the oracle user. Run the command id to verify the default project for the oracle user:

   ```
   # su - oracle
   $ id -p
   uid=100(oracle) gid=100(dba) projid=100(group.dba)
   $ exit
   ```

2. To set the maximum shared memory size to 2 GB, run the `projmod` command:

   ```
   # projmod -sK "project.max-shm-memory=(privileged,2G,deny)" group.dba
   ```

   Alternatively, add the resource control value project.max-shm-memory=(privileged,2147483648,deny) to the last field of the project entries for the Oracle project.

3. After these steps are complete, check the values for the `/etc/project` file using the following command:

   ```
   # cat /etc/project
   ```

   The output should be similar to the following:

   ```
   system:0::::
   user.root:1::::
   noproject:2::::
   default:3::::
   group.staff:10::::
   group.dba:100:Oracle default
   project:::project.max-shmmemory=(privileged,2147483648,deny)
   ```

4. To verify that the resource control is active, check process ownership, and run the commands id and prctl, as in the following example:

   ```
   # su - oracle
   $ id -p
   uid=100(oracle) gid=100(dba) projid=100(group.dba)
   $ prctl -n project.max-shm-memory -i process $$
   process: 5754: -bash
   NAME                    PRIVILEGE     VALUE     FLAG     ACTION
   RECIPIENT
   project.max-shm-memory  privileged    2.00GB     -       deny
   ```

Note: For additional information, refer to the Solaris Tunable Parameters Reference Manual.

7 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 (optional)

The Oracle base directory must have 3 GB of free disk space, or 4 GB of 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, you can install the data files in a subdirectory of the Oracle base directory. However, this is not recommended for production databases.

To determine where to create these directories:

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

   ```
   # df -k
   ```

   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, in kilobytes
   - The mount point directory for that file system

2. From the display, identify either one or two file systems that meet the following requirements:

   - A single file system with at least 1.2 GB of free disk space
   - Two or more file systems with at least 1.2 GB of free disk space in total

3. Note the name of the mount point directory for each file system that you identified.

In the following examples, `/u01` is the mount point directory used for the software, and `/u02` is the mount point directory used for the Oracle data file directory. You must specify the appropriate mount point directories for the file systems on your system.

To create the required directories and specify the correct owner, group, and permissions for them:

> **Note:** In the following procedure, replace `/u01` and `/u02` with the appropriate mount point directories that you identified in Step 3 previously.

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

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

2. If you intend to use a second file system for the Oracle Database files, then create an `oradata` subdirectory in the mount point directory that you identified for the Oracle data file directory (shown as `/u02` in the examples):

```
# mkdir /u02/oradata
```

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

```
# chown -R oracle:oinstall /u01/app/oracle
# chown -R oracle:oinstall /u02/oradata
```

4. Change the permissions on the directories that you created to 775:

```
# chmod -R 775 /u01/app/oracle
# chmod -R 775 /u02/oradata
```

8 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.
2. Enter the following command to ensure that X Window applications can display on this system:

```
$ xhost fully_qualified_remote_host_name
```

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

```
$ su - oracle
```

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

```
$ echo $SHELL
```

5. Open the `oracle` user's shell startup file in any text editor:
   - C shell (`csh` or `tcsh`):

```
% vi .login
```

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

```
umask 022
```

7. If the ORACLE_SID, ORACLE_HOME, or ORACLE_BASE environment variable is set in the file, then remove the appropriate lines from the file.
8. Save the file, and exit from the editor.
9. To run the shell startup script, enter the following command:
   - Bourne shell, Bash shell on SUSE, or Korn shell:

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

   - C shell:

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

10. If you are not installing the software on the local system, then enter a command similar to the following to direct X applications to display on the local system:
    - Bourne, Bash, or Korn shell:

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

    - C shell:

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

    In this example, *local_host* is the host name or IP address of the system that you want to use to display Oracle Universal Installer (your workstation or PC).
11. If you determined that the /tmp directory had insufficient free disk space when checking the hardware requirements, then enter the following commands to set the TMP and TMPDIR environment variables. Specify a directory on a file system with sufficient free disk space.
    - Bourne, Bash, or Korn shell:

      ```
      $ TMP=/directory
      $ TMPDIR=/directory
      $ export TMP TMPDIR
      ```

    - C shell:

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

12. Enter commands similar to the following to set the ORACLE_BASE and ORACLE_SID environment variables:
    - Bourne, Bash, or Korn shell:

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

    - C shell:

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

In these examples, /u01/app/oracle is the Oracle base directory that you created earlier, and sales is the name that you want to call the database (typically no more than five characters).

13. 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
      ```

14. 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.

9 Mounting the Product Disc

On most Solaris 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 - root
   ```

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

   ```
   # eject
   ```

3. Insert the disc into the disc drive.

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

   ```
   # ls /dvd/dvd0
   ```

5. If this command fails to display the contents of the disc, then enter a command similar to the following:

   ```
   # /usr/sbin/mount -r -F hsfs /dev/dsk/cxtydzs2 /dvd
   ```

   In this example, /dvd is the disc mount point directory and /dev/dsk/cxtydzs2 is the device name for the disc device, for example /dev/dsk/c0t2d0s2.

6. If Oracle Universal Installer displays the Disk Location dialog box, then enter the disc mount point directory path. For example:

   - Disc mounted automatically:

```
/dvd/dvd0
```

- Disc mounted manually:

```
/dvd
```

10 Installing Oracle Database

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

1. 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 Solaris Operating System* for information about how to troubleshoot X Window display problems.

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

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

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

Screen	Recommended Action
Select a Product to Install	This screen enables you to install any one for the following products: ■ Oracle Database 11*g* ■ Oracle Client ■ Oracle Clusterware Click **Next.**
Select Installation Method	The Basic Installation option is selected by default. Specify the directory path of the Oracle home. Ensure that the `oinstall` group is selected. If you want to create a starter database, then specify a name and password for it. Then, click **Next**.
Specify Inventory Directory and Credentials	This screen is displayed only during the first installation of Oracle products on a system. Specify the full path of the Oracle Inventory directory. Ensure that the operating system group selected is `oinstall`. Then, click **Next**.

Screen	Recommended Action
Product-Specific Prerequisite Checks	Verify that all of the prerequisite checks succeed, and then click **Next**. Oracle Universal Installer checks the system to verify that it is configured correctly to run Oracle software. If you have completed all of the preinstallation steps in this guide, all of the checks should pass. 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.
Oracle Configuration Manager	Enter the Customer Identification Number, Metalink User Name, Country code, and Click **Next**. The new screen prompts you to accept the license agreement. Click **Accept license Agreement** to accept the agreement. If you decline this agreement, then Oracle Configuration Manager is installed but not configured.
Summary	Review the information displayed on this screen, and then click **Install**.
Install	This screen displays status information while the product is installed.
Configuration Assistants	This screen displays status information for the configuration assistants that configure the software and create a database. When the message is displayed at the end of this process, click **OK** to continue.
Execute Configuration Scripts	When prompted, read the instructions and then run the scripts mentioned on this screen. Click **OK** to continue.
End of Installation	The configuration assistants configure several Web-based applications, including Oracle Enterprise Manager Database Control. This screen displays the URLs configured for these applications. Make a note of the URLs used. The port numbers used in these URLs are also recorded in the following file: *oracle_home*/install/portlist.ini To exit from Oracle Universal Installer, click **Exit** and then click **Yes**.

11 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*.

12 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 Control using a Web browser.

  Oracle Enterprise Manager Database Control is a Web-based application that you can use to manage a single Oracle Database installation. The default URL for Database Control 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 10*g* installation.
- Refer to *Oracle Database Installation Guide for Solaris Operating System* for information about required and optional postinstallation tasks, depending on the products that you want to use.
- Refer to *Oracle Database Installation Guide for Solaris Operating System* for information about how to use Database Control to learn about the configuration of your installed database.
- To learn more about using Oracle Enterprise Manager Database Control to administer a database, refer to *Oracle Database 2 Day DBA*.

  This guide, designed for new Oracle DBAs, describes how to use Database Control to manage all aspects of an Oracle Database installation. It also provides information about how to enable e-mail notifications and automated backups, which you might not have configured during the installation.

13 Additional Information

This section contains information about the following:

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, Version Updates, and Documentation

You can purchase program licenses, updated versions of Oracle products, and printed versions of Oracle documentation from the Oracle Store Web site:

`http://oraclestore.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 Web site:

http://www.oracle.com/support

Locating Product Documentation

Documentation for Oracle products is available in both HTML and Adobe portable document format (PDF) formats from several locations:

- On discs in the media pack:
  - Platform-specific documentation is available on the product discs. To access this documentation, see the `welcome.htm` file located in the top-level directory of the installation media.
  - Generic product documentation is available in the Oracle Documentation Library.
- From the Oracle Technology Network Web site:

  http://www.oracle.com/technology/documentation/index.html

To view PDF documents, download the free Adobe Acrobat Reader from the Adobe Web site, if necessary:

http://www.adobe.com

14 Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at

http://www.oracle.com/accessibility/

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

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