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Oracle Database Client Installation Guide, 10g Release 1 (10.1) for Apple Mac OS X
Part No. B13955-01

Oracle welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find errors or have other suggestions for improvement, you can e-mail them to us at osdwrite_us@oracle.com. Please indicate the title and part number of the document and the chapter, section, and page number if available. Please indicate whether you would like a reply.

If you have problems with the software, please contact your local Oracle Support Services Center.
Preface

This guide describes how to install and configure Oracle Client 10g release 1 (10.1) on Mac OS X systems.

Audience

This guide is intended for anyone responsible for installing Oracle Client 10g release 1 (10.1) on a single Mac OS X system.

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. 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 additional information, visit the Oracle Accessibility Program Web site at

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

Accessibility of Code Examples in Documentation  JAWS, a Windows screen reader, 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, JAWS 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.
Typographic Conventions

The following typographic conventions are used in this guide:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monospace</td>
<td>Monospace type indicates UNIX commands, directory names, user names, path names, and file names.</td>
</tr>
<tr>
<td>italics</td>
<td>Italic type indicates variables, including variable portions of file names. It is also used for emphasis and for book titles.</td>
</tr>
<tr>
<td>UPPERCASE</td>
<td>Uppercase letters indicate Structured Query Language (SQL) reserved words, initialization parameters, and environment variables.</td>
</tr>
</tbody>
</table>

Command Syntax

UNIX command syntax appears in monospace font. The dollar character ($), number sign (#), or percent character (%) are UNIX command prompts. Do not enter them as part of the command. The following command syntax conventions are used in this guide:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>backslash \</td>
<td>A backslash is the UNIX command continuation character. It is used in command examples that are too long to fit on a single line. Enter the command as displayed (with a backslash) or enter it on a single line without a backslash:</td>
</tr>
<tr>
<td>braces [ ]</td>
<td>Braces indicate required items:</td>
</tr>
<tr>
<td>brackets [ ]</td>
<td>Brackets indicate optional items:</td>
</tr>
<tr>
<td>ellipses ...</td>
<td>Ellipses indicate an arbitrary number of similar items:</td>
</tr>
<tr>
<td>italics</td>
<td>Italic type indicates a variable. Substitute a value for the variable:</td>
</tr>
<tr>
<td>vertical line</td>
<td>A vertical line indicates a choice within braces or brackets:</td>
</tr>
</tbody>
</table>

Accessing Documentation

The documentation for Oracle Client 10g release 1 (10.1) for Mac OS X systems includes platform-specific documentation and generic product documentation.

Platform-Specific Documentation

Platform-specific documentation includes information about installing and using Oracle products on particular platforms. The platform-specific documentation for this product is available in both Adobe portable document format (PDF) and HTML format on the product disc. To access the platform-specific documentation on disc:

1. Use a Web browser to open the welcome.htm file in the top-level directory of the disc.
2. For DVD-ROMs only, select the appropriate product link.

3. Select the **Documentation** tab.

If you prefer paper documentation, then open and print the PDF files.

**Product Documentation**

Product documentation includes information about configuring, using, or administering Oracle products on any platform. The product documentation for Oracle Database 10g products is available in both HTML and PDF formats in the following locations:

- On the Oracle Database 10g Documentation Library CD-ROM
  
  To access the documentation from the CD-ROM, use a Web browser to view the `index.htm` file in the top-level directory on the disc.

- In the `doc` subdirectory on the Oracle Database 10g DVD-ROM
  
  To access the documentation from the DVD-ROM, use a Web browser to view the `welcome.htm` file in the top-level directory on the disc, then select the Oracle Database 10g Documentation Library link.

- Online on the Oracle Technology Network (OTN) Web site:
  
  [http://www.oracle.com/technology/documentation](http://www.oracle.com/technology/documentation)

**Related Documentation**

The platform-specific documentation for Oracle Database 10g products includes the following manuals:

- **Oracle Database**:
  
  - *Oracle Database Release Notes for Apple Mac OS X*
  
  - *Oracle Database Quick Installation Guide for Apple Mac OS X*
  
  - *Oracle Database Installation Guide for Apple Mac OS X*
  
  - *Oracle Real Application Clusters Installation and Configuration Guide*
  
  - *Oracle Database Administrator’s Reference for UNIX Systems*

- **Oracle Client**:
  
  - *Oracle Database Client Quick Installation Guide for Apple Mac OS X*
  
  - *Oracle Database Client Installation Guide for Apple Mac OS X*

- **Oracle Database 10g Companion CD**:
  
  - *Oracle Database Companion CD Quick Installation Guide for Apple Mac OS X*
  
  - *Oracle Database Companion CD Installation Guide for Apple Mac OS X*

Refer to the Oracle Database release notes for your platform for important information that was not available when this book was released. The release notes for Oracle Database 10g are updated regularly. You can get the most-recent version from OTN:

[http://www.oracle.com/technology/documentation](http://www.oracle.com/technology/documentation)
This chapter describes the different types of Oracle Client installations that you can perform, and issues that you should consider before installing the software. It includes information about the following topics:

- Installation Overview
- Oracle Client Installation Methods
- Oracle Client Installation Types
- Installation Considerations
Installation Overview

The Oracle Client installation process consists of four parts:

1. **Planning your installation**: This chapter describes the Oracle products that you can install and issues that you must consider before starting the installation.

2. **Completing pre-installation tasks**: Chapter 2 describes pre-installation tasks that you must complete before installing the product.

3. **Installing software**: Chapter 3 describes how to use the Oracle Universal Installer to install this product.

4. **Completing post-installation tasks**: Chapter 4 describes recommended and required post-installation tasks.

Oracle Client Installation Methods

You can choose different installation methods to install Oracle Client, as follows:

- **Interactive Installation Methods**
- **Automated Installation Methods Using Response Files**

Interactive Installation Methods

When you use the interactive method to install Oracle Client, the Installer displays a series of screens that enable you to specify all of the required information to install the Oracle Client software.

Automated Installation Methods Using Response Files

By creating a response file and specifying this file when you start the Installer, you can automate some or all of the Oracle Client installation. These automated installation methods are useful if you need to perform multiple installations on similarly configured systems.

When you use a response file, you can run the Installer in the following modes, depending on whether you specify all of the required information or not:

- **Silent Mode**: The Installer runs in silent mode if you use a response file that specifies all required information. None of the Installer screens are displayed.

- **Suppressed Mode**: The Installer runs in suppressed mode if you do not specify all required information in the response file. The Installer displays only the screens that prompt for the information that you did not specify.

For more detailed information about these modes and about how to complete an installation using response files, see Appendix A.

Oracle Client Installation Types

You can choose one of the following installation types when installing Oracle Client:

- **Administrator**: Enables applications to connect to an Oracle database on the local system or on a remote system. It also provides tools that allow you to administer an Oracle database.

- **Runtime**: Enables applications to connect to an Oracle database on the local system or on a remote system.
Installation Considerations

- **Custom**: Allows you to select individual components from the list of Administrator and Runtime components.

- **Instant Client**: Enables you to install only the shared libraries required by Oracle Call Interface (OCI), Oracle C++ Call Interface (OCCI), or Java database connectivity (JDBC) OCI applications. This installation type requires much less disk space than the other Oracle Client installation types.

  **See Also**: For more information about Instant Client, see the *Oracle Call Interface Programmer’s Guide* or the *Oracle Database JDBC Developer’s Guide and Reference*.

**Installation Considerations**

This section contains information that you should consider before deciding how to install this product. It contains the following sections:

- **Hardware and Software Certification**
- **Multiple Oracle Homes**

**Hardware and Software Certification**

The platform-specific hardware and software requirements included in this installation guide were current at the time this guide was published. However, because new platforms and operating system software versions might be certified after this guide is published, review the certification matrix on the OracleMetaLink Web site for the most up-to-date list of certified hardware platforms and operating system versions. The OracleMetaLink Web site is available at the following URL:

http://metalink.oracle.com

If you do not have a current Oracle Support Services contract, you can access the same information from the following Web site:

http://www.oracle.com/technology/support/metalink/content.html

**Multiple Oracle Homes**

This product supports multiple Oracle homes. This means that you can install this release or previous releases of the software more than once on the same system, in different Oracle home directories.

**Installing the Software on a System with an Existing Oracle Installation**

You must install this product into a new Oracle home directory. You cannot install products from one release of Oracle Client into an Oracle home directory of a different release. For example, you cannot install release 10.1 software into an existing Oracle9i Oracle home directory. If you attempt to install this release into an Oracle home directory that contains software from an earlier Oracle release, the installation fails.

You can install this release more than once on the same system provided that each installation is installed in a separate Oracle home directory.
This chapter describes the tasks that you must complete before you start the Oracle Universal Installer. It includes information about the following tasks:

- Log In to the System as root
- Check the Hardware Requirements
- Check the Software Requirements
- Create Required UNIX Group and User
- Identify Required Software Directories
- Identify or Create an Oracle Base Directory
- Configure the oracle User’s Environment
Log 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, follow these steps:

1. Log in to the system as a user that is a member of the admin group.
2. Start a local terminal session (/Applications/Utilities/Terminal).
3. If you are not logged in as the root user, enter the following command to start a shell session with root privileges:
   
   $ sudo sh

4. When prompted, enter your password.

---

**Note:** Alternatively, if you are logged in as a user who is a member of the admin group, you can use the sudo command to run commands as the root user, as follows:

   $ sudo /sbin/sysctl -a

---

Check the Hardware Requirements

The system must meet the following minimum hardware requirements:

- 256 MB of physical RAM (268435456 bytes)
- 512 MB of swap space
- 400 MB of disk space in the /tmp directory
- Between 75 MB and 420 MB of disk space for the Oracle software, depending on the installation type

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

1. To determine the physical RAM size, use System Profiler (/Applications/Utilities/System Profiler) or enter the following command:

   # /usr/sbin/system_profiler SPHardwareDataType | grep Memory

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

2. To ensure that the system has enough swap space, enter the following command:

   # df -h /

---

**Note:** Mac OS X dynamically creates swap files as required in the /private/var/vm directory. Make sure that you have at least 512 MB of available disk space on the root (/) file system to accommodate newly created swap files.

---

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

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

- Delete unnecessary files from the `/tmp` directory to achieve the required disk space.
- Set the TEMP and TMPDIR environment variables when setting the `oracle` user’s environment (described later).
- Extend the file system that contains the `/tmp` directory. If necessary, contact your system administrator for information about extending file systems.

4. To determine the amount of free disk space on the system, enter the following command:

   ```
   # df -h
   ```

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

<table>
<thead>
<tr>
<th>Installation Type</th>
<th>Requirement for Software Files (MB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instant Client</td>
<td>75</td>
</tr>
<tr>
<td>Administrator</td>
<td>420</td>
</tr>
<tr>
<td>Runtime</td>
<td>200</td>
</tr>
<tr>
<td>Custom (maximum)</td>
<td>350</td>
</tr>
</tbody>
</table>

**Check the Software Requirements**

Check that the required software and patches are installed on the system.

**Check for Required Software**

Depending on the products that you intend to install, verify that the following software is installed on the system. The procedure following the table describes how to check these requirements.

<table>
<thead>
<tr>
<th>Installation Type or Product</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>All installations</td>
<td>The following operating system version:</td>
</tr>
<tr>
<td></td>
<td>Apple Mac OS X Server 10.3.6</td>
</tr>
<tr>
<td>All Installations</td>
<td>The following software (or a higher version) must be installed:</td>
</tr>
<tr>
<td></td>
<td>- Xcode Tools 1.1 or higher</td>
</tr>
<tr>
<td></td>
<td>- GNU C compiler (<code>gcc</code>) version 3.3 20030304 (Apple Computer, Inc. build 1635)</td>
</tr>
<tr>
<td></td>
<td>This version of <code>gcc</code> is included in Xcode Tools 1.2 or higher or in the Dec 2003 gccLongBranch Tools update.</td>
</tr>
<tr>
<td>Pro*C/C++, Oracle Call Interface, Oracle C++ Call Interface, Oracle XML Developer’s Kit (XDK)</td>
<td>The version of the GNU C and C++ compiler listed previously is supported for use with these products.</td>
</tr>
</tbody>
</table>
To ensure that the system meets these requirements, follow these steps:

1. To determine the version of the operating system, enter the following command:
   
   ```bash
   # sw_vers
   ```
   
   **Note:** Only Mac OS X Server is supported.

2. To determine whether the required version of gcc is installed, enter the following command:
   
   ```bash
   # gcc -v
   ```
   
   This command returns output similar to the following:
   
   ```
   Reading specs from /usr/libexec/gcc/darwin/ppc/3.3/specs
   Thread model: posix
   gcc version 3.3 20030304 (Apple Computer, Inc. build 1635) (-mlongcall)
   ```
   
   If the required version (including the date and build number) or a later version is not installed, download and install either of the following:
   
   - The Dec 2003 gccLongBranch Tools update
   - Xcode Tools 1.2 or higher, which includes the correct version of gcc
   
   You can download this software from the Apple Developer Connection Web site:
   
   
   After you log in, choose **Download Software**, then **Developer Tools** to display the download page.

---

**Create Required UNIX Group and User**

Depending on whether this is the first time Oracle software is being installed on this system and on the products that you are installing, you may need to create the following UNIX group and user:

- The Oracle Inventory group (`oinstall`)

  You must create this group the first time you install Oracle software on the system. The usual name chosen for this group is `oinstall`. This group owns the Oracle inventory, which is a catalog of all Oracle software installed on the system.

  **Note:** If Oracle software is already installed on the system, the existing Oracle Inventory group must be the primary group of the UNIX user that you use to install new Oracle software. The following sections describe how to identify an existing Oracle Inventory group.

- The Oracle software owner user (`oracle`)

  You must create this user the first time you install Oracle software on the system. This user owns all of the software installed during the installation. The usual name chosen for this user is `oracle`. This user must have the Oracle Inventory group as its primary group.
A single Oracle Inventory group is required for all installations of Oracle software on the system. After the first installation of Oracle software, you must use the same Oracle Inventory group for all subsequent Oracle software installations on that system. However, you can choose to create different Oracle software owner users for separate installations.

The following sections describe how to create the required UNIX user and group.

---

**Note:** The following sections describe how to create local users and groups. As an alternative to creating local users and groups, you could create the appropriate users and groups in a directory service, for example, lightweight directory access protocol (LDAP) or Network Information Services (NIS). For information about using directory services, contact your system administrator or see your operating system documentation.

---

**Creating the Oracle Inventory Group**

You must create the Oracle Inventory group if it does not already exist. The following subsections describe how to determine the Oracle Inventory group name, if it exists, and how to create it if necessary.

**Determine Whether the Oracle Inventory Group Exists**

When you install Oracle software on the system for the first time, the Installer creates the `oraInst.loc` file. This file identifies the name of the Oracle Inventory group and the path of the Oracle Inventory directory. To determine whether the Oracle Inventory group exists, enter the following command:

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

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

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

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

**Create the Oracle Inventory Group**

If the `oraInst.loc` file does not exist, use one of the following methods to create the Oracle Inventory group:

---

**Note:** Oracle recommends that you use the group name oinstall for the Oracle Inventory group.

---

- Use Workgroup Manager (`/Applications/Server/Workgroup Manager`) to create a group called oinstall.
- Use command-line utilities to create the Oracle Inventory group:
  1. Enter the following command to list existing groups and group IDs (GIDs):
     ```bash
     # nireport . /groups gid name | more
     ```
  2. Identify an unused GID for the new Oracle Inventory group.
3. Enter commands similar to the following to create the oinstall group:

```
# nicl . -create /groups/oinstall
# nicl . -append /groups/oinstall gid gid_number
# nicl . -append /groups/oinstall passwd "*"
```

### Creating the Oracle Software Owner User

You must create an Oracle software owner user in the following circumstances:

- If an Oracle software owner user does not exist, for example, if this is the first installation of Oracle software on the system
- If an Oracle software owner user exists, but you want to use a different UNIX user

#### Determine Whether an Existing Oracle Software Owner User Exists

To determine whether an Oracle software owner user named oracle exists, enter the following command:

```
# id oracle
```

If the oracle user exists, the output from this command is similar to the following:

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

If the user exists, determine whether you want to use the existing user or create a new user. If you want to use the existing user, ensure that the user’s primary group (gid) is the Oracle Inventory group. See one of the following sections for more information:

---

**Note:** If necessary, contact your system administrator before using or modifying an existing user.

---

- If you want to use the existing Oracle software owner user, and the user’s primary group is the Oracle Inventory group, see the "Identify Required Software Directories" section on page 2-7.
- To modify an existing user, see the "Modify an Existing Oracle Software Owner User" section on page 2-7.
- To create a new user, see the following section.

### Create a New Oracle Software Owner User

If the Oracle software owner user does not exist or if you require a new Oracle software owner user, create it as follows. In the following procedures, use the user name oracle unless a user with that name already exists.

- Use Workgroup Manager to create a user with the following properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Recommended Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Oracle Software Owner</td>
</tr>
<tr>
<td>Short name</td>
<td>oracle</td>
</tr>
<tr>
<td>Password</td>
<td>Specify and verify a password for the oracle user</td>
</tr>
<tr>
<td>Primary group</td>
<td>oinstall</td>
</tr>
<tr>
<td>Default shell</td>
<td>Any supported shell, for example /bin/tcsh or /bin/bash</td>
</tr>
</tbody>
</table>
Identify Required Software Directories

<table>
<thead>
<tr>
<th>Property</th>
<th>Recommended Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home directory</td>
<td>A home directory consistent with other user home directories, for example /Users/oracle</td>
</tr>
</tbody>
</table>

- Use command-line utilities to create the Oracle software owner user:
  1. Enter the following command to list existing users and user IDs (UIDs):
     ```
     # nireport . /users uid name | more
     ```
  2. Identify an unused UID for the new Oracle software owner user.
  3. Enter commands similar to the following to create the `oracle` user:
     ```
     # nicl . -create /users/oracle
     # nicl . -append /users/oracle uid uid_number
     # nicl . -append /users/oracle gid oinstall_gid
     # nicl . -append /users/oracle shell /bin/bash
     # nicl . -append /users/oracle home /Users/oracle
     # nicl . -append /users/oracle realname "Oracle software owner"
     ```
  4. Create the home directory for the `oracle` user and change the owner and group on that directory:
     ```
     # mkdir /Users/oracle
     # chown oracle:oinstall /Users/oracle
     ```
  5. Set the password for the `oracle` user:
     ```
     # passwd oracle
     ```

See the "Identify Required Software Directories" section on page 2-7 to continue.

Modify an Existing Oracle Software Owner User

If the `oracle` user exists, but its primary group is not `oinstall`, you can use one of the following methods to modify it:

- Use Workgroup Manager to modify the `oracle` user, specifying `oinstall` as the Primary group.
- Use command-line utilities to modify the `oracle` user:
  1. Enter the following command to determine the GID of the `oinstall` group:
     ```
     # nireport . /groups/oinstall gid name
     ```
  2. Enter the following command to change the GID of the `oracle` user to the GID of the `oinstall` group:
     ```
     # nicl . -delete /users/oracle gid
     # nicl . -append /users/oracle gid oinstall_gid
     ```

Identify Required Software Directories

You must identify or create three directories for the Oracle software, as follows:

- Oracle base directory
- Oracle Inventory directory
- Oracle home directory
The following subsections describe the requirements for these directories.

**Oracle Base Directory**

The Oracle base directory acts as a top-level directory for Oracle software installations. It is analogous to the C:\Oracle directory used for Oracle software installations on Windows systems. On UNIX systems, the Optimal Flexible Architecture (OFA) guidelines recommend that you use a path similar to the following for the Oracle base directory:

```
/mount_point/app/oracle_sw_owner
```

In this example:

- `mount_point` is the mount point directory for the file system that will contain the Oracle software.

  The examples in this guide use /Volumes/u01 for the mount point directory. However, you could choose another mount point directory, /Volumes/oracle or /opt/oracle for example.

- `oracle_sw_owner` is the UNIX user name of the Oracle software owner, for example `oracle`.

You can use the same Oracle base directory for more than one installation or you can create separate Oracle base directories for different installations. If different UNIX users install Oracle software on the same system, each user must create a separate Oracle base directory. The following example Oracle base directories could all exist on the same system:

```
/Volumes/u01/app/oracle
/Volumes/u01/app/orauser
/opt/oracle/app/oracle
```

The following sections describe how to identify existing Oracle base directories that might be suitable for your installation and how to create a new Oracle base directory if necessary.

Regardless of whether you create a new Oracle base directory or decide to use an existing one, you must set the ORACLE_BASE environment variable to specify the full path to this directory.

**Oracle Inventory Directory**

The Oracle Inventory directory (`oraInventory`) stores an inventory of all software installed on the system. It is required by, and shared by, all Oracle software installations on a single system. The first time you install Oracle software on a system, the Installer prompts you to specify the path to this directory. Oracle recommends that you choose the following path:

```
oracle_base/oraInventory
```

The Installer creates the directory that you specify and sets the correct owner, group, and permissions on it. You do not need to create it.

**Note:** All Oracle software installations rely on this directory. Make sure that you back it up regularly.

Do not delete this directory unless you have completely removed all Oracle software from the system.
Oracle Home Directory
The Oracle home directory is the directory where you choose to install the software for a particular Oracle product. You must install different Oracle products, or different releases of the same Oracle product, in separate Oracle home directories. When you run the Installer, it prompts you to specify the path to this directory, as well as a name that identifies it. The directory that you specify must be a subdirectory of the Oracle base directory. Oracle recommends that you specify a path similar to the following for the Oracle home directory:

```
oracle_base/product/10.1.0/client_1
```

The Installer creates the directory path that you specify under the Oracle base directory. It also sets the correct owner, group, and permissions on it. You do not need to create this directory.

**Identify or Create an Oracle Base Directory**
Before starting the installation, you must either identify an existing Oracle base directory or if required, create a new one. This section contains information about the following:

- Identifying an Existing Oracle Base Directory
- Creating a New Oracle Base Directory

---

**Note:** You can choose to create a new Oracle base directory, even if other Oracle base directories exist on the system.

---

**Identifying an Existing Oracle Base Directory**
Existing Oracle base directories might not have paths that comply with OFA guidelines. However, if you identify an existing Oracle Inventory directory or existing Oracle home directories, you can usually identify the Oracle base directories, as follows:

- Identify an existing Oracle Inventory directory

  Enter the following command to view the contents of the `oraInst.loc` file:

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

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

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

  The `inventory_loc` parameter identifies the Oracle Inventory directory (`oraInventory`). The parent directory of the `oraInventory` directory is typically an Oracle base directory. In the previous example, `/Volumes/u01/app/oracle` is an Oracle base directory.

- Identify existing Oracle home directories

  Enter the following command to view the contents of the `oratab` file:

  ```bash
  # more /etc/oratab
  ```
Identify or Create an Oracle Base Directory

If the `oratab` file exists, it contains lines similar to the following:

```plaintext
*: /Volumes/u03/app/oracle/product/10.1.0/db_1:N
*: /opt/orauser/infra_904:N
*: /Volumes/oracle/9.2.0:N
```

The directory paths specified on each line identify Oracle home directories. Directory paths that end with the user name of the Oracle software owner that you want to use are valid choices for an Oracle base directory. If you intend to use the `oracle` user to install the software, you could choose one of the following directories from the previous example:

```plaintext
/Volumes/u03/app/oracle
/Volumes/oracle
```

---

**Note:** If possible, choose a directory path similar to the first (`/Volumes/u03/app/oracle`). This path complies with the OFA guidelines.

---

To continue:

- If an Oracle base directory exists and you want to use it, see the "Configure the `oracle` User’s Environment" section on page 2-11.
  
  When you are configuring the `oracle` user’s environment later in this chapter, set the `ORACLE_BASE` environment variable to specify the directory you chose.

- If an Oracle base directory does not exist on the system or if you want to create a new Oracle base directory, see the following section.

### Creating a New Oracle Base Directory

To identify an appropriate file system, follow these steps:

1. Use the `df -h` command to determine the free disk space on each mounted file system.

2. From the display, identify a file system that has appropriate free space.

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

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

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

   ```bash
   # mkdir -p /mount_point/app/oracle_sw_owner
   # chown -R oracle:oinstall /mount_point/app/oracle_sw_owner
   # chmod -R 775 /mount_point/app/oracle_sw_owner
   
   If the mount point you identified is `/Volumes/u01` and `oracle` is the user name of the Oracle software owner, the recommended Oracle base directory path is as follows:

   `/Volumes/u01/app/oracle`

   2. When you are configuring the `oracle` user’s environment later in this chapter, set the `ORACLE_BASE` environment variable to specify this directory.
Configure the oracle User’s Environment

You run the Installer from the oracle account. However, before you start the 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 ORACLE_BASE environment variable.

To set the oracle user’s environment, follow these steps:

1. Start a new terminal session.
2. If you are not already logged in to the system where you want to install the software, log in to that system as the oracle user.
3. If you are not logged in as the oracle user, 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:

   - Bourne shell (sh), Bash shell (bash), or Korn shell (ksh):
     
     \$ vi .profile
   - C shell (csh or tcsh):
     
     % vi .login

   **Note:** If the oracle user’s shell is the Bash shell, open the .bash_profile file, if it exists.

6. Enter or edit the following line, 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 variables are set in the file, remove the appropriate lines from the file.

8. Save the file and exit from the editor.

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

   - Bash shell:
     
     \$ . ~/.bash_profile
   - Bourne, Bash, or Korn shell:
     
     \$ . ~/.profile
   - C shell:
     
     % source ~/.login

10. If you determined that the /tmp directory has less than 400 MB of free disk space, identify a file system with at least 400 MB of free space and set the TEMP and
Configure the oracle User’s Environment

TMPDIR environment variables to specify a temporary directory on this file system:

a. Use the `df -h` command to identify a suitable file system with sufficient free space.

b. If necessary, as a user that is a member of the `admin` group, 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:

   ```bash
   $ sudo mkdir /mount_point/tmp
   $ sudo chmod a+wr /mount_point/tmp
   ```

c. As the `oracle` user, enter commands similar to the following to set the TEMP and TMPDIR environment variables:

   * Bourne, Bash, or Korn shell:
     ```bash
     $ TEMP=/mount_point/tmp
     $ TMPDIR=/mount_point/tmp
     $ export TEMP TMPDIR
     ```

   * C shell:
     ```bash
     % setenv TEMP /mount_point/tmp
     % setenv TMPDIR /mount_point/tmp
     ```

11. Enter commands similar to the following to set the ORACLE_BASE environment variable:

   ■ Bourne, Bash, or Korn shell:
   ```bash
   $ ORACLE_BASE=/Volumes/u01/app/oracle
   $ export ORACLE_BASE
   ```

   ■ C shell:
   ```bash
   % setenv ORACLE_BASE /Volumes/u01/app/oracle
   ```

   In these examples, `/Volumes/u01/app/oracle` is the Oracle base directory that you created or identified earlier.

12. Enter the following command to ensure that the ORACLE_HOME and TNS_ADMIN environment variables are not set:

   ■ Bourne, Bash, or Korn shell:
   ```bash
   $ unset ORACLE_HOME
   $ unset TNS_ADMIN
   ```

   ■ C shell:
   ```bash
   % unsetenv ORACLE_HOME
   % unsetenv TNS_ADMIN
   ```

---

**Note:** If the ORACLE_HOME environment variable is set, the 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, Oracle recommends that you unset the ORACLE_HOME environment variable and choose the default path suggested by the Installer.
13. 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 that the environment variables you set in this section have the correct values.
This chapter describes how to start the Oracle Universal Installer and install Oracle products on your system. It includes information about the following topics:

- Installation Overview
- Download Oracle Software from the OTN Web Site
- Copy the Oracle Client Software to a Hard Disk
- Install the Oracle Client Software

**Note:** Review the information in Chapter 1, "Installation Overview” and complete the tasks listed in Chapter 2, "Pre-installation Tasks” before beginning the installation.
Installation Overview

The Oracle Client software is available on disc (CD-ROM or DVD-ROM) or you can download it from the Oracle Technology Network (OTN) Web site. In most cases, you use the graphical user interface (GUI) provided by the Oracle Universal Installer to install the software. However, you can also use the Installer to complete silent-mode installations, without using the GUI. See Appendix A for information about silent-mode installations.

This chapter describes how to install Oracle Client from the product media or from the hard disk. To install the software from the hard disk, you must either download it from OTN and unpack it, or copy it from the discs, if you have them. See one of the following sections, depending on the method that you want to use:

- To copy the software to a hard disk, see the “Copy the Oracle Client Software to a Hard Disk” section on page 3-3.
- To install the software from disc or from an existing hard disk location, see the "Install the Oracle Client Software" section on page 3-3.
- To download the software from OTN, see the following section.

Download Oracle Software from the OTN Web Site

This section describes how to download the installation archive files and extract them on your hard disk.

**Downloading the Installation Archive Files**

To download the installation archive files from OTN:

1. Use any browser to access the software download page on OTN:

   http://www.oracle.com/technology/software/

2. Navigate to the download page for the product that you want to install.

3. On the download page, identify the required disk space by adding the file sizes for each required file.
   The file sizes are listed next to the file names.

4. Select a file system with enough free space to store and expand the archive files.
   In most cases, the available disk space must be at least twice the size of all of the archive files.

5. On the file system that you selected in step 4, create a parent directory for each product, for example OraCl110g, to hold the installation directories.

6. Download all of the installation archive files to the directory that you created in step 5.

7. Verify that the files you downloaded are the same size as the corresponding files on OTN.

**Extracting the Installation Files**

To extract the installation archive files, perform the following steps:

1. If necessary, change directory to the directory that contains the downloaded installation archive files.
2. To uncompress each file, enter a command similar to the following:

   $ gunzip filename.cpio.gz

   This command creates files with names similar to the following:

   filename.cpio

3. To extract the installation files, enter commands similar to the following:

   $ cpio -idmv < filename.cpio

   For each file, this command creates a subdirectory named Disk\n, where \n is either 1 or the disk number identified in the file name.

   When you have extracted all of the required installation files, see the "Install the Oracle Client Software" section on page 3-3.

---

### Copy the Oracle Client Software to a Hard Disk

If your system does not have a CD-ROM or DVD-ROM drive, you can copy the software from the disc to a file system on another system, then either mount that file system using NFS, or use FTP to copy the files to the system where you want to install the software.

To copy the contents of the disc to a hard disk:

1. Create a single directory on the hard disk to hold the Oracle software:

   $ mkdir OraCli10g

2. Change directory to the directory you created in step 1:

   $ cd OraCli10g

3. Create subdirectories for each installation disc with names similar to the following, where \n is the disc number:

   $ mkdir Disk\n
4. Insert the disc into the disc drive.

5. Copy the contents of the mounted disc to the corresponding new subdirectory as follows:

   $ cp -R /directory_path Disk1

   In this example, /directory_path is the CD-ROM mount point directory or the path of the client directory on the DVD-ROM.

---

### Install the Oracle Client Software

The following sections describe how to install the Oracle software:

- Reviewing Product-Specific Installation Guidelines
- Running the Oracle Universal Installer
Reviewing Product-Specific Installation Guidelines

Review the following guidelines before starting the Installer:

- **Oracle Universal Installer**
  Do not use the Oracle Universal Installer from an earlier Oracle product release to install components from this release.

- **Installations on a cluster**
  If Oracle Cluster Ready Services (CRS) and Oracle Real Application Clusters (RAC) are already installed on the system, the Installer displays the Specify Hardware Cluster Installation Mode screen. You must select **Local Installation** on this screen.

- **Re-installing Oracle software**
  If you re-install Oracle software into an Oracle home directory where Oracle Client is already installed, you must also re-install any components that were installed before you began the re-installation.

Running the Oracle Universal Installer

Start the Installer and install the software, as follows:

1. If you are installing the software from disc, insert the disc into the disc drive.
2. To start the Installer, complete one of the following steps depending on the location of the installation files:
   - If the installation files are on disc, enter commands similar to the following, where `directory_path` is the CD-ROM mount point directory or the path of the `client` directory on the DVD-ROM:
     ```
     $ cd /tmp
     $ /directory_path/runInstaller
     ```
   - If the installation files are on the hard disk, change directory to the `Disk1` directory and enter the following command:
     ```
     $ ./runInstaller
     ```
3. Use the following guidelines to complete the installation:
   - Follow the instructions displayed in the Installer screens. If you need additional information, click **Help**.
   - When the Installer prompts you to run a script with root privileges, enter a command similar to the following in a terminal where you are logged in as the root user, then click **Continue** or **OK**:
     ```
     # /script_path/script_name
     ```
Alternatively, enter a command similar to the following to run the script in a terminal where you are logged in as a user that is a member of the admin group:

```
$ sudo /script_path/script_name
```

- If you encounter errors while installing or linking the software, see Appendix B for information about troubleshooting.

4. If you chose an installation type that runs Oracle Net Configuration Assistant (NetCA) in interactive mode, you must provide detailed information about configuring your network.

   If you need assistance when using NetCA in interactive mode, click Help on any screen.

   **Note:** If you chose a default installation, NetCA runs non-interactively.

5. When all of the configuration tools have finished, click Exit, then click Yes to exit from the Installer.

6. See Chapter 4, "Post-installation Tasks" for information about tasks that you must complete after you have installed the software.
This chapter describes how to complete post-installation tasks after you have installed the software. It includes information about the following topics:

- **Required Post-installation Tasks**
- **Recommended Post-installation Tasks**
- **Required Product-Specific Post-installation Tasks**

You must perform the tasks listed in the “Required Post-installation Tasks” section. Oracle recommends that you perform the tasks listed in the “Recommended Post-installation Tasks” section after all installations.

If you installed and intend to use any of the products listed in the "Required Product-Specific Post-installation Tasks” section, you must perform the tasks listed in the product-specific subsections.

---

**Note:** This chapter describes basic configuration only. See the *Oracle Database Administrator’s Reference for UNIX Systems* and product-specific administration and tuning guides for more sophisticated configuration and tuning information.

---
Required Post-installation Tasks

You must perform the tasks described in the following sections after completing an installation:

- Downloading and Installing Patches
- Running Oracle Enterprise Manager Java Console
- Connecting with Instant Client

Downloading and Installing Patches

Check the Oracle Metalink Web site for required patches for your installation. To download required patches:

1. Use a Web browser to view the Oracle Metalink Web site:
   http://metalink.oracle.com
2. Log in to Oracle Metalink.

---

Note: If you are not an Oracle Metalink registered user, click Register for MetaLink! and follow the registration instructions.

3. On the main Oracle Metalink page, click Patches.
4. Select Simple Search.
5. Specify the following information, then click Go:
   - In the Search By field, choose Product or Family, then specify RDBMS Server.
   - In the Release field, specify the current release number.
   - In the Patch Type field, specify Patchset/Minipack.
   - In the Platform or Language field, select your platform.

Running Oracle Enterprise Manager Java Console

In addition to using Oracle Enterprise Manager Database Control or Grid Control to manage an Oracle Database 10g database, you can also use the Oracle Enterprise Manager Java Console to manage databases from this release or previous releases. The Java Console is installed by the Administrator installation type.

---

Note: Oracle recommends that you use Grid Control or Database Control in preference to the Java Console when possible.

To start the Java Console, follow these steps:

1. Set the ORACLE_HOME environment variable to specify the Oracle home directory where you installed Oracle Client.
2. Set the DYLD_LIBRARY_PATH environment variable for your system to include the following directories:
   
   $ORACLE_HOME/lib:$DYLD_LIBRARY_PATH
3. Enter the following command to start the Java Console:

   $ $ORACLE_HOME/bin/oemapp console

**Connecting with Instant Client**

If you installed the Instant Client installation type, you can configure users’ environments to enable dynamically linked client applications to connect to a database as follows:

1. Set the DYLD_LIBRARY_PATH environment variable for your platform to specify the directory that contains the Instant Client libraries. For the Instant Client installation type, this directory is the Oracle home directory that you specified during the installation, for example:

   `/Volumes/u01/app/oracle/product/10.1.0/client_1`

2. Use one of the following methods to specify database connection information for the client application:

   - Specify a SQL connect URL string using the following format:
     
     `//host:port/service_name`

   - Set the TNS_ADMIN environment variable to specify the location of the `tnsnames.ora` file and specify a service name from that file.

   - Set the TNS_ADMIN environment variable and set the TWO_TASK environment variable to specify a service name from the `tnsnames.ora` file.

---

**Recommended Post-installation Tasks**

Oracle recommends that you perform the tasks described in the following section after completing an installation:

- Backing Up the `root.sh` Script
- Setting Up User Accounts
- Generating the Client Static Library

**Backing Up the `root.sh` Script**

Oracle recommends that you back up the `root.sh` script after you complete an installation. If you install other products in the same Oracle home directory, then the Oracle Universal Installer updates the contents of the existing `root.sh` script during the installation. If you require information contained in the original `root.sh` script, then you can recover it from the backed up `root.sh` file.

**Setting Up User Accounts**

For information about setting up additional user accounts, see the *Oracle Database Administrator’s Reference for UNIX Systems.*
Generating the Client Static Library

The client static library (libclntst10.a) is not generated during installation. If you want to link your applications to the client static library, you must first generate it as follows:

1. Switch user to oracle.
2. Set the ORACLE_HOME environment variable to specify the Oracle home directory used by the Oracle Client installation. For example:
   - Bourne, Bash, or Korn shell:
     ```
     $ ORACLE_HOME=/Volumes/u01/app/oracle/product/10.1.0/client_1
     $ export ORACLE_HOME
     ```
   - C shell:
     ```
     % setenv ORACLE_HOME /Volumes/u01/app/oracle/product/10.1.0/client_1
     ```
3. Enter the following command:
   ```
   $ $ORACLE_HOME/bin/genclntst
   ```

Required Product-Specific Post-installation Tasks

The following sections describe platform-specific post-installation tasks that you must perform if you installed and intend to use the products mentioned:

- Configuring Oracle Net Services
- Configuring Oracle Precompilers

Configuring Oracle Net Services

If you have an existing installation of Oracle software on this system, you might want to copy information from the Oracle Net tnsnames.ora configuration file from the existing installation to the corresponding file for the new installation.

---

**Note:** The default location for the tnsnames.ora file is the $ORACLE_HOME/network/admin/ directory. However, you can also use a central location for this file (/etc).

---

If necessary, you can also add connection information for additional database instances to the new file.

Configuring Oracle Precompilers

The following sections describes post-installation tasks for Oracle precompilers.

---

**Note:** All precompiler configuration files are located in the $ORACLE_HOME/precomp/admin directory.
Configuring Pro*C/C++

Verify that the PATH environment variable setting includes the directory that contains the C compiler executable. The default directory for the gcc compiler executable is /usr/bin.
Removing Oracle Software

This chapter describes how to completely remove all software from an Oracle home directory.

---

**Note:** If you want to remove an individual product, check the product-specific documentation for requirements and restrictions.

---

Removing Oracle Software

The following steps describe how to use the Installer to remove Oracle software from an Oracle home:

---

**Note:** Always use the Oracle Universal Installer to remove Oracle software. Do not delete any Oracle home directories without first using the Installer to remove the software.

---

1. If necessary, log in as the `oracle` user:
   
   ```bash
   $ su - oracle
   ```

2. Set the `ORACLE_HOME` environment variable to specify the path of the Oracle home directory that you want to remove:
   
   - Bourne, Bash, or Korn shell:
     ```bash
     $ ORACLE_HOME=/Volumes/u01/app/oracle/product/10.1.0/client_1
     $ export ORACLE_HOME
     ```
   
   - C shell:
     ```bash
     $ setenv ORACLE_HOME /Volumes/u01/app/oracle/product/10.1.0/client_1
     ```

3. Start the Installer as follows:
   
   ```bash
   $ $ORACLE_HOME/oui/bin/runInstaller
   ```

4. In the Welcome screen, click **Deinstall Products**.
   
   The Inventory screen appears, listing all of the Oracle homes on the system.

5. In the Inventory screen, select the Oracle home or the products that you want to remove, then click **Remove**.
The Installer displays a confirmation screen asking you to confirm that you want to deinstall the products and their dependant components.

6. Click Yes.

The Installer displays a progress indicator as it removes the software.
This chapter describes how to install and configure Oracle products using response files. It includes information about the following topics:

- Introduction
- Create the oraInst.loc File
- Prepare a Response File
- Run the Installer in Silent or Suppressed Mode
Introduction

You can automate the installation and configuration of Oracle software, either fully or partially, by specifying a response file when you start the Oracle Universal Installer. The Installer uses the values contained in the response file to provide answers to some or all of the Installer prompts:

- If you include responses for all of the prompts in the response file and specify the 
  -silent option when starting the Installer, then the Installer runs in silent mode. During a silent-mode installation, the Installer does not display any screens. Instead, it displays progress information in the terminal that you used to start it.

- If you include responses for some or all of the prompts in the response file and omit the -silent option, then the Installer runs in suppressed mode. During a suppressed-mode installation, the Installer displays only the screens for which you did not specify all required information. You can also use variables in the response file or command-line options to suppress other Installer screens, such as the Welcome screen or Summary screen, that do not prompt for information.

The following table describes several reasons why you might want to run the Installer in silent mode or suppressed mode:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent</td>
<td>Use silent mode if you want to:</td>
</tr>
<tr>
<td></td>
<td>■ Complete an unattended installation, which you might schedule using operating system utilities such as at</td>
</tr>
<tr>
<td></td>
<td>■ Complete several similar installations on multiple systems without user interaction</td>
</tr>
<tr>
<td></td>
<td>■ Install the software on a system that does not have a graphical display</td>
</tr>
<tr>
<td></td>
<td>The Installer displays progress information in the terminal that you used to start it, but it does not display any of the Installer screens.</td>
</tr>
<tr>
<td>Suppressed</td>
<td>Use suppressed mode if you want to complete similar Oracle software installations on more than one system, providing default answers to some, but not all of the Installer prompts.</td>
</tr>
<tr>
<td></td>
<td>If you do not specify information required for a particular Installer screen in the response file, the Installer displays that screen. It suppresses screens for which you have provided all of the required information.</td>
</tr>
</tbody>
</table>

Installation Overview

To install and configure Oracle products using the Installer in silent or suppressed mode, follow these steps:

**Note:** You must complete all required pre-installation tasks on a system before running the Installer in silent or suppressed mode.

1. Create the oraInst.loc file.
2. Prepare a response file.
3. Run the Installer in silent or suppressed mode.

These steps are described in the following sections.
Create the oraInst.loc File

If you plan to install Oracle products using the Installer in silent or suppressed mode, you must manually create the `oraInst.loc` file if it does not already exist. This file specifies the location of the Oracle Inventory directory where the Installer creates the inventory of Oracle products installed on the system.

**Note:** If Oracle software has been installed previously on the system, the `oraInst.loc` file might already exist. If the file does exist, you do not need to create a new file.

To create the `oraInst.loc` file, follow these steps:

1. As a user that is a member of the `admin` group, start a shell session with root privileges:
   
   ```
   $ sudo sh
   ```

2. Create the `/var/opt/oracle` directory if it does not exist:
   
   ```
   # mkdir -p /var/opt/oracle
   ```

3. Change directory to the `/var/opt/oracle` directory.

4. Use a text editor to create the `oraInst.loc` file, containing the following lines:
   
   ```
   inventory_loc=ORACLE_BASE/oraInventory
   inst_group=
   ```

   In this example, `ORACLE_BASE` is the path of the Oracle base directory, for example, `/Volumes/u01/app/oracle`.

5. Enter the following commands to set the appropriate owner, group, and permissions on the `oraInst.loc` file:
   
   ```
   # chown oracle:oinstall oraInst.loc
   # chmod 664 oraInst.loc
   ```

Prepare a Response File

There are two methods that you can use to prepare a response file for use during silent-mode or suppressed-mode installations:

- **Edit a response file template**
  
  This method is most useful for the Instant Client, Administrator, or Runtime installation types.

- **Record a response file using the Installer**

  This method is most useful for the Custom installation type.

The following subsections describe each method.

**Editing a Response File Template**

Oracle provides response file templates for each product and installation type, and for each configuration tool. These files are located in the `response` directory on the CD-ROM or the `client/response` directory on the DVD-ROM.
Prepare a Response File

Table A–1 lists the response files provided with Oracle Client.

<table>
<thead>
<tr>
<th>Response File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>instantClient.rsp</td>
<td>Instant Client installation of Oracle Client</td>
</tr>
<tr>
<td>clientAdmin.rsp</td>
<td>Administrator installation of Oracle Client</td>
</tr>
<tr>
<td>clientRuntime.rsp</td>
<td>Runtime installation of Oracle Client</td>
</tr>
<tr>
<td>clientCustom.rsp</td>
<td>Custom installation of Oracle Client</td>
</tr>
</tbody>
</table>

**Note:** If you copied the software to a hard disk, the response files are located in the Disk1/response directory.

To prepare a response file:

1. Copy the response file from the response file directory to a directory on your system:
   ```
   $ cp /directory_path/response/response_file.rsp local_directory
   ```
   In this example, `directory_path` is the CD-ROM mount point directory or the `client` directory on the DVD-ROM. If you have copied the software to a hard drive, you can edit the file in the `response` directory if you prefer.

2. Open the response file in a text editor:
   ```
   $ vi /local_dir/response_file.rsp
   ```

3. Edit the file, following the instructions in the file.

**Note:** The Installer or configuration assistant fails if you do not correctly configure the response file. See “Silent-Mode Response File Error Handling” on page B-4 for more information about troubleshooting a failed silent-mode installation.

Recording a Response File

You can use the Installer in interactive mode to record a response file that you can edit and then use to complete silent-mode or suppressed-mode installations. When you are recording the response file, you can either complete the installation, or you can exit from the Installer on the Summary screen, before it starts to copy the software to the system.

To record a new response file:

1. Complete the pre-installation tasks listed in Chapter 2.
   When you run the Installer to record a response file, it checks the system to verify that it meets the requirements to install the software. For this reason, Oracle recommends that you complete all of the required pre-installation tasks and record the response file while completing an installation.

2. If you have not installed Oracle software on this system previously, create the `oraInst.loc` file, as described in the previous section.
3. Make sure that the Oracle software owner user (typically oracle) has permissions to create or write to the Oracle home path that you will specify when you run the Installer.

4. To record a response file, enter a command similar to the following to start the Installer:

```
$ /directory_path/runInstaller -record -destinationFile filename
```

In this example:
- `directory_path` is either the CD-ROM mount point directory, the path of the client directory on the DVD-ROM, or the path of the Disk1 directory on the hard drive
- The `-record` parameter specifies that you want to record the responses that you enter in a response file
- `filename` is the full path and file name of the response file that you want to record

5. On each Installer screen, specify the required information.

6. When the Installer displays the Summary screen, do one of the following:
- Click Install to create the response file, then continue with the installation.
- Click Cancel, then Yes to create the response file but exit from the Installer without installing the software.

The response file is saved in the location that you specified using the `-destinationFile` option.

7. If you did not complete the installation, delete the Oracle home directory that the Installer created using the path you specified on the Specify File Locations screen.

8. Before using the recorded response file on another system, use any text editor to edit the file and make any required changes.

Use the comments in the file as a guide when editing it.

---

### Run the Installer in Silent or Suppressed Mode

To run the Oracle Universal Installer in silent or suppressed mode, follow these steps:

1. Complete the pre-installation tasks listed in Chapter 2.

2. Log in as the Oracle software owner user (typically oracle).

3. To start the Installer in silent or suppressed mode, enter a command similar to the following:

```
$ /directory_path/runInstaller [-silent] -responseFile filename
```

Note: Do not specify a relative path to the response file. If you specify a relative path, the Oracle Universal Installer fails.
In this example:

- `directory_path` is either the CD-ROM mount point directory, the path of the `client` directory on the DVD-ROM, or the path of the `Disk1` directory on the hard drive
- The `-silent` option indicates that you want to run the Installer in silent mode
- `filename` is the full path and file name of the installation response file that you configured

---

**Note:** For more information about other options for the `runInstaller` command, enter the following command:

$ /directory_path/runInstaller -help

---

4. When the installation completes, run the `root.sh` script as the root user:

```bash
#/oracle_home_path/root.sh
```

Alternatively, as a user that is a member of the `admin` group, use the `sudo` command to run the `root.sh` script:

```bash
$ sudo /oracle_home_path/root.sh
```
This appendix contains information about troubleshooting. It includes information about the following topics:

- Verify Requirements
- What to Do If an Installation Error Occurs
- Reviewing the Log of an Installation Session
- Troubleshooting Configuration Assistants
- Silent-Mode Response File Error Handling
- Cleaning Up After a Failed Installation
Verify Requirements

Before performing any of the troubleshooting steps in this appendix, ensure that the system meets the requirements and that you have completed all of the pre-installation tasks specified in Chapter 2, "Pre-installation Tasks".

Read the Release Notes

Read the release notes for the product on your platform before installing it. The release notes are available on the Oracle Database 10g disc. The latest version of the release notes is also available on the OTN Web site:

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

What to Do If an Installation Error Occurs

If you encounter an error during installation:

- Do not exit the Installer.
- If you clicked Next after you entered incorrect information on one of the installation screens, click Back to return to the screen and correct the information.
- If you encounter an error while the Installer is copying or linking files, see the "Reviewing the Log of an Installation Session" section on page B-2.
- If you encounter an error while a configuration assistant is running, see the "Troubleshooting Configuration Assistants" section on page B-3.
- If you cannot resolve the problem, remove the failed installation by following the steps listed in the "Cleaning Up After a Failed Installation" section on page B-4.

Reviewing the Log of an Installation Session

During an installation, the Installer records all of the actions that it performs in a log file. If you encounter problems during the installation, review the log file for information about possible causes of the problem.

To view the log file, follow these steps:

1. If necessary, enter the following command to determine the location of the oraInventory directory:

   $ cat /var/opt/oracle/oraInst.loc

   The inventory_loc parameter in this file specifies the location of the oraInventory directory.

2. Enter the following command to change directory to the Installer log file directory, where orainventory_location is the location of the oraInventory directory:

   $ cd /orainventory_location/logs

3. Enter the following command to determine the file name of the log file:

   $ ls -ltr
This command lists the files in the order of creation, with the most recent file shown last. Installer log files have names similar to the following, where date_time indicates the date and time that the installation started:

installActionsdate_time.log

4. To view the most recent entries in the log file, where information about a problem is most likely to appear, enter a command similar to the following:

$ tail -50 installActionsdate_time.log | more

This command displays the last 50 lines in the log file.

5. If the error displayed by the Installer or listed in the log file indicates a relinking problem, see the following file for more information:

$ORACLE_HOME/install/make.log

Troubleshooting Configuration Assistants

To troubleshoot an installation error that occurs when a configuration assistant is running:

- Review the installation log files listed in the "Reviewing the Log of an Installation Session" section on page B-2.

- Review the specific configuration assistant log file located in the $ORACLE_HOME/cfgtoollogs directory. Try to fix the issue that caused the error.

- If you see the "Fatal Error. Reinstall" message, look for the cause of the problem by reviewing the log files. Refer to the "Fatal Errors" section for further instructions.

Configuration Assistant Failure

Oracle configuration assistant failures are noted at the bottom of the installation screen. The configuration assistant interface displays additional information, if available. The configuration assistant execution status is stored in the following file:

oraInventory_location/logs/installActionsdate_time.log

The execution status codes are listed in the following table:

<table>
<thead>
<tr>
<th>Status</th>
<th>Result Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration assistant succeeded</td>
<td>0</td>
</tr>
<tr>
<td>Configuration assistant failed</td>
<td>1</td>
</tr>
<tr>
<td>Configuration assistant cancelled</td>
<td>-1</td>
</tr>
</tbody>
</table>

Fatal Errors

If you receive a fatal error while a configuration assistant is running, you must remove the current installation and reinstall the Oracle software, as follows:

1. Remove the failed installation as described in the "Cleaning Up After a Failed Installation" section on page B-4.

2. Correct the cause of the fatal error.

3. Reinstall the Oracle software.
Silent-Mode Response File Error Handling

To determine whether a silent-mode installation succeeds or fails, see the following log file:

/oraInventory_location/logs/silentInstalldate_time.log

If necessary, see the previous section for information about determining the location of the oraInventory directory.

A silent installation fails if:

■ You do not specify a response file
■ You specify an incorrect or incomplete response file
■ The Installer encounters an error, such as insufficient disk space

The Installer or configuration assistant validates the response file at runtime. If the validation fails, the silent-mode installation or configuration process ends. The Installer treats values for parameters that are of the wrong context, format, or type as if no value was specified in the file.

Cleaning Up After a Failed Installation

If an installation fails, you must remove files that the Installer created during the attempted installation and remove the Oracle home directory. Perform the following steps to remove the files:

1. Start the Installer as described in the "Install the Oracle Client Software" section on page 3-3.
2. Click Deinstall Products on the Welcome screen or click Installed Products on any Installer screen.
   The Inventory screen appears, listing installed products.
3. Select the Oracle home that contains the products that you want to remove, then click Remove.
4. Manually remove the Oracle home directory created during the failed installation.
5. Reinstall the Oracle software.
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<tr>
<th>Index</th>
</tr>
</thead>
</table>

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