Send Us Your Comments .................................................................................................................. vii

Preface ........................................................................................................................................... ix

Purpose ........................................................................................................................................... ix
Audience ........................................................................................................................................... ix
Oracle8i and Oracle8i Enterprise Edition ................................................................................... ix
Typographic Conventions ........................................................................................................... x
Command Syntax ......................................................................................................................... x
Accessing Online Documentation ............................................................................................. xi
Related Documentation ............................................................................................................... xi
Oracle Services and Support ....................................................................................................... xi

1 System Requirements

Installation Overview ..................................................................................................................... 1-2
Product Installation Categories and Installation Types ............................................................... 1-2
System Installation Requirements ............................................................................................... 1-4
Hardware Requirements ............................................................................................................. 1-4
Disk Space Requirements .......................................................................................................... 1-5
Operating System Software Requirements ............................................................................... 1-6
Online Documentation Requirements ........................................................................................ 1-7
Additional Product-Specific Installation Requirements ............................................................. 1-7
Solaris and Installation-Specific Issues and Restrictions ............................................................ 1-12
New ORACLE_HOME .................................................................................................................. 1-12
Java Runtime Environment (JRE) .............................................................................................. 1-12
2 Pre-Installation

UNIX System Configuration ........................................................................................................... 2-2
Setup Tasks to Perform as the root User ................................................................................... 2-3
Setup Tasks to Perform as the oracle User ................................................................................ 2-7
Setup Tasks for Oracle Products .............................................................................................. 2-11
  Oracle Options ......................................................................................................................... 2-11
  Tools and Precompilers ......................................................................................................... 2-14
  Networking and System Management Products .................................................................. 2-15
Understanding Net8 Configuration ............................................................................................ 2-17
  Server Network Configuration ............................................................................................... 2-18
  Client Network Configuration .............................................................................................. 2-21
Identifying Your Database Environment .................................................................................... 2-22
  Selecting a Database Creation Method .................................................................................. 2-23

3 Installation

Using Oracle Universal Installer ................................................................................................. 3-2
  Oracle8i Enterprise Edition .................................................................................................. 3-7
  Oracle8i Client ..................................................................................................................... 3-10
  Oracle8i Management Infrastructure .................................................................................... 3-12
Run the root.sh Script .............................................................................................................. 3-16
Reviewing a Log of an Installation Session .............................................................................. 3-16
Installing Oracle Parallel Server ............................................................................................. 3-17
Re-Installing Oracle Parallel Server ............................................................................................ 3-17
Cleaning Up After a Failed Installation ..................................................................................... 3-17
Installing Legato Storage Manager Manually ......................................................................... 3-17
  Updating Legato Storage Manager ....................................................................................... 3-19
Removing Legato Storage Manager Version 5.5 ..................................................................... 3-20
4 Post-Installation

Configuration Tasks to Perform as the root User ................................................................. 4-2
Configuration Tasks to Perform as the oracle User ............................................................. 4-6
Post-Installation for Oracle Products ................................................................................... 4-12
  Net8 ....................................................................................................................................... 4-12
  Oracle Internet Directory ..................................................................................................... 4-13
  Oracle Enterprise Manager ................................................................................................. 4-14
  Oracle Options ..................................................................................................................... 4-15
  Recovery Manager ............................................................................................................... 4-16
  Multi-Threaded Server ....................................................................................................... 4-16
  Oracle Parallel Server Management .................................................................................... 4-17
  Oracle Precompilers ............................................................................................................ 4-17
  Oracle Supported Protocols ............................................................................................... 4-18
  Legato Storage Manager ...................................................................................................... 4-19
Oracle Configuration Assistants .......................................................................................... 4-21
  Net8 Configuration Assistant ............................................................................................. 4-22
  Oracle Data Migration Assistant ......................................................................................... 4-22
  Oracle Database Configuration Assistant ........................................................................... 4-23
  Oracle Enterprise Manager Configuration Assistant ....................................................... 4-23
Accessing Installed Documentation ..................................................................................... 4-23
  Oracle Information Navigator ............................................................................................. 4-24
De-installing Oracle Software .............................................................................................. 4-24

A Oracle8i Products

Determining Which Products are Installed .......................................................................... A-2
  Oracle8i Enterprise Edition .................................................................................................. A-2
  Oracle8i Client ................................................................................................................... A-7
  Oracle8i Management Infrastructure .................................................................................. A-11
Oracle Corporation 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 any errors or have any other suggestions for improvement, please indicate the chapter, section, and page number (if available). You can send comments to us in the following ways:

- Email - osdwrite@us.oracle.com
- FAX - 650.506.7303 Attn: Tom Leah-Martin
- Postal service:
  Tom Leah-Martin
  Oracle Corporation
  500 Oracle Parkway, Mailstop 1op5
  Redwood Shores, CA 94065
  USA

If you would like a reply, please provide your name, address, and telephone number.

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

Purpose

This guide and the Oracle8i Administrator’s Reference provide instructions for installing and configuring Oracle8i Release 2 (8.1.6) on Sun SPARC Solaris systems. Product-specific documentation is in the Oracle8i Generic Documentation Set.

Audience

This document is intended for anyone responsible for installing Oracle8i Release 2 (8.1.6) on Sun SPARC Solaris systems.

Oracle8i and Oracle8i Enterprise Edition

Unless noted otherwise, features and functionality described in this document are common to both Oracle8i and Oracle8i Enterprise Edition.
Typographic Conventions

monospace  Monospace type indicates UNIX commands, directory names, usernames, pathnames, and filenames.

brackets [ ]  Words enclosed in brackets indicate key names (for example, Press [Return]). Note that brackets have a different meaning when used in command syntax.

italics  Italic type indicates a variable, including variable portions of filenames. It is also used for emphasis.

UPPERCASE  Uppercase letters indicate Structured Query Language (SQL) reserved words, initialization parameters, and environment variables.

Command Syntax

UNIX command syntax appears in monospace font and assumes the use of the Bourne shell. The “$” character at the beginning of UNIX command examples should not be entered at the prompt. Because UNIX is case-sensitive, conventions in this document may differ from those used in other Oracle documentation.

backslash \  A backslash indicates a command that is too long to fit on a single line. Enter the line as printed (with a backslash) or enter it as a single line without a backslash:

```
dd if=/dev/rdsk/c0t1d0s6 of=/dev/rst0 bs=10b \
  count=10000
```

braces {}  Braces indicate required items: .DEFINE {macro1}

brackets [ ]  Brackets indicate optional items: cvtcrt termname [outfile]

Note that brackets have a different meaning when used in regular text.

eclipses ...  Ellipses indicate an arbitrary number of similar items:

```
CHKVAL fieldname value1 value2 ... valueN
```

italics  Italic type indicates a variable. Substitute a value for the variable: library_name

vertical line |  A vertical line indicates a choice within braces or brackets:

```
SIZE filesize [K|M]
```
Accessing Online Documentation

**Oracle8i for Sun SPARC Solaris Documentation**

Oracle8i for Sun SPARC Solaris documentation includes this guide and the *Oracle8i Administrator’s Reference for Sun SPARC Solaris*.

To access the documentation in HTML and PDF formats, use a UNIX browser to open the *index.htm* file at the top level of the Oracle8i CD-ROM. This file contains links to product and Solaris-specific documentation.

**Oracle Product Documentation**

Oracle8i product documentation is on the Oracle8i Generic Documentation CD-ROM. Instructions for accessing and installing the documents on the CD-ROM are found in the README file on the top level directory of the CD-ROM.

Related Documentation

If you are unfamiliar with the concepts or terminology associated with relational database management systems, read Chapter 1 in *Oracle8i Concepts* before beginning your installation.

Information about system administration and tuning for a production database system is provided in these documents:

- *Oracle8i Administrator’s Reference for Sun SPARC Solaris*
- *Oracle8i System Administrator’s Guide*
- *Net8 Administrator’s Guide*
- *Oracle8i Designing and Tuning for Performance*

Information about migrating or upgrading from a previous release of the Oracle Server is provided in *Oracle8i Migration*.

**Oracle Services and Support**

A wide range of information about Oracle products and global services is available on the Internet, from:

http://www.oracle.com

The sections below provide URLs for selected services.
Oracle Support Services
Technical Support contact information worldwide is listed at:

http://www.oracle.com/support

Templates are provided to help you prepare information about your problem before you call. You will also need your CSI number (if applicable) or complete contact details, including any special project information.

Products and Documentation
For U.S.A. customers, Oracle Store is at:

http://store.oracle.com

Links to Stores in other countries are provided from this site.

Product documentation can be found at:

http://docs.oracle.com

Customer Service
Global Customer Service contacts are listed at:

http://www.oracle.com/support/

Education and Training
Training information and worldwide schedules are available from:

http://education.oracle.com

Oracle Technology Network
Register with the Oracle Technology Network (OTN) at:

http://technet.oracle.com

OTN delivers technical papers, code samples, product documentation, self-service developer support, and Oracle’s key developer products to enable rapid development and deployment of applications built on Oracle technology.
Completing a quick, successful installation depends on the local system satisfying the software dependencies and space requirements for Oracle software. This chapter describes the requirements for installing Oracle8i on Sun SPARC Solaris and any restrictions with this release. Before starting the installation, verify that your system meets the requirements described in this chapter

- Installation Overview
- System Installation Requirements
- Solaris and Installation-Specific Issues and Restrictions
Installation Overview

Installing Oracle8i involves the following steps:

1. **Satisfy Prerequisites:** Make sure the local system satisfies the hardware, software, memory, and disk space requirements for the products you want to install. These requirements and restrictions are described in this chapter.

2. **Pre-Installation:** Make sure the UNIX environment is properly set up and complete pre-installation tasks for the products you want to install. See Chapter 2, "Pre-Installation".

3. **Install:** Use the new Oracle Universal Installer provided on your software CD-ROM to install Oracle products. See Chapter 3, "Installation".

4. **Post-Installation:** Create database objects, establish the user environment, and configure the installed Oracle products for the local system. See Chapter 4, "Post-Installation".

5. **Client Installations:** If you want to install client tools, applications, and client interfaces not included with the Oracle8i Release 2 (8.1.6) CD-ROM, check the requirements and instructions in the documentation for those products.

Product Installation Categories and Installation Types

There are three categories of products included with Oracle8i Release 2 (8.1.6) for Sun SPARC Solaris.

- Oracle8i Enterprise Edition
- Oracle8i Management Infrastructure
- Oracle8i Client

Each category of products consists of multiple installation types. An overview of these product categories and types follows in Table 1-1, "Oracle8i Product Installation Categories and Types" on page 1-3. For descriptions and version numbers of individual software products included on the Oracle8i Release 2 (8.1.6) for Sun SPARC Solaris CD-ROM, refer to Appendix A, "Oracle8i Products".
### Table 1–1 Oracle8i Product Installation Categories and Types

<table>
<thead>
<tr>
<th>This Installation Category…</th>
<th>Consists of These Installation Types:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle8i Enterprise Edition</td>
<td><strong>Typical</strong>&lt;br&gt;Installs a preconfigured starter database, licensable Oracle options, networking services, Oracle utilities, enterprise management tools, and online documentation. This type of installation is recommended for users who want the complete database package.</td>
</tr>
<tr>
<td></td>
<td><strong>Minimal</strong>&lt;br&gt;Gives you the option of installing a preconfigured starter database, networking services, enterprise management tools, and Oracle utilities. This type of installation is recommended for users who want a minimal database package.</td>
</tr>
<tr>
<td></td>
<td><strong>Custom</strong>&lt;br&gt;Lets you selectively install products from the above installation types.</td>
</tr>
<tr>
<td>Oracle8i Management Infrastructure</td>
<td><strong>Oracle Management Server</strong>&lt;br&gt;Installs a management console, management tools, networking services, utilities, basic client software, and online documentation.</td>
</tr>
<tr>
<td></td>
<td><strong>Oracle Internet Directory</strong>&lt;br&gt;Installs components that enable the Oracle Internet Directory directory server to be implemented as an application on the Oracle8i database.</td>
</tr>
<tr>
<td></td>
<td><strong>Custom</strong>&lt;br&gt;Lets you selectively install products from the above installation types.</td>
</tr>
<tr>
<td>Oracle8i Client</td>
<td><strong>Administrator</strong>&lt;br&gt;Installs a management console, management tools, networking services, utilities, basic client software, and online documentation.</td>
</tr>
<tr>
<td></td>
<td><strong>Programmer</strong>&lt;br&gt;Installs development tools and interfaces for creating applications that access an Oracle8i database. This installation package includes precompilers, networking services, and documentation.</td>
</tr>
<tr>
<td></td>
<td><strong>Application User</strong>&lt;br&gt;Provides networking services and support files that enable database application users to connect to and interact with an Oracle8i database.</td>
</tr>
<tr>
<td></td>
<td><strong>Custom</strong>&lt;br&gt;Lets you selectively install products from the above installation types.</td>
</tr>
</tbody>
</table>
System Installation Requirements

Verify that your system meets the requirements described in the following sections before you install Oracle8i Release 2 (8.1.6) products.

Note: You will not be able to complete an installation if your system does not meet the minimum requirements for the Oracle products you select.

- Hardware Requirements
- Disk Space Requirements
- Operating System Software Requirements
- Online Documentation Requirements
- Additional Product-Specific Installation Requirements

Hardware Requirements

To install Oracle8i products included with this release, your Sun SPARC Solaris system must meet the minimum hardware requirements listed in Table 1–2.

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>A minimum of 128 MB RAM is required to install Oracle8i products. Oracle8i Client products require 64 MB of RAM.</td>
</tr>
<tr>
<td>Swap Space</td>
<td>Twice the amount of RAM or at least 400 MB, whichever is greater, is recommended for most systems.</td>
</tr>
</tbody>
</table>

To determine the amount of RAM memory installed on your system, enter the following command:

$ /usr/sbin/prtconf | grep size

To determine the bytes of swap space currently configured on your system, enter the following command and multiply the BLOCKS column by 512:

$ swap -l
Disk Space Requirements

The Oracle Universal Installer allows you to choose your installation category and type as described in "Product Installation Categories and Installation Types" on page 1-2. Your choices will determine how much disk space you will need as shown in Table 1–3, Table 1–4, and Table 1–5. Disk space requirements do not account for the size of your database. A production Oracle database server supporting many users requires significantly greater disk space and memory.

Note: These are approximate values that might vary slightly at install time.

<table>
<thead>
<tr>
<th>Table 1–3 Disk Space Requirements for Oracle8i Enterprise Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Type</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Typical</td>
</tr>
<tr>
<td>Minimal</td>
</tr>
<tr>
<td>Custom</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 1–4 Disk Space Requirements for Oracle8i Management Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Type</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Oracle Management Server</td>
</tr>
<tr>
<td>Oracle Internet Directory</td>
</tr>
<tr>
<td>Custom</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 1–5 Disk Space Requirements for Oracle8i Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Type</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Administrator</td>
</tr>
<tr>
<td>Programmer</td>
</tr>
<tr>
<td>Application User</td>
</tr>
<tr>
<td>Custom</td>
</tr>
</tbody>
</table>
Operating System Software Requirements

To install Oracle8i products included with this release, your Sun SPARC Solaris system must meet the operating system requirements listed in Table 1–6.

Table 1–6 Operating System Software Requirements

<table>
<thead>
<tr>
<th>OS Software</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Solaris 2.6 or Solaris 7.</td>
</tr>
<tr>
<td>Operating System Patch</td>
<td>Use the latest kernel patch from Sun Microsystems. Sun provides patch information at:</td>
</tr>
<tr>
<td></td>
<td><a href="http://sunsolve.sun.com">http://sunsolve.sun.com</a></td>
</tr>
<tr>
<td></td>
<td>Solaris 2.6 requires at least kernel jumbo patch revision #105181-15 for successful installation of Release 2 (8.1.6).</td>
</tr>
<tr>
<td></td>
<td>See Table 1–12, &quot;Solaris 2.6 Patches for JRE 1.1.8_10&quot; and Table 1–13, &quot;Solaris 7 Patches for JRE 1.1.8_10&quot; on page 1-13 for patches required on Solaris for the JRE.</td>
</tr>
<tr>
<td>Operating System Packages</td>
<td>SUNWarc, SUNWbtool, SUNWhea, SUNWlibm, SUNWlibms, SUNWsprot, SUNWtoo</td>
</tr>
<tr>
<td>Window Manager</td>
<td>X-windows must be installed on the system from where the Installer is run. Use any Sun-supported X-windows server, for example, dtwm, twm, olwm, that supports Motif.</td>
</tr>
<tr>
<td></td>
<td>Character mode installs are not supported for Release 2 (8.1.6). See &quot;Character Mode&quot; on page 1-13.</td>
</tr>
<tr>
<td>Required Executables</td>
<td>The following executables must be present in the /usr/ccs/bin directory: make, ar, ld, nm.</td>
</tr>
</tbody>
</table>

To determine your current operating system information, enter the following command:

$ uname -a
To determine which operating system patches are installed, enter the following command:

$ showrev -p

To determine which operating system packages are installed, enter the following command:

$ pkginfo -i [package_name]

If you enter pkginfo -i, all installed packages are listed.

To determine if your X-windows system is working properly on your local system, enter the following command:

$ xclock

If a clock is not displayed on your screen, X-windows is not configured correctly. See "DISPLAY" on page 2-8 for instructions on configuring X-windows.

To determine if you are using the correct system executables, enter the following commands:

$ /usr/bin/which make
$ /usr/bin/which ar
$ /usr/bin/which ld
$ /usr/bin/which nm

Each of the four commands above should point to the /usr/ccs/bin directory. If not, add /usr/ccs/bin to the beginning of the PATH environment variable in the current shell. See "PATH" on page 2-9 for instructions on setting the PATH variable.

Online Documentation Requirements

To view online documentation included with the Oracle8i CD-ROM, use a web browser such as Netscape Navigator 4.0 or higher running on a UNIX system. To view PDF documents, you need Adobe Acrobat Reader version 3.0 or higher. Online documentation included with Oracle8i Release 2 (8.1.6) for Sun SPARC Solaris can only be viewed on UNIX systems.

Additional Product-Specific Installation Requirements

This section provides product-specific information in addition to hardware and software requirements provided earlier in this chapter. For descriptions of these products, see Appendix A, "Oracle8i Products".
System Installation Requirements

Oracle8i and Options

Table 1–7 Restrictions, Requirements, and Installation Tasks for Oracle8i and Options

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Restrictions and Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Parallel Server, 8.1.6</td>
<td>Requires Sun Enterprise Cluster 2.1 or higher</td>
</tr>
<tr>
<td>Oracle \textit{inter}Media, 8.1.6</td>
<td>You must have at least 10 MB of disk space available for the \textit{inter}Media Text data dictionary.</td>
</tr>
<tr>
<td>Oracle Visual Information Retrieval, 8.1.6</td>
<td>Requires Oracle \textit{inter}Media, 8.1.6</td>
</tr>
<tr>
<td>Oracle Internet Directory, 2.0.6</td>
<td>Requires an installation of Oracle8i Enterprise Edition, Release 2 (8.1.6) with character set AMERICAN_AMERICA_UTF8 and an instance dedicated to the Oracle Internet Directory. If this installation does not already exist, the Oracle Universal Installer will install it automatically.</td>
</tr>
</tbody>
</table>

Tools and Precompilers

Table 1–8 Restrictions, Requirements, and Installation Tasks for Tools and Precompilers

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Restrictions and Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Java Runtime Environment (JRE), 1.1.8</td>
<td>See Table 1–12, &quot;Solaris 2.6 Patches for JRE 1.1.8_10&quot; and Table 1–13, &quot;Solaris 7 Patches for JRE 1.1.8_10&quot; on page 1-13 for patches required on Solaris for the JRE.</td>
</tr>
<tr>
<td>Oracle JServer, 8.1.6 (includes Java Virtual Machine (JVM) and Java utilities)</td>
<td>See the Java README on the Oracle8i CD-ROM for restrictions and requirements</td>
</tr>
<tr>
<td>Oracle Data Migration Assistant, 8.1.6</td>
<td>An Oracle7 database must be at least release 7.1.4 to be migrated. An Oracle8 database must be at least release 8.0.3.0 to be upgraded. An Oracle8i database must be at least version 8.1.5 to be upgraded.</td>
</tr>
<tr>
<td>Pro*COBOL, 8.1.6</td>
<td>Requires Micro Focus COBOL 3.2 or higher, or Sun Nihongo COBOL 1.0.1</td>
</tr>
<tr>
<td>Pro*C/C++, 8.1.6</td>
<td>Requires SPARCworks/Workshop C compiler 4.2 or higher</td>
</tr>
<tr>
<td>Pro*COBOL, 1.8.51</td>
<td>Requires Micro Focus COBOL 3.2 or higher, or Sun Nihongo COBOL 1.0.1</td>
</tr>
<tr>
<td>Pro*FORTRAN, 1.8.51</td>
<td>Requires FORTRAN77 3.0.1 or higher</td>
</tr>
<tr>
<td>SQL\textit{\text{*}}Module Ada, 8.1.6</td>
<td>Requires Sun ADA 2.1 or higher</td>
</tr>
</tbody>
</table>
Networking and System Management Products

All network products require the underlying software and operating system libraries for the supported network. The network software must be installed and running prior to installation of Net8 products. Refer to operating system and third party vendor networking product documentation for more information. Net8 Release 8.1.6 products require Oracle8i Release 2 (8.1.6) and Net8 Release 8.1.6.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Restrictions and Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Enterprise Manager, 2.1.0</td>
<td>A system running:</td>
</tr>
<tr>
<td></td>
<td>■ only the Console and DBA Management Pack must be at least a Sun SPARC 20 - 266 Mhz</td>
</tr>
<tr>
<td></td>
<td>■ the Oracle Management Server must be at least a Sun SPARC Ultra 1 - 300 Mhz</td>
</tr>
<tr>
<td></td>
<td>■ the entire Oracle Enterprise Manager bundle (Console, DBA Management Pack, Oracle Management Service, and database repository) must be at least a Sun SPARC Ultra 1 - 400 Mhz.</td>
</tr>
<tr>
<td></td>
<td>If tracing is enabled, an additional 50 MB of disk space should be allocated for trace logs.</td>
</tr>
<tr>
<td></td>
<td>Access to an Oracle database, release 7.3 or later, is required to create a new Enterprise Manager repository. Running Oracle Enterprise Manager from a website requires special configuration. See the Oracle Enterprise Manager Configuration Guide for more information.</td>
</tr>
<tr>
<td>Oracle Advanced Security: Export Edition, 8.1.6</td>
<td>See Table 1–10 for information about Oracle Advanced Security authentication support requirements.</td>
</tr>
<tr>
<td>Legato Storage Manager, Version 5.5</td>
<td>See Table 1–11 for Legato Storage Manager Software Requirements.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: Legato Storage Manager (LSM) can be installed either through the Installer or manually according to the instructions in the section &quot;Installing Legato Storage Manager Manually&quot; in Chapter 3.</td>
</tr>
<tr>
<td>Oracle TCP/IP with SSL Protocol Support, 8.1.6</td>
<td>SSL 3.0 or later</td>
</tr>
<tr>
<td>Oracle LU6.2 Protocol Support, 8.1.6</td>
<td>Sun SNA 9.1, or higher</td>
</tr>
<tr>
<td>Oracle SPX/IPX Protocol Support, 8.1.6</td>
<td>Sun PC Protocol Services 1.1</td>
</tr>
</tbody>
</table>
Oracle Advanced Security

Oracle Advanced Security is an add-on product to the standard Net8 Server or Net8 Client. It must be purchased and installed on both the client and the server.

Oracle Advanced Security release 8.1.6 requires Net8 release 8.1.6 and supports Oracle8i Enterprise Edition. Install Oracle Advanced Security on each client and server where Oracle Advanced Security is required.

Table 1–10 describes requirements for authentication protocols supported by Oracle Advanced Security. See the Oracle Advanced Security Administrator’s Guide for additional information.

<table>
<thead>
<tr>
<th>Authentication Method</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerberos</td>
<td>MIT Kerberos Version 5, release 1.1</td>
</tr>
<tr>
<td></td>
<td>The Kerberos authentication server must be installed on a physically secure machine.</td>
</tr>
<tr>
<td>CyberSafe TrustBroker</td>
<td>CyberSafe GSS Runtime Library, version 1.1 or later, installed on both the system that runs the Oracle client and on the machine that runs the Oracle server.</td>
</tr>
<tr>
<td></td>
<td>CyberSafe TrustBroker, release 1.2 or later installed on a physically secure machine that runs the authentication server.</td>
</tr>
<tr>
<td></td>
<td>CyberSafe TrustBroker Client, release 1.2 or later installed on the machine that runs the Oracle client.</td>
</tr>
<tr>
<td>SecurID</td>
<td>ACE/Server release 3.3 or higher running on the authentication server.</td>
</tr>
<tr>
<td>Identix Biometric</td>
<td>Identix hardware and driver installed on each Biometric Manager station and client.</td>
</tr>
<tr>
<td>RADIUS</td>
<td>A RADIUS server that is compliant with the standards in the Internet Engineering Task Force (IETF) RFC #2138, <em>Remote Authentication Dial In User Service (RADIUS)</em> and RFC #2139, <em>RADIUS Accounting</em></td>
</tr>
<tr>
<td></td>
<td>To enable challenge-response authentication, you must run RADIUS on a platform that supports the Java Native Interface as specified in release 1.1 of the Java Development Kit from JavaSoft.</td>
</tr>
<tr>
<td>Secure Socket Layer (SSL)</td>
<td>A wallet that is compatible with the Oracle Wallet Manager version 2.1. Wallets created in earlier releases of the Oracle Wallet Manager are not forward compatible.</td>
</tr>
</tbody>
</table>
System Installation Requirements

Software Requirements for Legato Storage Manager

Legato Storage Manager is a restricted-functionality version of Legato NetWorker.

Note: If you have Legato NetWorker already installed on your system, you will not have the option of installing Legato Storage Manager. To install the version of Legato Storage Manager included with this release of Oracle8i, you must first de-install any present version of Legato NetWorker. See "Removing an Existing Legato Storage Manager Installation" on page 2-15.

The software requirements in Table 1–11 apply to a default installation of Legato Storage Manager, with no relocation of the software components.

<table>
<thead>
<tr>
<th>Components</th>
<th>Default Location</th>
<th>Space Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUI</td>
<td>/usr/bin</td>
<td>17 MB</td>
</tr>
<tr>
<td>Daemon and utility command files</td>
<td>/usr/sbin</td>
<td>26 MB</td>
</tr>
<tr>
<td>Library files</td>
<td>/usr/lib</td>
<td>10 MB</td>
</tr>
<tr>
<td>Online client file and server indexes; media database</td>
<td>/nsr</td>
<td>100 MB</td>
</tr>
<tr>
<td>Online manual pages</td>
<td>/usr/share/man</td>
<td>1 MB</td>
</tr>
<tr>
<td>Device Drivers</td>
<td>/usr/kernel</td>
<td>0.1 MB</td>
</tr>
<tr>
<td></td>
<td>/etc/LGTOuscsi</td>
<td>15 MB</td>
</tr>
</tbody>
</table>

169.1 MB
Solaris and Installation-Specific Issues and Restrictions

The following issues and restrictions can affect the installation or use of Oracle8i on Sun SPARC Solaris. Check the Release Notes that accompany this release and the README files in the $ORACLE_HOME/relnotes directory before using Oracle8i. For Release 2 (8.1.6), the README files are uncompressed and linked to the top-level HTML file in the doc directory. README files for other products on the Oracle8i CD-ROM are in the doc or admin/doc directories for the respective products.

New ORACLE_HOME

Do not install Oracle8i Release 2 (8.1.6) into an ORACLE_HOME directory containing any Oracle Software earlier than 8.1.5. If you install Oracle8i Release 2 (8.1.6) into an 8.1.5 ORACLE_HOME, Oracle Universal Installer removes most existing 8.1.5 products before the 8.1.6 products are installed. Do not remove 8.1.5 products that remain after the upgrade to 8.1.6.

Oracle Corporation recommends that you install Oracle8i Release 2 (8.1.6) products into a new ORACLE_HOME.

Java Runtime Environment (JRE)

The JRE shipped with Oracle8i is used by Oracle Java applications such as the Oracle Universal Installer and is the only one supported to run with these applications. Customers should not modify this JRE, unless it is done through a patch provided by Oracle Support Services.

The inventory can contain multiple versions of the JRE, each of which can be used by one or more products or releases. The Installer creates the oraInventory directory the first time it is run to keep an inventory of products that it installs on your system as well as other installation information. The location of oraInventory is defined in /var/opt/oracle/oraInst.loc.

Products in an ORACLE_HOME access the JRE through a symbolic link in $ORACLE_HOME/JRE to the actual location of a JRE within the inventory. Customers should not modify the symbolic link unless it is done through a patch provided by Oracle Support Services.

The Solaris patches Table 1–12 and Table 1–13 are required or recommended for JRE 1.1.8_10 and can be obtained from:

http://sunsolve.sun.com
To determine which operating system patches are installed, enter the following command:

```
$ showrev -p
```

### Character Mode

Installation can no longer be performed using character mode. However, you can configure the Oracle Universal Installer to perform a non-interactive installation of Oracle products. The Installer can be run in non-interactive mode directly from your system’s X-windows console or via an X-terminal or PC X-terminal on a remote system. For more information on the non-interactive installation of Oracle products, see "Non-Interactive Installation and Configuration" on page 3-21.
Upgrading and Migrating

If you are upgrading an existing system, there are issues which exceed the scope of this manual. See Oracle8i Migration for details on upgrade and migration procedures. If you are upgrading an Oracle Enterprise Manager repository, see the Oracle Enterprise Manager Configuration Guide.

It is possible to migrate an Oracle7 database, release 7.1.4 or higher, or upgrade an Oracle8 database, release 8.0.3 or higher, to Oracle8i Release 2 (8.1.6). To migrate from an Oracle7 database lower than 7.1.4, you must first upgrade to an Oracle7 database, release 7.1.4 or higher, and then use the Oracle Data Migration Assistant to migrate to Oracle8i.

Note: The Migration Utility is available as a stand-alone product.

File Systems

Oracle8i Server must be able to verify that file writes have been made to disk. File systems that do not support this verification are not supported for use with Oracle databases, although Oracle software can be installed on them.

Optimal Flexible Architecture

Optimal Flexible Architecture (OFA), Oracle’s standard set of configuration guidelines for Oracle databases, is supported, but not enforced, by the Oracle Universal Installer. The starter database included with the Typical installation type of Oracle8i Enterprise Edition is created under a single mount point. See “Identifying Your Database Environment” on page 2-22 for more information about the databases you can create during installation.

For more information about OFA, see Appendix A, “Optimal Flexible Architecture”, in the Oracle8i Administrator’s Reference.

Solaris 2.3, 2.4, and 2.5

Solaris 2.3, 2.4, and 2.5 are not supported for use with Oracle8i Release 2 (8.1.6). You must be using Solaris 2.6 or Solaris 7. See Table 1–6 on page 1-6 for details of operating system and patch level requirements.
Very Large Files

Oracle8i Release 2 (8.1.6) includes native support for files greater than 2 GB. Check your shell to determine whether it will impose a limit.

To check current soft shell limits, enter the following command:

```
$ ulimit -Sa
```

To check maximum hard limits, enter the following command:

```
$ ulimit -Ha
```

The `file (blocks)` value should be multiplied by 512 to obtain the maximum file size imposed by the shell. A value of `unlimited` is the operating system default and is the maximum value of 1 TB. See Table 1–14, "Oracle File Size Limits" for Oracle-specific file size limits. The `db_block_size` parameter is defined in the `$ORACLE_HOME/dbs/init$SID.ora` file.

<table>
<thead>
<tr>
<th>File Type</th>
<th>Maximum Size in Bytes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Datafiles where <code>db_block_size</code>=2048</td>
<td>8,589,932,544</td>
</tr>
<tr>
<td>Datafiles where <code>db_block_size</code>=4096</td>
<td>17,179,865,088</td>
</tr>
<tr>
<td>Datafiles where <code>db_block_size</code>=8192</td>
<td>34,359,730,176</td>
</tr>
<tr>
<td>Datafiles where <code>db_block_size</code>=16384</td>
<td>68,719,460,352</td>
</tr>
<tr>
<td>Import/Export file</td>
<td>2,147,483,647</td>
</tr>
<tr>
<td>SQL*Loader file</td>
<td>2,147,483,647</td>
</tr>
</tbody>
</table>

Oracle Parallel Server Restriction

Because all Oracle databases on a cluster linked in Parallel Server mode must match the word size of the Cluster Group Services executable, they must all run only a 32-bit executable. Mixing word sizes of parallel server executables, even across different databases, will not work in 8.1.x. This restriction does not apply to Oracle executables that are not linked in Parallel Server modes.
After you have verified that your system meets the requirements described in Chapter 1, “System Requirements”, use this chapter to help you prepare your system for installing Oracle8i,

- UNIX System Configuration
- Setup Tasks to Perform as the root User
- Setup Tasks to Perform as the oracle User
- Setup Tasks for Oracle Products
- Understanding Net8 Configuration
- Identifying Your Database Environment
UNIX System Configuration

Table 2–1 summarizes the requirements for installing Oracle8i on your Solaris system. If your system fails to satisfy any listed requirement, perform the tasks listed on page 2-3 as necessary to configure your system to meet these requirements.

Table 2–1 UNIX System Configuration Summary

<table>
<thead>
<tr>
<th>System Factor</th>
<th>Requirement for Oracle8i</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIX Kernel Parameters:</td>
<td></td>
</tr>
<tr>
<td>Shared Memory</td>
<td><strong>SHMMAX</strong>: 4294967295</td>
</tr>
<tr>
<td></td>
<td>This setting does not affect how much shared memory is needed or used by Oracle8i or the operating system. It is used only to indicate the maximum allowable size. This setting also does not impact operating system kernel resources.</td>
</tr>
<tr>
<td></td>
<td><strong>SHMMIN</strong>: 1</td>
</tr>
<tr>
<td></td>
<td><strong>SHMMNI</strong>: 100</td>
</tr>
<tr>
<td></td>
<td><strong>SHMSEG</strong>: 10</td>
</tr>
<tr>
<td>Semaphores</td>
<td><strong>SEMMNI</strong>: 100</td>
</tr>
<tr>
<td></td>
<td><strong>SEMMSL</strong>: Set to 10 plus the largest PROCESSES parameter of any Oracle database on the system. The PROCESSES parameter can be found in each init.sid.ora file, located in the $ORACLE_HOME/dbs directory. The default value of PROCESSES for the preconfigured database created by Oracle Database Configuration Assistant is 50.</td>
</tr>
<tr>
<td></td>
<td><strong>SEMMNS</strong>: Set to the sum of the PROCESSES parameter for each Oracle database, adding the largest one twice, then add an additional 10 for each database. See &quot;Configure the UNIX Kernel for Oracle8i&quot; on page 2-4 for an example of this formula.</td>
</tr>
<tr>
<td></td>
<td><strong>SEMOPM</strong>: 100</td>
</tr>
<tr>
<td></td>
<td><strong>SEMVMX</strong>: 32767</td>
</tr>
</tbody>
</table>

**Note:** If any of the kernel parameters above are less than your current values, continue to use the current value. These are the requirements for Oracle8i only. If you have other programs which use shared memory and semaphores, you will need to adjust the values accordingly. Take into account that a system reboot is necessary for kernel changes to take effect when planning for current and future database requirements.
Setup Tasks to Perform as the root User

Table 2–1  UNIX System Configuration Summary

<table>
<thead>
<tr>
<th>System Factor</th>
<th>Requirement for Oracle8i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Points (Storage Devices)</td>
<td>Oracle Universal Installer requires only two mount points: one for the software, and one for the database files. An Optimal Flexible Architecture (OFA)-compliant database requires at least four mount points, all at the same level of the directory structure. One is for the software, three are for database files. See the Oracle8i Administrator’s Reference for information on implementing OFA on UNIX.</td>
</tr>
<tr>
<td>UNIX Groups for Oracle Roles</td>
<td>A UNIX group is required for the OSDBA role. This book assumes that the group is named dba. The OSOPER role may belong to the same group as the OSDBA or to a different group.</td>
</tr>
<tr>
<td>Special UNIX Group to own the Oracle Universal Installer oraInventory</td>
<td>All users installing Oracle products in any ORACLE_HOME must have oinstall set as their primary UNIX group. The Installer’s inventory is shared by all ORACLE_HOMEs on a system and is group writable. Install Oracle products with oinstall set as the current group.</td>
</tr>
<tr>
<td>UNIX Accounts</td>
<td>A UNIX account that is dedicated solely to installing and upgrading Oracle products. The account must have the oinstall group as its primary group and the OSDBA group as a secondary group. This book assumes the account is called oracle.</td>
</tr>
<tr>
<td>Permissions for File Creation</td>
<td>Set umask to 022 for the oracle account.</td>
</tr>
<tr>
<td>ORACLE_BASE</td>
<td>Recommended as part of an OFA-compliant installation. See “ORACLE_BASE” on page 2-10 for further information.</td>
</tr>
</tbody>
</table>

Setup Tasks to Perform as the root User

Log in as the root user and perform the following tasks to set up your environment for Oracle8i:

- Configure the UNIX Kernel for Oracle8i
- Create Mount Points
- Create UNIX Groups for Database Administrators
- Create a UNIX Group for the Oracle Universal Installer Inventory
- Create a UNIX Account to Own Oracle Software
Setup Tasks to Perform as the root User

Note: In addition to these setup tasks, you will need root privileges near the start of the installation if the file /var/opt/oracle/oraInst.loc does not exist. You will also need root privileges near the end of the installation to run the root.sh script.

Configure the UNIX Kernel for Oracle8i

Configure the UNIX kernel Interprocess Communication (IPC) parameters to accommodate the Shared Global Area (SGA) structure of Oracle8i. You will not be able to start up the database if the system does not have adequate shared memory to accommodate the SGA.

1. Use the `ipcs` command to obtain a list of the system’s current shared memory and semaphore segments, and their identification number and owner.

   Because the shared memory in Solaris is dynamically loaded, when you run `ipcs` you may receive a message that the shared memory facility is not in the system. The shared memory driver is loaded after the Oracle8i instance is started. You can check the `/etc/system` file to verify that the system has been configured with enough shared memory.

2. Set the kernel parameters corresponding to the:
   - maximum size of a shared memory segment (SHMMAX)
   - minimum size of shared memory segment (SHMMIN)
   - maximum number of shared memory identifiers in the system (SHMMNI)
   - maximum number of shared memory segments a user process can attach (SHMSEG)
   - maximum number of semaphore identifiers in the system (SEMMNI)
   - maximum number of semaphores in a set (SEMMSL)
   - maximum number of semaphores in the system (SEMMNS)
   - maximum number of operations per `semop` call (SEMOPM)
   - semaphore maximum value (SEMVMX)

   The total allowable shared memory is determined by the formula:

   \[ \text{SHMMAX} \times \text{SHMSEG} \]
Table 2–1 on page 2-2 shows the required settings, which should be acceptable for most installations.

Set to the sum of the PROCESSES parameter for each Oracle database, adding the largest one twice, then add an additional 10 for each database. For example, consider a system that has three Oracle instances with the PROCESSES parameter in their init$SID.ora files set to the following values:

```
ORACLE_SID=A, PROCESSES=100
ORACLE_SID=B, PROCESSES=100
ORACLE_SID=C, PROCESSES=200
```

The value of SEMMNS is calculated as follows:

\[
\text{SEMMNS} = [(A=100) + (B=100)] + [(C=200) \times 2] + [(\text{# of instances}=3) \times 10] = 630
\]

Setting parameters too high for the operating system can prevent the machine from booting up. Refer to Sun Microsystems Sun SPARC Solaris system administration documentation for parameter limits.

The following lines are examples of additions to the /etc/system file to configure the UNIX kernel with the minimum recommended values:

```
set shmsys:shminfo_shmmax=4294967295
set shmsys:shminfo_shmin=1
set shmsys:shminfo_shmmni=100
set shmsys:shminfo_shmseg=10
set semsys:seminfo_semmni=100
set semsys:seminfo_semmsl=100
set semsys:seminfo_semmns=200
set semsys:seminfo_semopm=100
set semsys:seminfo_semvmx=32767
```

3. Reboot the system if you have modified the kernel, shared memory, or semaphore parameters.

Create Mount Points

Oracle8i requires at least two mount points: one for the software and at least one for the database files. It requires at least four mount points when creating an OFA-compliant installation: one for the software and at least three for database files.

All software and database mount point names used for Oracle8i should match the pattern /pm, where p is a string constant and m is a fixed-length key to distinguish between mount points. Table 2–2, “Sample Mount Point Naming Scheme”, on page 2-6 shows a sample naming scheme.
Create UNIX Groups for Database Administrators

During installation, two Oracle roles are created: SYSDBA and SYSOPER. Database administrators are granted these roles by virtue of their membership in corresponding UNIX groups. Oracle8i documentation refers to these UNIX groups as the OSDBA and OSOPER groups. Create the group(s) for these roles before you log in as the oracle user and start the Oracle Universal Installer. You may assign the roles to two separate UNIX groups, or to a single group.

Use the admintool or groupadd utility to create a group named dba or another name of your choosing. If you plan to assign the SYSOPER role to a separate group, create that group also.

The Oracle Universal Installer gives both Oracle SYSDBA and SYSOPER privileges to members of the UNIX group dba by default. If you perform a Custom installation of Oracle8i, or if the oracle user is not a member of a group called dba, Oracle Universal Installer will prompt you to enter the group(s) you have created for these roles.

Create a UNIX Group for the Oracle Universal Installer Inventory

Use the admintool or groupadd utility to create a group named oinstall. The oinstall group will own the Oracle Universal Installer’s oraInventory directory. The oracle user account that runs the installation must have the oinstall group as its primary group.

Create a UNIX Account to Own Oracle Software

The oracle account is the UNIX user account that owns the Oracle8i software after installation. Run Oracle Universal Installer with this user account.

See Also: Optimal Flexible Architecture is described in detail in Appendix A, "Optimal Flexible Architecture” of the Oracle8i Administrator’s Reference for Sun SPARC Solaris.

Table 2–2 Sample Mount Point Naming Scheme

<table>
<thead>
<tr>
<th>Software Mount Point</th>
<th>Database Mount Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>/u01</td>
<td>/u02</td>
</tr>
<tr>
<td>/u03</td>
<td>/u04</td>
</tr>
</tbody>
</table>
Use the admintool or useradd utility to create an oracle account with the following properties:

### Table 2–3 Properties of the oracle Account

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Login Name</td>
<td>Any name, but this document refers to it as the oracle account.</td>
</tr>
<tr>
<td>Primary GID</td>
<td>The oinstall group.</td>
</tr>
<tr>
<td>Secondary GID</td>
<td>The dba group.</td>
</tr>
<tr>
<td>Home Directory</td>
<td>Choose a home directory consistent with other user home directories. The home directory of the oracle account does not have to be the same as the ORACLE_HOME directory.</td>
</tr>
<tr>
<td>Login Shell</td>
<td>The default shell can be /usr/bin/sh, /usr/bin/csh, or /usr/bin/ksh, but the examples in this document assume the Bourne shell (/usr/bin/sh).</td>
</tr>
</tbody>
</table>

**Note:** Use the oracle account only for installing and maintaining Oracle software. Never use it for purposes unrelated to the Oracle8i Server. Do not use root as the oracle account.

Sites with multiple ORACLE_HOMEs on one system may install Oracle software with the same oracle account, or separate ones. Each oracle account must have oinstall as its primary group.

## Setup Tasks to Perform as the oracle User

Log in to the oracle account and perform the following tasks as necessary:

- Set Permissions for File Creation
- Set Environment Variables
- Update the Environment for Current Session

### Set Permissions for File Creation

Set umask to 022 for the oracle account to ensure group and other have read and execute permissions, but not write permission, on files installed.

1. Enter the umask command to check the current setting.
2. If the `umask` command does not return 22, set it in the `.profile` or `.login` file of the `oracle` account and execute the following command:

   `$ umask 022`

### Set Environment Variables

Before starting the Oracle Universal Installer, set the `DISPLAY` and `PATH` environment variables and any of the other variables as appropriate. Table 2–4, “Environment Variable Summary”, provides a brief summary of the variables listed in this section. Refer to each variable’s entry in this section for instructions on setting the variable correctly.

---

**Note:** If an Oracle Server already exists on your system, its settings may have a bearing on the settings that you choose for the new environment.

---

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description and Example Setting</th>
<th>Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY</td>
<td>The name, server number, and screen number of the system where the Oracle Universal Installer will display.</td>
<td>Yes</td>
</tr>
<tr>
<td>PATH</td>
<td>Shell’s search path for executables.</td>
<td>Yes</td>
</tr>
<tr>
<td>ORACLE_BASE</td>
<td>Directory at the top of the Oracle software and administrative file structure.</td>
<td>No</td>
</tr>
<tr>
<td>ORACLE_HOME</td>
<td>Directory containing Oracle software for a given release.</td>
<td>No</td>
</tr>
<tr>
<td>NLS_LANG</td>
<td>Character set to use when installing.</td>
<td>No</td>
</tr>
<tr>
<td>ORA_NLS33</td>
<td>Location of National Language Support character set data.</td>
<td>No</td>
</tr>
<tr>
<td>ORACLE_SID</td>
<td>The Oracle server instance identifier to use during installation.</td>
<td>No</td>
</tr>
<tr>
<td>ORACLE_DOC</td>
<td>Directory where documentation will be installed.</td>
<td>No</td>
</tr>
</tbody>
</table>

**DISPLAY**

On the system where you will run Oracle Universal Installer, set `DISPLAY` to the system name or IP address, X server, and screen used by your workstation. Do not use the hostname or IP address of the system where the software is being installed unless you are performing the installation from that system’s X-windows console. Use the machine name or IP of your own workstation if you are installing from a
remote system. If you are not sure what the X server and screen should be set to, use 0 (zero) for both.

If you get an Xlib error similar to “Failed to connect to server” or "Connection refused by server" or "Can’t open display" when starting the Installer, run the Bourne/Korn shell or C shell commands below on your X workstation:

**For the Bourne or Korn shells:**

On the server where the Oracle database will be installed, enter the following:

\[
\text{DISPLAY}=\text{workstation\_name}:0.0 \\
\text{export DISPLAY}
\]

In the session on your workstation:

\[
\text{xhost +server\_name}
\]

**For the C shell:**

On the server where the Oracle database will be installed, enter the following:

\[
\text{setenv DISPLAY workstation\_name:0.0}
\]

In the session on your workstation:

\[
\text{xhost +server\_name}
\]

If you are using a PC X server, refer to your PC X server documentation for instructions on how to configure the PC X server to allow remote X clients to connect.

Check that the DISPLAY variable is correctly set as detailed above.

**PATH**

Set the shell’s search path to include the following:

- \$ORACLE\_HOME/bin, /usr/bin, /etc, /usr/ccs/bin, /usr/openwin/bin
- the local bin directory, /usr/local/bin, if it exists
Setup Tasks to Perform as the oracle User

**ORACLE_BASE**
ORACLE_BASE specifies the directory at the top of the Oracle software and administrative file structure. The OFA-recommended value is `software_mount_point/app/oracle`. For example: `/u01/app/oracle`. If you are not using an OFA-compliant system, you do not have to set ORACLE_BASE, but it is highly recommended that you do set it.

**ORACLE_HOME**
ORACLE_HOME specifies the directory containing the Oracle software for a given release. The Optimal Flexible Architecture recommended value is: `$ORACLE_BASE/product/release`. For example: `/u01/app/oracle/product/8.1.6`.

Ensure that the value of ORACLE_HOME points to a directory that does not already contain any Oracle software prior to Oracle8i Release 1 (8.1.5).

**NLS_LANG**
Set NLS_LANG if you will create a database that uses a character set other than US7ASCII (the default). If you will install Oracle Internet Directory, set NLS_LANG to AMERICAN_AMERICA.UTF8. A complete list of valid character sets is available in the Oracle8i National Language Support Guide.

**ORA_NLS33**
Set ORA_NLS33 if you will create a database with a storage character set other than US7ASCII. Set ORA_NLS33 to `$ORACLE_HOME/ocommon/nls/admin/data` before starting the Installer or creating the database. For more information, see the Oracle8i National Language Support Guide.

**ORACLE_SID**
If you plan on creating a database during installation, you have the option of setting ORACLE_SID to the value of the Oracle server instance identifier (referred to in this installation guide as the `sid`). If you choose to create a database during installation, the Installer will prompt you to confirm this value. See "ORACLE_SID" on page 4-8 for more information.

**Note:** If you require `/usr/ucb` in your search path, make sure it comes after `/usr/ccs/bin` in the PATH setting.
ORACLE_DOC
ORACLE_DOC specifies the directory where online documentation will be installed. See "Accessing Installed Documentation" on page 4-23 to determine where documentation is installed if you do not set ORACLE_DOC.

Update the Environment for Current Session
With a text editor, add the settings for the environment variables listed in "Set Environment Variables" to the .profile or .login file of the oracle account. Once you have finished editing these initialization files, you can quickly update the environment in the current shell session before beginning installation by using the appropriate shell command.

For the Bourne or Korn shell:

$ . ~/.profile

For the C shell:

% source .login

Setup Tasks for Oracle Products
Before beginning your installation, complete the following tasks for products that you will install:

- Oracle Options
- Tools and Precompilers
- Networking and System Management Products

Oracle Options

Pre-Installation Steps for Oracle Parallel Server
These steps should be completed in conjunction with steps listed in the Oracle8i Parallel Server Setup and Configuration Guide.

Complete the following steps before installing the Parallel Server:

1. Create raw devices.

All files associated with an Oracle Parallel Server database must reside on raw volumes so they can be accessed by all nodes in the cluster. Control and data
files are shared by all instances. Each instance has its own log files, but all instances must have access to all log files during recovery.

See Also: Oracle8i Administrator's Reference for information on creating raw devices.

---

Note: The following two steps only apply if you are performing a Typical installation of Oracle8i. These steps are not required for the Custom Installation type. See "Using Oracle Universal Installer" on page 3-2 for more information.

---

2. On the node from which you will run Oracle Universal Installer, create an ASCII file with entries for each database object and the corresponding raw device file name. This file will be used Oracle Database Configuration Assistant to configure the database for Oracle Parallel Server.

See Also: Oracle8i Parallel Server Setup and Configuration Guide for information and examples on creating the ASCII mapping file.

3. Set the environment variable DBCA_RAW_CONFIG to point to the ASCII mapping file. When Oracle Database Configuration Assistant creates the database, it looks for the environment variable, reads in the ASCII file, and uses the file names indicated when building the tablespaces.

Steps to Perform as the root User

1. Make sure you have a UNIX group defined in the /etc/group file on all nodes of the cluster that will serve as the OSDBA group. The OSDBA group name and number (and OSOPER group if you plan to designate one during installation) must be identical for all nodes of a UNIX cluster accessing a single database. The default UNIX group name for the OSDBA and OSOPER groups is dba.

2. Create a UNIX account on each node of the cluster so that:
   - the account has the oinstall group as the primary group.
   - the account has the dba group as the secondary group.
   - the account is used only to install and update Oracle software.
   - the account has write permissions on remote directories.

3. Create a mount point directory on each node to serve as the top of your Oracle software directory structure so that:
Setup Tasks for Oracle Products

2-13

■ the name of the mount point on each node is identical to that on the initial node.
■ the oracle account has read, write, and execute privileges.

See Also: Recommended naming conventions for Oracle mount points are discussed in "Create Mount Points" on page 2-5.

4. Apply the Sun Cluster software patch that is provided on the Oracle8i CD-ROM. To install the patch, follow the directions in the opspatch directory on your CD-ROM. This patch provides the Cluster Membership Monitor (CMM) and is required before you attempt to install Oracle Parallel Server.

5. After applying the CMM patch on each node, restart the cluster management software.

For the first node, run the following commands:

```
# cd /opt/SUNWcluster/bin
# scadmin startcluster cluster_name
```

Then run these commands on each of the other nodes in the cluster:

```
# cd /opt/SUNWcluster/bin
# scadmin startnode cluster_name
```

For information about cluster management software and the scadmin command, see your Solaris Enterprise 2.1 documentation.

6. On the node from which you will run Oracle Universal Installer, set up user equivalence by adding entries for all nodes in the cluster, including the local node, to either the .rhosts file of the oracle account or the /etc/hosts.equiv file.

7. Exit the root account when you are done.

Steps to Perform as the oracle User

1. Verify that the Cluster Membership Monitor (CMM) is running:

```
$ ps -ef | grep clustd
```

If the CMM program clustd does not appear in the process listing, repeat step 5 on page 2-13.

2. Check for user equivalence for the oracle account by performing a remote login (rlogin) to each node in the cluster. If you are prompted for a password,
the oracle account has not been given the same attributes on all nodes. The Installer cannot use the rcp command to copy Oracle products to the remote directories without user equivalence.

If you have not set up user equivalence, you must perform Step 6 in “Steps to Perform as the root User” above.

Tools and Precompilers

Complete the tasks for the following tools and precompilers before installing them.

- **Pre-Installation Steps for the Pro*COBOL Precompiler**
  1. Verify that the COBOL compiler executable is included in the PATH setting.
  2. Verify that `$COBLIB` is included in the setting for LD_LIBRARY_PATH.
  3. Set the COBDIR environment variable to the directory where the COBOL compiler is installed.

  **See Also:** To determine the settings for COBDIR and COBLIB environment variables see your product specific COBOL documentation

- **Pre-Installation Steps for the Pro*C/C++ Precompiler**
  Verify that the C compiler executable is included in the PATH setting. The SPARCworks C compiler executable is usually located in `/opt/SUNWspro/bin`.

- **Pre-Installation Steps for Pro*FORTRAN Precompiler**
  Verify that the FORTRAN compiler executable is included in the PATH setting.

- **Pre-Installation Steps for the SQL*Module Ada**
  Verify that the Ada executable is included in the PATH setting, and that the Sun Ada 2.1 compiler configuration file has been set up.

- **Pre-Installation Steps for Legato Storage Manager (LSM)**
  The LSM installation script modifies the following system files during installation:
  - `/etc/rpc`
  - `/etc/syslog.conf`
Make copies of the original versions of these files before you install Legato Storage Manager.

Removing an Existing Legato Storage Manager Installation
If you want to install LSM from the Oracle8i distribution, but it is already on your system, you must first remove the installed version.

1. Log in as the root user and shut down the LSM daemons:
   ```
   # nsr_shutdown
   ```

2. Use the `pkgrm` command to remove individual Legato Storage Manager packages, or all of the Legato Storage Manager packages at the same time.
   ```
   # pkgrm package_name
   ```
   where `package_name` is one of the following:
   - ORCLman: NetWorker Man Pages
   - ORCLserv: NetWorker Server
   - ORCLnode: NetWorker Storage Node
   - ORCLclnt: NetWorker Client
   - ORCLdrvr: NetWorker Device Drivers

Networking and System Management Products

**Configuring LDAP Services**

Lightweight Directory Access Protocol (LDAP) Version 3 is the Internet open standard for directory access protocol. Some products included with Oracle8i Release 2 (8.1.6) can be configured to use the LDAP V3 directory service provided by Oracle Internet Directory. This directory service is included for use by the Oracle8i database to centralize the storage of database user, Net8 network connector, and database listener parameters.
If you plan to configure Oracle products to use LDAP directory services, Oracle Internet Directory should be available prior to installing and configuring those products. Install Oracle Internet Directory if it is not already available to your system. For optimal directory performance, Oracle corporation recommends installing Oracle Internet Directory on a system separate from other Oracle software. See "Pre-Installation Steps for Oracle Internet Directory" and Chapter 3, "Installation". For information on LDAP and Oracle Internet Directory, refer to the Oracle Internet Directory Administrator’s Guide.

Pre-Installation Steps for Oracle Internet Directory

These steps should be completed in addition to those steps listed in the Oracle Internet Directory Administrator’s Guide.

1. Set the NLS_LANG environment variable to AMERICAN_AMERICA.UTF8. See "Set Environment Variables" on page 2-8 for information on setting environment variables. See the Oracle8i National Language Support Guide for information about valid settings.

2. If Oracle8i Release 2 (8.1.6) is already installed on your system, make sure that:
   - Oracle8i Server is running
   - you can connect to the database as user "internal" without a password; for example:

     $ sqlplus internal

     If you cannot connect as internal without a password, refer to the Oracle8i Administrator’s Guide for instructions on configuring the internal account to not require a password.

   - the Net8 listener serving connections to the database is running; use the following command:

     $ lsnrctl status [listener_name]

     The listener_name field is required if the listener has a name other than the default, listener.

If Oracle8i Release 2 (8.1.6) is not already installed on your system, then Oracle Universal Installer will install it with Oracle Internet Directory.

Pre-Installation Steps for Net8

If Net8 Server is already installed on your system, shut down all listeners before installing Net8. To determine if any listeners are running, enter:
$ lsnrctl status [listener_name]

The listener_name field is required if the listener has a name other than the default, listener.

Shut down a running listener with the following command:

$ lsnrctl stop listener_name

See "Understanding Net8 Configuration" on page 2-17 to determine how to be install and configure Net8 on your system.

➢ Pre-Installation Steps for Oracle Supported Protocols

Before installing any protocol, verify that the underlying network is functioning and configured properly.

TCP/IP

The TCP/IP protocol is installed automatically with all Oracle8i Server installations.

Verify that the network is functioning properly by transferring a test file using the ftp utility.

$ ftp remote_server_name
ftp> put test_filename
ftp> get test_filename

➢ Pre-Installation Steps for Oracle Enterprise Manager

If you plan to upgrade or migrate an existing Oracle Enterprise Manager repository to the current version, backup or export the repository so that it can be recovered in the event of a unexpected error.

If you want to create a new Enterprise Manager Repository without installing a new database, you must have access to an Oracle database, release 7.3 or later in which to create the Enterprise Manager repository.

For details on upgrading, migrating, or creating a repository, refer to the Oracle Enterprise Manager Configuration Guide.

Understanding Net8 Configuration

Net8 Configuration Assistant is a graphical user interface (GUI) tool that enables you to configure your Oracle client/server network environment. Net8
Configuration Assistant is automatically started from within Oracle Universal Installer for all installation types or manually started as a stand-alone tool.

Note: This chapter describes running Net8 Configuration Assistant from within Oracle Universal Installer. See the Net8 Administrator’s Guide or “Net8 Configuration Assistant” on page 4-22 for information on running Net8 Configuration Assistant in stand-alone mode.

Depending on the installation type selected, Net8 Configuration Assistant configures your network in one of two ways:

- automatically configures your network for standard database connection methods (user input is minimal)
- creates a customized network by prompting you for extensive input

Configuration consists of creating and modifying of network files located in the $ORACLE_HOME/network/admin directory.

Server Network Configuration

The type of network configuration created with the server installation types and the amount of user input required are described below. Review the selections below and identify the network configuration that best matches your requirements and network configuration expertise.
<table>
<thead>
<tr>
<th>Installation Types...</th>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle8i Enterprise Edition or Oracle8i</td>
<td>Net8 Configuration Assistant creates a net service name to use in connecting to a database.</td>
</tr>
<tr>
<td>■ Typical</td>
<td>Net8 Configuration Assistant then automatically creates your Net8 server environment by configuring the following files:</td>
</tr>
<tr>
<td>■ Minimal</td>
<td>■ listener.ora</td>
</tr>
<tr>
<td></td>
<td>Configures and starts a listener named listener with protocol addresses for both the Oracle8i database using your operating system’s preferred protocol (typically TCP/IP on port 1521) and for external procedures using the IPC protocol.</td>
</tr>
<tr>
<td></td>
<td>Configures services information for external procedures.</td>
</tr>
<tr>
<td></td>
<td>■ sqlnet.ora</td>
</tr>
<tr>
<td></td>
<td>Configures the server’s domain as the default domain (the domain in which your computer is located). This domain is automatically appended to any unqualified name.</td>
</tr>
<tr>
<td></td>
<td>Configures the naming methods the server uses to resolve a name to a connect descriptor.</td>
</tr>
<tr>
<td></td>
<td>■ tnsnames.ora</td>
</tr>
<tr>
<td></td>
<td>Creates a net service name (EXTPROC_CONNECTION_DATA) in the tnsnames.ora file to use for external procedures.</td>
</tr>
<tr>
<td>Oracle Database Configuration Assistant configures additional Net8 Server information in the following files after successful creation of the Oracle8i database.</td>
<td></td>
</tr>
<tr>
<td>■ listener.ora</td>
<td>Configures static service information for the Oracle8i database.</td>
</tr>
</tbody>
</table>

**Note:** You cannot configure access to an LDAP directory service through the *Typical* or *Minimal* installation types. LDAP directory configuration is available through the *Custom* installation type.
Understanding Net8 Configuration

<table>
<thead>
<tr>
<th>If You Select These Installation Types...</th>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle8i Enterprise Edition or Oracle8i</td>
<td></td>
</tr>
<tr>
<td>■ Custom (and then select Net8 Server</td>
<td></td>
</tr>
<tr>
<td>and Net8 Client)</td>
<td></td>
</tr>
<tr>
<td>■ Net8 Configuration Assistant first</td>
<td></td>
</tr>
<tr>
<td>prompts you to:</td>
<td></td>
</tr>
<tr>
<td>■ Complete directory service access</td>
<td></td>
</tr>
<tr>
<td>configuration, including entering</td>
<td></td>
</tr>
<tr>
<td>a directory server type and</td>
<td></td>
</tr>
<tr>
<td>location and verifying the</td>
<td></td>
</tr>
<tr>
<td>administrative context from which</td>
<td></td>
</tr>
<tr>
<td>the server can look up, create,</td>
<td></td>
</tr>
<tr>
<td>and modify net service names. You</td>
<td></td>
</tr>
<tr>
<td>are prompted for this information</td>
<td></td>
</tr>
<tr>
<td>if you have never configured this</td>
<td></td>
</tr>
<tr>
<td>ORACLE_HOME for directory service</td>
<td></td>
</tr>
<tr>
<td>access.</td>
<td></td>
</tr>
<tr>
<td>■ Create a listener(s) and select</td>
<td></td>
</tr>
<tr>
<td>network protocols to use for</td>
<td></td>
</tr>
<tr>
<td>database connections</td>
<td></td>
</tr>
<tr>
<td>■ Select the naming methods to use</td>
<td></td>
</tr>
<tr>
<td>to connect to databases (for</td>
<td></td>
</tr>
<tr>
<td>example, selecting the</td>
<td></td>
</tr>
<tr>
<td>local naming method enables the</td>
<td></td>
</tr>
<tr>
<td>tnsnames.ora file to be used).</td>
<td></td>
</tr>
<tr>
<td>Depending on your selection, you</td>
<td></td>
</tr>
<tr>
<td>are prompted for additional</td>
<td></td>
</tr>
<tr>
<td>information (for selecting the</td>
<td></td>
</tr>
<tr>
<td>local naming method, you are</td>
<td></td>
</tr>
<tr>
<td>prompted to enter a net service</td>
<td></td>
</tr>
<tr>
<td>name, database SID, and</td>
<td></td>
</tr>
<tr>
<td>networking protocol to use).</td>
<td></td>
</tr>
<tr>
<td>Net8 Configuration Assistant then</td>
<td></td>
</tr>
<tr>
<td>automatically creates your Net8 server</td>
<td></td>
</tr>
<tr>
<td>environment by configuring the</td>
<td></td>
</tr>
<tr>
<td>following files:</td>
<td></td>
</tr>
<tr>
<td>■ listener.ora</td>
<td></td>
</tr>
<tr>
<td>Configures a listener with a</td>
<td></td>
</tr>
<tr>
<td>name and protocol address that</td>
<td></td>
</tr>
<tr>
<td>you choose. A protocol address</td>
<td></td>
</tr>
<tr>
<td>and static service information for</td>
<td></td>
</tr>
<tr>
<td>external procedures is also</td>
<td></td>
</tr>
<tr>
<td>configured.</td>
<td></td>
</tr>
<tr>
<td>■ sqlnet.ora</td>
<td></td>
</tr>
<tr>
<td>Configures the server’s domain as</td>
<td></td>
</tr>
<tr>
<td>the default domain (the domain in</td>
<td></td>
</tr>
<tr>
<td>which your computer is located).</td>
<td></td>
</tr>
<tr>
<td>This domain is automatically</td>
<td></td>
</tr>
<tr>
<td>appended to any unqualified name.</td>
<td></td>
</tr>
<tr>
<td>Configures the naming methods the</td>
<td></td>
</tr>
<tr>
<td>server uses to resolve a name to</td>
<td></td>
</tr>
<tr>
<td>a connect descriptor.</td>
<td></td>
</tr>
<tr>
<td>■ tnsnames.ora</td>
<td></td>
</tr>
<tr>
<td>Creates a net service name entry</td>
<td></td>
</tr>
<tr>
<td>to use for external procedure</td>
<td></td>
</tr>
<tr>
<td>connections.</td>
<td></td>
</tr>
<tr>
<td>■ ldap.ora</td>
<td></td>
</tr>
<tr>
<td>Configures directory service</td>
<td></td>
</tr>
<tr>
<td>access by identifying the</td>
<td></td>
</tr>
<tr>
<td>directory server type. It may</td>
<td></td>
</tr>
<tr>
<td>also identify the location and</td>
<td></td>
</tr>
<tr>
<td>the administrative context.</td>
<td></td>
</tr>
<tr>
<td>Oracle Database Configuration Assistant automatically configures additional Net8 server information in the following file during creation of the Oracle8i database:</td>
<td></td>
</tr>
<tr>
<td>■ listener.ora</td>
<td></td>
</tr>
<tr>
<td>Configures static service</td>
<td></td>
</tr>
<tr>
<td>information</td>
<td></td>
</tr>
</tbody>
</table>

If You Select These Installation Types... Then...

Oracle8i Enterprise Edition or Oracle8i

■ Custom (and then select Net8 Server and Net8 Client)

Net8 Configuration Assistant first prompts you to:

■ Complete directory service access configuration, including entering a directory server type and location and verifying the administrative context from which the server can look up, create, and modify net service names. You are prompted for this information if you have never configured this ORACLE_HOME for directory service access.

■ Create a listener(s) and select network protocols to use for database connections

■ Select the naming methods to use to connect to databases (for example, selecting the local naming method enables the tnsnames.ora file to be used). Depending on your selection, you are prompted for additional information (for selecting the local naming method, you are prompted to enter a net service name, database SID, and networking protocol to use).

Net8 Configuration Assistant then automatically creates your Net8 server environment by configuring the following files:

■ listener.ora

  Configures a listener with a name and protocol address that you choose. A protocol address and static service information for external procedures is also configured.

■ sqlnet.ora

  Configures the server’s domain as the default domain (the domain in which your computer is located). This domain is automatically appended to any unqualified name.

  Configures the naming methods the server uses to resolve a name to a connect descriptor.

■ tnsnames.ora

  Creates a net service name entry to use for external procedure connections.

■ ldap.ora

  Configures directory service access by identifying the directory server type. It may also identify the location and the administrative context.
Client Network Configuration

The type of network configurations created with the client installation types and the amount of user input required are described below. Review the selections below and identify the network configuration that best matches your network requirements and configuration expertise:

<table>
<thead>
<tr>
<th>If You Select These Installation Types...</th>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle8i Client</td>
<td>Net8 Configuration Assistant first prompts you to select one of the following methods by which to configure access to your Oracle8i database:</td>
</tr>
<tr>
<td>■ Administrator</td>
<td>■ Directory Naming</td>
</tr>
<tr>
<td>■ Programmer</td>
<td>Enables you to directory service to make client connections to Oracle8i databases using information registered with the directory service when the databases were created.</td>
</tr>
<tr>
<td>■ Application User</td>
<td>■ Local Naming</td>
</tr>
<tr>
<td></td>
<td>Specify a net service name to enable client connections to Oracle8i databases using information in Net8 configuration files on the local system.</td>
</tr>
</tbody>
</table>

Depending on what you select, you are prompted to provide additional information. Net8 Configuration Assistant then automatically creates your Net8 client environment by configuring the following files:

<table>
<thead>
<tr>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ ldap.ora</td>
</tr>
<tr>
<td>Configures directory service access by identifying the directory server type (if directory naming was selected). It may also identify the location and the administrative context.</td>
</tr>
<tr>
<td>■ tnsnames.ora</td>
</tr>
<tr>
<td>Specifies a net service name (if local naming was selected)</td>
</tr>
<tr>
<td>■ sqlnet.ora</td>
</tr>
<tr>
<td>Configures the client’s domain as the default domain (the domain in which your computer is located). This domain is automatically appended to any unqualified net service name given in the connect string. An unqualified net service name does not contain a network domain.</td>
</tr>
<tr>
<td>Configures the naming methods the client uses to resolve a name to a connect descriptor.</td>
</tr>
</tbody>
</table>
Identifying Your Database Environment

Oracle8i Installation Guide

Identifying Your Database Environment

Oracle8i Client

<table>
<thead>
<tr>
<th>If You Select These Installation Types...</th>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom (and then select Net8 Client)</td>
<td>Net8 Configuration Assistant first prompts you to:</td>
</tr>
<tr>
<td></td>
<td>■ Complete directory service access configuration, including entering a directory server type and location and verifying the administrative context from which the server can look up, create, and modify net service names. You are prompted for this information if you have never configured this ORACLE_HOME for directory service access.</td>
</tr>
<tr>
<td></td>
<td>■ Select the naming methods to use to connect to databases (for example, selecting the local naming method enables the tnsnames.ora file to be used). Depending on your selection, you are prompted for additional information (for selecting the local naming method, you are prompted to enter a net service name, database SID, and networking protocol to use).</td>
</tr>
</tbody>
</table>

Net8 Configuration Assistant then automatically creates your Net8 client environment by configuring the following files:

- sqlnet.ora
  - Configures the client to request operating system authenticated connections (OPS$).
  - Configures the clients domain as the default domain (the domain in which your computer is located). This domain is automatically appended to any unqualified name.
  - Configures the naming methods the server uses to resolve a name to a connect descriptor.
- tnsnames.ora
  - If local naming was selected above, specifies a net service name.
- ldap.ora
  - If directory naming was selected above, configures directory service access by identifying the directory server type. It may also identify the location and the administrative context.

Identifying Your Database Environment

Oracle Universal Installer enables you to create an Oracle8i database that operates in one of the following environments. To identify the environment appropriate for your Oracle8i database, refer to Table 2–5, "Oracle8i Database Environment Descriptions":

2-22  Oracle8i Installation Guide
Identifying Your Database Environment

Your database environment selection affects the values for the following database settings:

- DB_BLOCK_BUFFERS initialization file parameter
- DB_BLOCK_SIZE initialization file parameter
- PROCESSES initialization file parameter
- SHARED_POOL_SIZE initialization file parameter
- Rollback tablespace information

**Selecting a Database Creation Method**

Oracle Database Configuration Assistant is a graphical user interface (GUI) tool that enables you to create an Oracle8i database for an OLTP, Warehousing, or Multipurpose environment. Oracle Database Configuration Assistant will be automatically started from within Oracle Universal Installer when you choose to create an Oracle8i database during installation. It can also be manually run as a stand-alone tool.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Transaction Processing (OLTP)</td>
<td>Many concurrent users performing numerous transactions requiring rapid access to data. Availability, speed, concurrence, and recoverability are key issues. Transactions consist of reading (SELECT statements), writing (INSERT and UPDATE statements), and deleting (DELETE statements) data in database tables.</td>
</tr>
<tr>
<td>Warehousing</td>
<td>Users perform numerous, complex queries that process large volumes of data. Response time, accuracy, and availability are key issues. These queries (typically read-only) range from a simple fetch of a few records to numerous complex queries that sort thousands of records from many different tables. Warehousing environments are also known as Decision Support System (DSS) environments</td>
</tr>
<tr>
<td>Multipurpose</td>
<td>Both types of applications can access this database.</td>
</tr>
</tbody>
</table>
Identifying Your Database Environment

**Note:** This chapter describes running Oracle Database Configuration Assistant from within Oracle Universal Installer. See "Oracle Database Configuration Assistant" on page 4-23 for information on running Oracle Database Configuration Assistant in stand-alone mode.

Each installation type of Oracle8i Enterprise Edition enables you to create an Oracle8i database. The types of databases (OLTP, Warehousing, and Multipurpose) created with the Typical, Minimal, and Custom installation types and the amount of user input required are described below. Review these selections and identify the database that best matches your database requirements and your database creation expertise.

<table>
<thead>
<tr>
<th>If You Perform These Steps...</th>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Select the <em>Typical</em> installation type.</td>
<td>Oracle Database Configuration Assistant automatically starts at the end of installation and creates a pre-configured, ready-to-use multipurpose starter database with:</td>
</tr>
<tr>
<td></td>
<td>■ Default initialization parameters.</td>
</tr>
<tr>
<td></td>
<td>■ Automatic installation and configuration of Oracle options and <em>interMedia</em>(^1).</td>
</tr>
<tr>
<td></td>
<td>■ Advanced replication capabilities.</td>
</tr>
<tr>
<td></td>
<td>■ Database configuration of dedicated server mode(^2).</td>
</tr>
<tr>
<td></td>
<td>■ Archiving mode of NOARCHIVELOG.</td>
</tr>
<tr>
<td></td>
<td>■ No user input is required other than the global database name and SID you are prompted to enter.</td>
</tr>
</tbody>
</table>

\(^1\) Oracle Database Configuration Assistant configures options that were installed through Oracle Universal Installer.

\(^2\) See Chapter 5 of *Oracle8i Administrator’s Guide* for descriptions of dedicated server mode and multi-threaded server mode (also known as shared server mode).
If You Perform These Steps... | Then...
---|---
1. Select the *Minimal* installation type. | Oracle Database Configuration Assistant automatically starts at the end of installation and creates the same Oracle8i database that you receive with *Typical*, with the following exceptions:
   ■ No installation and configuration of Oracle options and *interMedia* products is available.
   ■ Database configuration of dedicated server mode.
2. Select "Yes" when prompted to create a starter database. **Note:** If you select "No", all server products except a database are installed. You can create your database later by manually running Oracle Database Configuration Assistant or with a SQL script. See the *Oracle8i System Administrator’s Guide* for instructions.
   **Note:** A database is also installed through the Oracle Internet Directory installation type of Oracle8i Management Infrastructure. This database is only used for storing Oracle Internet Directory information.
Identifying Your Database Environment

<table>
<thead>
<tr>
<th>If You Perform These Steps...</th>
<th>Then...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Select the <strong>Custom</strong> installation type.</td>
<td><strong>If You Select the Custom database creation method...</strong> Oracle Database Configuration Assistant guides you in the creation of a database fully customized to match the environment (OLTP, Warehousing, or Multipurpose) and database configuration mode (dedicated server or multi-threaded server) you select. Options and interMedia components (if installed) and advanced replication (if selected) are also automatically configured. Select this option only if you are experienced with advanced database creation procedures, such as customizing:</td>
</tr>
<tr>
<td>2. Select Oracle Server and additional products in the <strong>Available Products window.</strong></td>
<td>Data, control, and redo log file settings.</td>
</tr>
<tr>
<td>3. Select &quot;Yes&quot; when prompted to create a starter database.</td>
<td>Tablespace and extent sizes.</td>
</tr>
<tr>
<td>4. Oracle Database Configuration Assistant prompts you to select either the Typical or Custom database creation methods.</td>
<td>Database memory parameters.</td>
</tr>
</tbody>
</table>

**If You Select the Typical database creation method...**

You have two choices. Oracle Database Configuration Assistant’s role in database creation depends on your selection:

- **Copy existing files from CD**

  Oracle Database Configuration Assistant creates the same Oracle8i database as described under **Typical** on the previous page. Options and interMedia (if installed) are also automatically configured. No user input is required other than the global database name and SID you are prompted to enter.¹

- **Create new database files**

  Oracle Database Configuration Assistant prompts you to answer several questions, including selecting a database environment (OLTP, Warehousing, or Multipurpose) and specifying the number of concurrent connections. Oracle Database Configuration Assistant then dynamically creates a database. Options and interMedia (if installed) and advanced replication (if selected) are also automatically configured.²

¹ If you selected Oracle JServer for installation, the database is created in multi-threaded server mode for IIOP clients.

² If you select OLTP as your database environment and enter 20 or more for the number of concurrent database connections, your database is created in multi-threaded server mode. Otherwise, the server mode is dedicated.
This chapter describes how to start the Oracle Universal Installer and install Oracle8i products on your system. Review and complete the tasks listed in Chapter 1, "System Requirements" and Chapter 2, "Pre-Installation" before beginning the installation.

- Using Oracle Universal Installer
- Installing Legato Storage Manager Manually
- Non-Interactive Installation and Configuration
Using Oracle Universal Installer

Complete these tasks to start Oracle Universal Installer:

- Mount the Oracle8i CD-ROM
- Start Oracle Universal Installer

**Note:** Using the old Oracle Installer (the pre-Oracle Universal Installer shipped with releases 7.x and 8.0.x) to install products into a release 8.1 ORACLE_HOME directory is not supported. Likewise, you cannot install release 8.1 products into a release 7.x or 8.0.x ORACLE_HOME.

**Mount the Oracle8i CD-ROM**

The Oracle8i CD-ROM is in ISO 9660 format with Rockridge extensions. If you are using Volume Management software (available by default on Solaris) the CD-ROM is mounted automatically to /cdrom/oracle8i when you put it into the disk drive. Proceed to "Start Oracle Universal Installer" on page 3-3.

If you are not using the Volume Management software, you must mount the CD-ROM manually. You must have root privileges to mount or unmount the CD-ROM manually. Be sure to unmount the CD-ROM before removing it from the drive by using the `umount` command.

1. Place the Oracle8i CD-ROM in the CD-ROM drive.
2. Log in as the root user and create a CD-ROM mount point directory:

   ```
   $ su root
   # mkdir cdrom_mount_point_directory
   ```

3. Mount the CD-ROM drive on the mount point directory and exit the root account:

   ```
   # mount options device_name cdrom_mount_point_directory
   # exit
   ```

**Example 3–1  Mounting the CD-ROM Without Using Volume Management Software**

```
$ su root
# mkdir /cdrom
# mount -r -F hsfs device_name /cdrom
# exit
```
Start Oracle Universal Installer

Caution: Do not run the Installer as the root user.

To start the Installer:

1. Log in as the oracle user.

2. Go to the CD-ROM mount-point directory:
   
   cd cdrom_mount_point_directory

3. Start the Installer by entering ./runInstaller.

Note: The Installer is capable of running a non-interactive installation of Oracle products and can optionally be configured for a "silent" mode which does not display anything on the screen. For instructions on using this feature of the Installer, see "Non-Interactive Installation and Configuration" on page 3-21.

Once the Installer is started, the Welcome window appears.

4. Click Next.
The File Locations window appears. Do not change the text in the Source field. This is the location of files for installation.

5. Enter the ORACLE_HOME directory path in which to install Oracle8i products in the Destination fields. The default location is the ORACLE_HOME environment variable if you set it prior to starting the Installer.

If the destination directory you choose contains Oracle8i Release 1 (8.1.5) software, the older versions of the software will be upgraded to Release 2 (8.1.6). Oracle Corporation recommends that you install Release 2 (8.1.6) products into a new ORACLE_HOME.

Caution: If you have an existing ORACLE_HOME created with a pre-8.1.x release, you must change the default installation location to a different location.
6. Click Next.

If this is the first time any Oracle8i products are installed on the current system, the "UNIX Group Name" window appears. Otherwise, go to Step 8.

In the "UNIX Group Name" field, specify the group which will have permission to update Oracle software on your system. This group should typically be the oinstall group that you created in "Create a UNIX Group for the Oracle Universal Installer Inventory" on page 2-6.

7. Click Next.

If /var/opt/oracle/ does not exist or is not writable by the oracle user, you will also be prompted in the window that appears to run /tmp/OraInstall/orainstRoot.sh in another terminal window as the root user. After you have done so, click Retry to continue the installation.

**Note:** If you install Oracle8i into an ORACLE_HOME directory that already contains Oracle client software, the listener is not created. To create the listener, install Oracle8i in a different ORACLE_HOME.
The Available Products window appears.

8. Select the Oracle8i installation category you want to install and click Next. See "Product Installation Categories and Installation Types" on page 1-2 for a description of each category.

   **Note:** For a list of products installed with each installation type, see the appropriate product section in Appendix A, "Oracle8i Products".

9. Proceed to one of the following sections based on the selection you made in step 8.
Using Oracle Universal Installer

Oracle8i Enterprise Edition

The Installation Types window appears.

1. Select one of the types of installations and click Next.
2. Proceed to one of the following sections based on the selection you made in step 1.

<table>
<thead>
<tr>
<th>If You Selected...</th>
<th>See this Section...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle8i Client</td>
<td>&quot;Oracle8i Client&quot; on page 3-10.</td>
</tr>
<tr>
<td>Oracle8i Management Infrastructure</td>
<td>&quot;Oracle8i Management Infrastructure&quot; on page 3-12.</td>
</tr>
</tbody>
</table>

Typical or Minimal

1. If Oracle Universal Installer detects an earlier version of an Oracle database on your system, you are prompted to upgrade your database with the Oracle Data Migration Assistant. Select the Upgrade or Migrate an Existing Database check box to have Oracle Data Migration Assistant start immediately after installation to migrate your database to an Oracle8i Release 2 (8.1.6) database.
2. Click Next
   
   If you selected Minimal, the Select Starter Database window appears. If you selected Typical, go to step 5 (an Oracle8i database is installed without prompting you. See "Identifying Your Database Environment" on page 2-22).
3. Select Yes to install an Oracle8i database. Selecting No installs all server products except a database. You can create your database later by manually running Oracle Database Configuration Assistant or with a SQL script.
4. Click Next
   
   If the oracle user is not a member of the dba group created in "Create UNIX Groups for Database Administrators" on page 2-6, or if there is a UNIX group with a name other than dba that serves as the OSDBA group, the Privileged
Operating System Groups window appears. Enter the name of a UNIX group of which the oracle user is a member that will serve as the OSDBA group. If a separate UNIX group will serve as the OSOPER group, specify it in this window as well.

5. Click Next

The Database Identification window appears.

6. Enter the Global Database Name and SID in the fields provided:

<table>
<thead>
<tr>
<th>This Field...</th>
<th>Is the...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Database Name</td>
<td>Full database name that uniquely distinguishes it from any other database in your network domain. For example: sales.acme.com where sales is the name you want to call your database and acme.com is the network domain in which the database is located.</td>
</tr>
<tr>
<td>SID</td>
<td>System Identifier (SID), the database instance name that uniquely distinguishes it from any other database on your system. The SID field defaults to the database name portion of the Global Database Name (sales in the example above) (until you reach eight characters or enter a period). You can accept or change the default value.</td>
</tr>
</tbody>
</table>

7. Click Next.

The Database File Location window appears.

8. In the Directory for Database Files field, enter the path of the database file mount point. You can also use the Browse... button to navigate to the path of the mount point.

9. Click Next.

The Summary window appears.

10. Review the information to ensure that you have enough disk space. You cannot make any product or space allocation changes once the installation begins.

11. Click Install. Wait until the selected products are installed.

12. When prompted, run the root.sh script. See "Run the root.sh Script" on page 3-16 for instructions.
The Configuration Tools window appears at the end of installation and, based on your selections above, starts the following assistants to create and configure your database and network environments.

### Table 3–1 Configuration Assistants

<table>
<thead>
<tr>
<th>This Assistant...</th>
<th>Starts...</th>
<th>And...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net8 Configuration Assistant</td>
<td>In all cases</td>
<td>Automatically configures your Net8 server networking software. See &quot;Understanding Net8 Configuration&quot; on page 2-17 for a description of the configuration procedures performed.</td>
</tr>
<tr>
<td>Oracle Database Configuration Assistant</td>
<td>If you selected:</td>
<td></td>
</tr>
<tr>
<td>■ Typical</td>
<td>Automatically creates an Oracle8i Release 8.1.6 database. See &quot;Identifying Your Database Environment&quot; on page 2-22.</td>
<td></td>
</tr>
<tr>
<td>■ Minimal or Custom, then answered &quot;Yes&quot; when prompted to install an Oracle8i database.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Database Migration Assistant</td>
<td>If you selected to migrate or upgrade a database when prompted at step 1.</td>
<td>Migrates or upgrade the selected database to Oracle8i release 8.1.6.</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Configuration Assistant</td>
<td>If you selected to install Oracle Management Server in the Custom installation type.</td>
<td>Creates or configures an Enterprise Manager repository. See step 4 of &quot;Oracle Management Server&quot; on page 3-13 and refer to the Oracle Enterprise Manager Configuration Guide for instructions on how to use the assistant.</td>
</tr>
</tbody>
</table>

The Configuration Tools window displays the results of running these assistants.

13. Click Next to continue.

The End of Installation window appears.

14. Click Exit to exit Oracle Universal Installer, or click Next Install to install additional products. Clicking Next Install returns you to the "Oracle Universal Installer "File Locations" Window" on page 3-4.
15. See section "Reviewing a Log of an Installation Session" on page 3-16 for information about accessing Oracle Universal Installer log files.

**Custom**

The *Available Products* window displays all products available for installation.

1. Select appropriate products to install and click Next.
2. Provide appropriate responses to any windows that appear.
   
   The *Summary* window appears.

3. Review the information to ensure that you have enough disk space. You cannot make any product or space allocation changes once the installation begins.
4. Click Install. Wait until the selected products are installed.

5. When prompted, run the *root.sh* script. See "Run the root.sh Script" on page 3-16 for instructions.

   The *End of Installation* window appears.

6. Click Exit to exit Oracle Universal Installer or click Next Install to install additional products. Clicking Next Install returns you to the "Oracle Universal Installer "File Locations" Window" on page 3-4.

7. See "Reviewing a Log of an Installation Session" on page 3-16 for information about accessing Oracle Universal Installer log files.

**Oracle8i Client**

---

**Note:** For a list of products installed with each installation type, see the appropriate product section in Appendix A, "Oracle8i Products".

---

The *Installation Types* window appears.

1. Select the Oracle installation type you want to install and click Next.

2. Proceed to one of the following sections based on the selection you made in step 1.
Using Oracle Universal Installer

1. Click Next. The Summary window appears.
2. Review the information to ensure that you have enough disk space. You cannot make any product or space allocation changes once the installation begins.
3. Click Install. Wait until the selected products are installed.
4. When prompted, run the root.sh script. See "Run the root.sh Script" on page 3-16 for instructions.
   The End of Installation window appears.
5. Click Exit to exit Oracle Universal Installer, or click Next Install to install additional products. Clicking Next Install returns you to the "Oracle Universal Installer "File Locations” Window" on page 3-4.

**Custom**

The Available Products window displays all products available for installation.

1. Select appropriate products to install and click Next.
2. Provide appropriate responses to any windows that appear.
   The Summary window appears.
3. Review the information to ensure that you have enough disk space. You cannot make any product or space allocation changes once the installation begins.
4. Click Install. Wait until the selected products are installed.
5. When prompted, run the root.sh script. See "Run the root.sh Script" on page 3-16 for instructions.
   The End of Installation window appears.

<table>
<thead>
<tr>
<th>If You Selected...</th>
<th>See this Section...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator, Programmer, or Application User</td>
<td>&quot;Administrator, Programmer or Application User” on page 3-11.</td>
</tr>
<tr>
<td>Custom</td>
<td>&quot;Custom” on page 3-11.</td>
</tr>
</tbody>
</table>
6. Click Exit to exit Oracle Universal Installer, or click Next Install to install additional products. Clicking Next Install returns you to the "Oracle Universal Installer "File Locations" Window" on page 3-4.

7. See section "Reviewing a Log of an Installation Session" on page 3-16 for information about accessing Oracle Universal Installer log files.

**Oracle8i Management Infrastructure**

---

**Note:** For a list of products installed with each installation type, see the appropriate product section in Appendix A, "Oracle8i Products".

---

The *Installation Types* window appears.

1. Select one of the types of installations and click Next.

2. Proceed to one of the following sections based on the selection you made in step 1.

<table>
<thead>
<tr>
<th>If You Selected...</th>
<th>See this Section...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Management Server</td>
<td>&quot;Oracle Management Server&quot; on page 3-12.</td>
</tr>
<tr>
<td>Oracle Internet Directory</td>
<td>&quot;Oracle Internet Directory&quot; on page 3-14.</td>
</tr>
<tr>
<td>Custom</td>
<td>&quot;Custom&quot; on page 3-15.</td>
</tr>
</tbody>
</table>

**Oracle Management Server**

The *Oracle Management Server Repository* window appears.

1. Select the repository to use with the Oracle Management Server.

<table>
<thead>
<tr>
<th>Type</th>
<th>In this Situation...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing repository</td>
<td>A Release 2.1 repository has already been created and configured for the environment to be managed and you want this management server to share the existing 2.1 repository, or you want to upgrade or migrate an existing repository from a previous release.</td>
</tr>
<tr>
<td>New repository</td>
<td>Neither a Release 2.1 repository, nor an existing repository is available to the environment to be managed.</td>
</tr>
</tbody>
</table>
The Summary window appears.

2. Review the information to ensure that you have enough disk space. You cannot make any product or space allocation changes once the installation begins.

3. Click Install. Wait until the selected products are installed.

   Oracle Enterprise Manager Configuration Assistant starts at the end of installation.

4. Provide responses to Oracle Enterprise Manager Configuration Assistant based on the selection you made in step 1.

<table>
<thead>
<tr>
<th>If You Selected...</th>
<th>You are Prompted to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>existing repository</td>
<td>Provide the following repository connection information:</td>
</tr>
<tr>
<td></td>
<td>■ user name and password for the existing repository.</td>
</tr>
<tr>
<td></td>
<td>■ database service containing the existing repository, specified with the format:</td>
</tr>
<tr>
<td></td>
<td>hostname:port_number:SID</td>
</tr>
<tr>
<td></td>
<td>If the existing repository is 1.x, you cannot migrate until a 2.1 repository exists. First choose new repository to create a new repository, then exit and use the Oracle Enterprise Manager Migration Assistant to migrate to a 2.1 repository.</td>
</tr>
<tr>
<td></td>
<td>■ verify new repository connection information.</td>
</tr>
<tr>
<td>new repository</td>
<td>Enter the following information regarding the database in which to create the new repository:</td>
</tr>
<tr>
<td></td>
<td>■ username (with DBA privileges) and password.</td>
</tr>
<tr>
<td></td>
<td>■ database service containing the new repository, specified with the format:</td>
</tr>
<tr>
<td></td>
<td>hostname:port_number:SID</td>
</tr>
<tr>
<td></td>
<td>Additional windows appear to help you create a repository in the selected database. See the Oracle Enterprise Manager Configuration Guide for additional information.</td>
</tr>
</tbody>
</table>

Note: The default port number used by most databases is 1521.

5. When prompted, run the root.sh script. See "Run the root.sh Script" on page 3-16 for instructions.

   The End of Installation window appears.
6. Click Exit to exit Oracle Universal Installer, or click Next Install to install additional products. Clicking Next Install returns you to the "Oracle Universal Installer "File Locations" Window" on page 3-4.

7. See "Reviewing a Log of an Installation Session" on page 3-16 for information about accessing Oracle Universal Installer log files.

Oracle Internet Directory

Note: If an Oracle8i database release 8.1.6 is not currently installed, Oracle Universal Installer automatically installs one in the same ORACLE_HOME directory in which Oracle Internet Directory is installed. If Oracle Universal Installer detects an existing Oracle8i database in this location, it does not install another one. However, for optimal results, Oracle corporation recommends that you install Oracle Internet Directory on a system that does not currently have an Oracle8i database.

Note: If an Oracle8i Release 2 (8.1.6) database is currently installed, ensure that the database and the listener are running, and that you can connect with the internal user account without being prompted for a password:

$ sqlplus internal

If you were prompted for a password, see Chapter 1 of the Oracle8i Administrator's Guide for information on configuring the internal user account to log in without a password.

The following information is automatically set during installation:

<table>
<thead>
<tr>
<th>The...</th>
<th>Is Automatically Set to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of an Encrypted Password</td>
<td>Yes</td>
</tr>
<tr>
<td>Approximate number of directory entries to be stored in Oracle Internet Directory</td>
<td>Under 10,000 entries</td>
</tr>
<tr>
<td>Password of the Administrator Distinguished Name</td>
<td>welcome</td>
</tr>
</tbody>
</table>
The Oracle Internet Directory Database File Location window appears.

1. Enter a directory location in which to install the Oracle Internet Directory database files. Oracle Corporation recommends installing database files and Oracle software on separate drives. These database files contain Oracle Internet Directory-specific tables and schema created during configuration.

2. Click Next.

The Summary window appears.

3. Review the information to ensure that you have enough disk space. You cannot make any product or space allocation changes once the installation begins.

4. Click Install. Wait until the selected products are installed.

5. When prompted, run the root.sh script. See "Run the root.sh Script" on page 3-16 for instructions.

The End of Installation window appears.

6. Click Exit to exit Oracle Universal Installer, or click Next Install to install additional products. Clicking Next Install returns you to the "Oracle Universal Installer "File Locations" Window" on page 3-4.

7. See "Reviewing a Log of an Installation Session" on page 3-16 for information about accessing Oracle Universal Installer log files.

Custom

The Available Products window displays all products available for installation.

1. Select appropriate products to install and click Next.

2. Provide appropriate responses to any windows that appear.

---

Note: For a list of products installed with each installation type, see the appropriate product section in Appendix A, "Oracle8i Products".

---

The Summary window appears.

3. Review the information to ensure that you have enough disk space and click Install.

4. When prompted, run the root.sh script. See "Run the root.sh Script" on page 3-16 for instructions.
Using Oracle Universal Installer

The End of Installation window appears.

5. Click Exit to exit Oracle Universal Installer, or click Next Install to install additional products. Clicking Next Install returns you to the “Oracle Universal Installer 'File Locations' Window” on page 3-4.


Run the root.sh Script

The Installer creates the root.sh script in the ORACLE_HOME directory and prompts you to run the root.sh script when it finishes installing Oracle products. Log in as the root user and run the script to set the necessary file permissions for Oracle products, and perform other root-related configuration activities:

```
# cd $ORACLE_HOME
# ./root.sh
```

If you install Oracle Parallel Server, you must run the root.sh script on every node in the cluster.

The root.sh script prompts you to confirm the environment before it performs any actions. If you need to reset the environment, terminate the root.sh script. If you terminate the script, you must re-run it. You do not need to run Oracle Universal Installer again. Click OK in the alert window after root.sh runs successfully to continue the installation.

Depending on the products you installed, messages are displayed to inform you of the progress of root.sh. You might also be prompted for user names and be given additional instructions.

You will be asked by the root.sh script to specify the local bin directory. If this directory does not already exist, root.sh creates it for you.

Reviewing a Log of an Installation Session

The Installer creates the oraInventory directory the first time it is run to keep an inventory of products that it installs on your system as well as other installation information. The location of oraInventory is defined in /var/opt/oracle/oraInst.loc.

Do not delete or manually alter the oraInventory directory or its contents. Doing so can prevent the Installer from locating products that you install on your system.
The latest log file is *oraInventory_location/logs/installActions.log*. Log file names of previous installation sessions take the form *installActionsdatetime.log*. For example: *installActions1999-07-14_09-00-56-am.log*

### Installing Oracle Parallel Server

During installation, software products are installed on the node from which the Oracle Universal Installer is run and pushed to the other selected nodes in the cluster.

*See Also:* The *Oracle 8i Parallel Server Setup and Configuration Guide*.

### Re-Installing Oracle Parallel Server

If the installation fails before completion and you have to re-install, you must click the Yes button to all the Installer dialog boxes that ask "Do you want to re-install *name of a product*?". Otherwise the remote copy operation to the other nodes will miss the products for which you declined the re-install.

### Cleaning Up After a Failed Installation

If an installation fails, you might need to remove files that the Installer created during the last session before you attempt another installation.

To clean up after a failed installation:

1. Start the Oracle Universal Installer.
2. Click the De-install Products button and select any products that were left after the failed installation.
3. Click the Remove button.

To complete the clean up, you might need to manually remove the ORACLE_HOME directory.

### Installing Legato Storage Manager Manually

The usual procedure for installing Legato Storage Manager is to select Legato Storage Manager when you use the Oracle Universal Installer to install Oracle software using the Custom installation type of Oracle8i Enterprise Edition. If you

---

*Installation 3-17*
do not install Legato Storage Manager using Oracle Universal Installer, you can manually install it with the following steps:

**Note:** If you are updating Legato Storage Manager, be sure to perform a partial removal of Legato Storage Manager using the procedure in the section "Removing an Existing Legato Storage Manager Installation" in Chapter 2. Be sure not to remove any existing Legato Storage Manager files in the /nsr directory. For more information on updating, refer to the section "Updating Legato Storage Manager".

1. Be sure no Legato Storage Manager or NetWorker software is installed on your system. The Legato Storage Manager installer, *lsminst* (step 3 below), attempts to detect existing Legato software. If Legato software exists but is not detected, both the existing Legato software and the Legato Storage Manager might not function properly.

2. From the Oracle8i Release 2 (8.1.6) CD-ROM mount point, go to the *lsm* directory:
   
   `$ cd lsm`

3. As *root* user, install the Legato Storage Manager software using the following *lsminst* command:

   `# ./lsminst cd_rom_mount_point/stage/Components/lsm`

   For each prompt asking if you want to continue the installation, enter Yes.

   When prompted for a directory to use for client and server information, you can accept the default or enter another directory name. To check that the directory used has sufficient disk space, see the "Legato Storage Manager Software Requirements" table on page 1-11.

   When prompted for a device name, you can enter either a carriage return ([ENTER]) or a proper no-rewind, BSD-semantics tape device name. The device is used by Legato Storage Manager for backups after it has been properly configured in the LSM Administrator GUI. For details on device configuration, see Chapter 3 in the *Legato Storage Manager Administrator’s Guide*.

   For all other prompts displayed by *lsminst*, press [ENTER].

4. Update the MANPATH and PATH environment variables as required. MANPATH must include `/usr/share/man`, the pathname of the directory...
where the Legato Storage Manager man pages are installed. PATH must include 
/usr/bin and /usr/sbin, the pathnames of the directories where the Legato 
Storage Manager binaries are installed.

5. For each ORACLE_HOME to be enabled for Legato Storage Manager backups, 
follow these steps:

   **Note:** If you later install another ORACLE_HOME on your 
   system, you must follow these steps to enable Legato Storage 
   Manager backups from that ORACLE_HOME.

   a. Log in as the `oracle` user.
   
b. Copy `stage/Components/lsm/lib/liblsm.so` from the Oracle8i 
   CD-ROM to the file `$ORACLE_HOME/lib/liblsm.so`:
   ```
   $ cp stage/Components/lsm/lib/liblsm.so $ORACLE_HOME/lib/liblsm.so
   ```
   
c. Shut down all Oracle instances that use this ORACLE_HOME.
   
d. Remove the symbolic link `$ORACLE_HOME/lib/libobk.so` and create a 
   symbolic link from `$ORACLE_HOME/lib/libobk.so` to 
   `$ORACLE_HOME/lib/liblsm.so`:
   ```
   $ cd $ORACLE_HOME/lib
   $ rm libobk.so
   $ ln -s liblsm.so libobk.so
   ```
   
e. Restart all Oracle instances that use this ORACLE_HOME.

### Updating Legato Storage Manager

To update to a newer version of Legato Storage Manager, follow these steps:

1. Perform a partial removal of Legato Storage Manager using the procedure in 
   the section "Removing an Existing Legato Storage Manager Installation" in 
   Chapter 2.
   
   Do not remove any existing Legato Storage Manager files in the `/nsr` directory.
   
2. Install the updated version of Legato Storage Manager using the procedure in 
   the section "Installing Legato Storage Manager Manually".

---

Installation 3-19
Removing Legato Storage Manager Version 5.5

Note: You cannot remove Legato Storage Manager by using the Installer. Use the following steps to remove Legato Storage Manager version 5.5.

To remove Legato Storage Manager version 5.5, follow these steps:

1. For each ORACLE_HOME on your system enabled for backups, follow these steps to remove the Media Management API of Legato Storage Manager:
   a. Shut down Oracle instances that use ORACLE_HOMEs enabled for backups.
   b. Remove $ORACLE_HOME/lib/liblsm.so and create a symbolic link from $ORACLE_HOME/lib/libobk.so to $ORACLE_HOME/lib/libdsbtsh8.so:
      ```
      $ cd $ORACLE_HOME/lib
      $ rm libobk.so
      $ rm liblsm.so
      $ ln -s libdsbtsh8.so libobk.so
      ```
   c. Restart all Oracle instances that use this ORACLE_HOME.

2. As root user, stop the Legato Storage Manager daemons by using the nsr_shutdown command:
   ```
   # nsr_shutdown
   ```

3. As root user, remove the Legato Storage Manager software by using the following pkgrm command:
   ```
   # pkgrm ORCLman ORCLserv ORCLnode ORCLdrvr ORCLclnt
   ```

Note: Be sure to remove the software packages in the exact order shown in step 3.

For each prompt displayed by the pkgrm command, enter "Yes."
Non-Interactive Installation and Configuration

4. To remove the Legato Storage Manager index and resource configuration files, remove the `/nsr` directory by running the following command as root user:

```bash
# rm -rf /nsr/* /nsr
```

If you remove the `/nsr` directory containing the index and configuration information, you will not be able to restore from the Legato Storage Manager backups. If you later re-install Legato Storage Manager or install another Legato product, you will need to rebuild the configuration.

Non-Interactive Installation and Configuration

You can perform a non-interactive installation of Oracle8i products by supplying the Oracle Universal Installer with a response file. The Installer uses the variables and values contained in this text file to provide answers to some or all of the Installer’s user prompts. If you include responses for all of the Installer’s prompts in the response file, you can run a “silent” installation that displays no graphical output. You can also run Oracle Data Migration Assistant, Net8 Configuration Assistant, Oracle Database Configuration Assistant, and Oracle Enterprise Manager Configuration Assistant non-interactively by using response files.

Preparing the Response File

There are ten Oracle Universal Installer response files, one for each install category and type, and four configuration tool response files included on the Oracle8i Release 2 (8.1.6) CD-ROM. You will need to edit the response file to suit your environment. In particular, the custom response files need extensive editing before you can use them for a non-interactive session.

To use a response file, copy the response file from the Oracle8i CD-ROM to a drive mounted on your system. For example:

```bash
$ cd cdrom_mount_point_directory/stage/Response/
$ cp svrtypical.rsp local_directory
```
Edit the response file you want to use with any text editor to include information specific to your system. Each file contains instructions for properly configuring the response file. Table 3–2 lists the response files included on the Oracle8i CD-ROM.

### Table 3–2 Response Files

<table>
<thead>
<tr>
<th>File Name</th>
<th>Provides Responses for...</th>
</tr>
</thead>
<tbody>
<tr>
<td>svrtypical.rsp</td>
<td>Typical installation of Oracle8i Enterprise Edition</td>
</tr>
<tr>
<td>svrminimal.rsp</td>
<td>Minimal installation of Oracle8i Enterprise Edition</td>
</tr>
<tr>
<td>svrcustom.rsp</td>
<td>Custom installation of Oracle8i Enterprise Edition</td>
</tr>
<tr>
<td>omioms.rsp</td>
<td>Oracle Management Server installation of Oracle8i Management Infrastructure</td>
</tr>
<tr>
<td>omiid.rsp</td>
<td>Oracle Internet Directory installation of Oracle8i Management Infrastructure</td>
</tr>
<tr>
<td>omicustom.rsp</td>
<td>Custom installation of Oracle8i Management Infrastructure</td>
</tr>
<tr>
<td>clientadmin.rsp</td>
<td>Administrator installation of Oracle8i Client</td>
</tr>
<tr>
<td>clientprogrmr.rsp</td>
<td>Programmer installation of Oracle8i Client</td>
</tr>
<tr>
<td>clientappuser.rsp</td>
<td>Application User installation of Oracle8i Client</td>
</tr>
<tr>
<td>clientcustom.rsp</td>
<td>Custom installation of Oracle8i Client</td>
</tr>
<tr>
<td>dbca.rsp</td>
<td>Oracle Database Configuration Assistant</td>
</tr>
<tr>
<td>net8ca.rsp</td>
<td>Net8 Configuration Assistant</td>
</tr>
<tr>
<td>emca.rsp</td>
<td>Oracle Enterprise Manager Configuration Assistant</td>
</tr>
</tbody>
</table>

### Specifying a Response File

To make the Installer use the response file at install time, follow the same steps as described in the section "Start Oracle Universal Installer" on page 3-3, but specify the location of the response file that you wish to use as a parameter when starting the Installer. To make a configuration assistant use a response file, invoke it at the command line using the same parameters.

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

To perform a completely silent installation or configuration session, use the -silent parameter. In silent mode, the DISPLAY environment variable must still be set as described in "DISPLAY" on page 2-8.
To run the Oracle Enterprise Manager Configuration Assistant in non-interactive mode, you must use both the `-silent` and `-responseFile` parameters.

The success or failure of the installation is logged in the `silentInstall.log` file. If an Oracle Inventory exists on your system, then the `silentInstall.log` file is created there. Otherwise, it is created in the `oraInventory_location/logs/` directory. The detailed results of the non-interactive installation session are found in the `oraInventory_location/logs/installActions.log` file. See "Reviewing a Log of an Installation Session" on page 3-16.

---

**Note:** The Installer or configuration assistant will fail if you attempt a non-interactive session without appropriately configuring a response file.

---

**Error Handling**

Values for variables that are of the wrong context, format, or type are treated as if no value were specified. Variables which are outside any section are ignored.

A non-interactive installation fails if no response file is specified or if you attempt a silent installation with an incorrect or incomplete response file. If you attempt a silent installation and the Installer encounters an error, such as insufficient disk space, the installation fails. The results of your non-interactive installation is recorded in the installation session’s log file. See "Reviewing a Log of an Installation Session" on page 3-16.

**Validation of Values from Response File**

The Installer or configuration assistant performs calculation and validation of the response file at run time. Failure of the validation process ends the installation or configuration.
You must perform certain post-installation steps and configure Oracle8i after completing the Oracle Universal Installer session. This chapter describes the required steps, as well as some optional ones.

- Configuration Tasks to Perform as the root User
- Configuration Tasks to Perform as the oracle User
- Post-Installation for Oracle Products
- Oracle Configuration Assistants
- Accessing Installed Documentation
- De-installing Oracle Software

---

**Note:** This chapter describes *basic configuration only*. The more sophisticated configuration and tuning typically required for production systems is described in the *Oracle8i Administrator’s Reference for Sun SPARC Solaris* and in product administration and tuning guides.
Configuration Tasks to Perform as the root User

Log in as the root user and perform the following tasks:

- Create Additional UNIX Accounts
- Verify Database File Security
- Automate Database Startup and Shutdown (Optional)

Create Additional UNIX Accounts

If necessary, create additional UNIX accounts with a system administration utility such as admintool or useradd. Each DBA user on the system must be a member of the OSDBA group.

Query the data dictionary view using SQL*Plus to list the accounts in the default database. Accounts in the database are based upon the products chosen in the Installer.

```
SQL> SELECT username from dba_users;
```

You should delete accounts you do not need.

Verify Database File Security

If you configure Oracle8i in a way similar to a United States NCSC C2 or European ITSEC E3 security evaluation configuration, verify database file security to ensure the integrity of the Oracle software installation. This task is optional if security is not an issue.

Many files must be protected to prevent unauthorized access to secure data. The recommended file modes and ownership are as follows:

- The oracle account should have read, write, and execute privileges all files and directories in an Oracle installation.
- The oinstall group should have read, write, and execute privileges on the oraInventory directory, but should not have write permissions on anything else.
- No user outside the oracle account or the oinstall group should have write access on any files or directories in an Oracle installation.

Table 4–1, “Access Permissions on Oracle Directories and Files”, on page 4-3 summarizes the directory and file permissions for different types of files.
Note: These permissions are the default values and should not be changed.

### Table 4–1 Access Permissions on Oracle Directories and Files

<table>
<thead>
<tr>
<th>Directories/Files</th>
<th>Permissions</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>All database, redo log, and control files (extensions for these files are typically .dbf, .log, and .ctl)</td>
<td>640&lt;br&gt;rw-r----</td>
<td>To maintain discretionary access to data, all databases, redo logs, and control files must be readable only by the oracle account and oinstall group.</td>
</tr>
<tr>
<td>$ORACLE_HOME/bin/</td>
<td>751&lt;br&gt;rwxr-x--x</td>
<td>Must be writable by the oracle software owner, and executable by all users.</td>
</tr>
<tr>
<td>The oracle executable, and the following network executables: $ORACLE_HOME/bin/oracle and $ORACLE_HOME/bin/dbsnmp</td>
<td>6751&lt;br&gt;rws-r-s--x</td>
<td>The 6 sets the setuid bit and the setgid bit so the executables run as the oracle user and dba group, regardless of who executes them.</td>
</tr>
<tr>
<td>All other executables.</td>
<td>751&lt;br&gt;rwxr-x--x</td>
<td>Must be writable by the oracle account and executable by all users.</td>
</tr>
<tr>
<td>$ORACLE_HOME/lib/</td>
<td>755&lt;br&gt;rwxr-xr-x</td>
<td>The directory is readable, writable, and executable by the owner, readable and executable by all other users.</td>
</tr>
<tr>
<td>All files under $ORACLE_HOME/lib/</td>
<td>644&lt;br&gt;rwxr--r--</td>
<td>The files are readable and writable by the owner, read-only for all other users.</td>
</tr>
<tr>
<td>$ORACLE_HOME/rdbms/log</td>
<td>751&lt;br&gt;rwxr-x--x</td>
<td>Restricts access to files in the directory to the oracle account and oinstall group.</td>
</tr>
<tr>
<td>Product subdirectories such as $ORACLE_HOME/sqlplus or $ORACLE_HOME/rdbms</td>
<td>751&lt;br&gt;rwxr-x--x</td>
<td>Restricts access to log files to the oracle account and oinstall group.</td>
</tr>
<tr>
<td>Files in $ORACLE_HOME/sqlplus or $ORACLE_HOME/rdbms</td>
<td>644&lt;br&gt;rwxr--r--</td>
<td>The files are readable and writable by the owner, read-only for all other users.</td>
</tr>
</tbody>
</table>
Configuration Tasks to Perform as the root User

**Automate Database Startup and Shutdown (Optional)**

You can configure your system to automatically start Oracle databases when your system starts up and to shut down Oracle databases when your system shuts down. Automating database startup is optional, but automatic shutdown is recommended because it guards against improper shutdown of the database.

The `dbshut` and `dbstart` scripts are located in the `$ORACLE_HOME/bin` directory and can be used to automate database startup and shutdown.

The `dbstart` and `dbshut` scripts reference the same entries in the `oratab` file, so the scripts must apply to the same set of databases. For example, you cannot have `dbstart` automatically start up databases `sid1`, `sid2`, and `sid3`, and `dbshut` shut down only databases `sid1` and `sid2`. You can, however, specify that `dbshut` shut down a set of databases while `dbstart` is not used at all. To do this, include the `dbshut` entry in the shutdown file but omit the `dbstart` entry from the system startup files.

**See Also:** For a description of system startup and shutdown procedures, check information about the `init` command in your Sun SPARC Solaris documentation.

**Automating Database Startup and Shutdown**

This process must be completed for every new database that you want to configure for automated startup and shutdown. Perform the following tasks to set up the `dbstart` and `dbshut` scripts so that they are called at system startup:

---

### Table 4–1 Access Permissions on Oracle Directories and Files

<table>
<thead>
<tr>
<th>Directories/Files</th>
<th>Permissions</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>$ORACLE_HOME/network/trace</code></td>
<td>777 rxrwxrwx</td>
<td>777 allows broad access to view and create trace files during development. Use 730 in a production environment to ensure that only the oracle account and members of the oinstall group have access to trace files.</td>
</tr>
<tr>
<td>or</td>
<td>730 rwx-wx---</td>
<td></td>
</tr>
<tr>
<td>All files under product admin directories, like</td>
<td>644 -rw-r--r-</td>
<td>SQL scripts should typically be run as the SYS user.</td>
</tr>
<tr>
<td><code>$ORACLE_HOME/rdbms/admin</code></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>$ORACLE_HOME/sqlplus/admin</code></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Edit the `/var/opt/oracle/oratab` file.

Database entries in the `oratab` file appear in the following format:

```
ORACLE_SID:ORACLE_HOME:{Y|N}
```

where Y or N specifies whether you want the `dbstart` and `dbshut` scripts to start up and shut down the database. Find the entries for all the databases that you want to start up. They are identified by the `sid` in the first field. Change the last field for each to Y.

2. Create a file named `dbora` in the `/etc/init.d` directory (if it does not already exist).

3. Create entries similar to the following at the end of the `dbora` file (if they do not already exist). Be sure to give the full path of the `dbstart` utility.

```bash
#!/bin/sh
# Set ORA_HOME to be equivalent to the ORACLE_HOME
# from which you wish to execute dbstart and dbshut
# set ORA_OWNER to the user id of the owner of the Oracle database in ORA_HOME
ORA_HOME=/u01/app/oracle/product/8.1.6
ORA_OWNER=oracle
if [ ! -f $ORA_HOME/bin/dbstart ]
then
    echo "Oracle startup: cannot start"
    exit
fi
```

```bash
case "$1" in
    'start')
    # Start the Oracle databases:
    # The following command assumes that the oracle login will not prompt the
    # user for any values
    su - $ORA_OWNER -c $ORA_HOME/bin/dbstart &
    ;;
    'stop')
    # Stop the Oracle databases:
    # The following command assumes that the oracle login will not prompt the
    # user for any values
    su - $ORA_OWNER -c $ORA_HOME/bin/dbshut &
```
4. Link dbora by entering:

```
# ln -s /etc/init.d/dbora /etc/rc2.d/K10dbora
# ln -s /etc/init.d/dbora /etc/rc2.d/S99dbora
```

## Configuration Tasks to Perform as the oracle User

Perform the following tasks as the oracle user.

- Update UNIX Account Startup Files
- Update the `oratab` File
- Apply Any Required Oracle Patches
- Set Initialization Parameters

### Update UNIX Account Startup Files

Update the startup files of the `oracle` account and the UNIX accounts of Oracle users.

#### Set Environment Variables

Set the following environment variables in the `.profile` or `.login` file of the `oracle` account before using Oracle8i products. Table 4–2, "Environment Variable Settings" shows the recommended settings. The settings that you use here should correspond to the settings you used during installation as described in "Set Environment Variables" on page 2-8. The syntax for setting environment variables is as follows.

For the Bourne or Korn shell:

```
variable_name=value; export variable_name
```

For the C shell:

```
setenv variable_name value
```
Configuration Tasks to Perform as the oracle User

**Note:** You should not define environment variables with names that are identical to those used for Oracle processes, for example: CKPT, PMON, and DBWR.

---

**Table 4-2 Environment Variable Settings**

<table>
<thead>
<tr>
<th>Environment Variable</th>
<th>Recommended Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD_LIBRARY_PATH</td>
<td>Set it to include $ORACLE_HOME/lib.</td>
</tr>
<tr>
<td>ORACLE_BASE</td>
<td>software.mount_point/app/oracle</td>
</tr>
<tr>
<td>ORACLE_HOME</td>
<td>$ORACLE_BASE/product/8.1.6</td>
</tr>
<tr>
<td>ORACLE_SID</td>
<td>If you do not remember the value you entered when you were prompted by the Oracle Universal Installer, you can find it listed in the Installer log file located in oraInventory_location/logs/installActions.log. The oraInventory_location is defined in /var/opt/oracle/oraInst.loc</td>
</tr>
<tr>
<td>PATH</td>
<td>Make sure the new $ORACLE_HOME/bin directory is included in the PATH setting. See Chapter 2, &quot;Pre-Installation&quot; for other PATH requirements.</td>
</tr>
<tr>
<td>CLASSPATH</td>
<td>CLASSPATH must include the following: JRE_Location, $ORACLE_HOME/jlib, $ORACLE_HOME/product/jlib. Note: JRE_Location is defined as $ORACLE_HOME/JRE.</td>
</tr>
<tr>
<td>TNS_ADMIN</td>
<td>Set it to the location of the Net8 configuration files. This variable only needs to be set if Net8 configuration files are not located in one of the default locations.</td>
</tr>
<tr>
<td>TWO_TASK</td>
<td>Set TWO_TASK to the Net8 connect string alias defined in tnsnames.ora which client software will use by default to connect to a server.</td>
</tr>
</tbody>
</table>

---

**LD_LIBRARY_PATH**

Required when using Oracle products that use shared libraries. Set LD_LIBRARY_PATH to include $ORACLE_HOME/lib.

**ORACLE_BASE**

Specifies the directory at the top of the Oracle software and administrative file structure. The OFA-recommended value is:
Configuration Tasks to Perform as the oracle User

software_mount_point/app/oracle.

For example:
/u01/app/oracle

**ORACLE_HOME**
Specifies the directory containing the Oracle software for a given release. The Optimal Flexible Architecture recommended value is:

$ORACLE_BASE/product/release.

For example:

/u01/app/oracle/product/8.1.6.

**ORACLE_SID**
Specifies the Oracle System Identifier, or *sid*, which is the name of the Oracle Server instance. Because the *sid* is incorporated into many filenames, Oracle Corporation recommends restricting it to no more than four characters to avoid filename problems on different operating systems.

**PATH**
After installation of Oracle software, the search path should include all of the following:

- $ORACLE_HOME/bin, /bin, /usr/bin, and /usr/ccs/bin
- the local bin directory specified when the root.sh script was run, usually /usr/local/bin

---

**Note:** If you require /usr/ucb in your search path, make sure it comes after /usr/ccs/bin in the search order.

---

**CLASSPATH**
The CLASSPATH variable is used for Java functionality. CLASSPATH is different for various products. Refer to your product documentation for more information. In addition to any pre-existing settings, CLASSPATH must include the following JRE location(s):

$ORACLE_HOME/JRE:$ORACLE_HOME/jlib:$ORACLE_HOME/product/jlib
The variable *product* indicates any product directory in the ORACLE_HOME, such as rdbms or network, where a JRE or file required for Java functionality are located.

**TNS_ADMIN**

To place the Net8 configuration files in a location other than the default locations (/var/opt/oracle or $ORACLE_HOME/network/admin), set the TNS_ADMIN environment variable to the directory where Net8 configuration files are located. For example, if tnsnames.ora resides in the /tns directory, set TNS_ADMIN to /tns.

Oracle products will look for the tnsnames.ora file in the following order:

1. .tnsnames.ora file in the current user’s home directory (Note the dot before the file name).
2. $TNS_ADMIN/tnsnames.ora
3. /var/opt/oracle/
4. $ORACLE_HOME/network/admin/

Check that a tnsnames.ora file exists in one of these locations; otherwise, you may be unable to connect to a database through Net8 using local naming.

**TWO_TASK**

If you have a Client/Server configuration, you can set TWO_TASK to the net service name of the database where client software will connect by default. When TWO_TASK is set, you do not have to specify the net service name of the database to connect to it with Oracle client software. See the Net8 Administrator’s Guide and the Oracle8i Administrator’s Reference for Sun SPARC Solaris for more information about net service names.

**Initialize the oraenv (coraenv) Script**

You have the option of using the oraenv or coraenv scripts to set a common environment for oracle users. Follow the instructions below for a single-instance or multiple-instance configuration for the oraenv script, or the coraenv script if you are running the C shell.

**Single-Instance Machine**

On a single-instance machine, set the environment variable ORACLE_SID in the .profile or .login file of the oracle account followed by these commands to initialize the oraenv (coraenv) file at login.
Configuration Tasks to Perform as the oracle User

For the Bourne or Korn shell:

```
ORAENV_ASK=NO
./usr/local/bin/oraenv
```

For the C shell:

```
set ORAENV_ASK = NO
source /usr/local/bin/coraenv
unset ORAENV_ASK
```

**Multiple-Instance Machine**

On a multiple-instance machine, include a list of instance names and the commands necessary to initialize the `oraenv` (coraenv) file at the end of the startup file of the `oracle` account.

For the Bourne or Korn shell:

```
#!/usr/bin/sh
echo "The SIDs on this machine are:"
cat /var/opt/oracle/oratab | awk -F: '{print $1}' | grep -v "#"
ORAENV_ASK="YES"
./usr/local/bin/oraenv
```

For the C shell:

```
#!/usr/bin/csh
echo "The SIDs on this machine are:"
cat /var/opt/oracle/oratab | awk -F: '{print $1}' | grep -v "#"
set ORAENV_ASK="YES"
source /usr/local/bin/coraenv
```

**Update Other Oracle User Startup Files**

To create the same environment for all `oracle` accounts, update each user startup file to include the following line at the end of the startup file:

- for `.profile` files used by the Bourne or Korn shells:
  ```
  . /usr/local/bin/oraenv
  ```

- for `.login` files used by the C shell:
  ```
  source /usr/local/bin/coraenv
  ```

- Settings for the `ORACLE_BASE`, `ORACLE_HOME`, and `PATH` environment variables as described in "Set Environment Variables" on page 4-6.
Update the oratab File
If you have created a database manually instead of using Oracle Database Configuration Assistant, you must ensure the system configuration is reflected in the /var/opt/oracle/oratab file.

Add an entry for each Server instance on the system in the following format:

```
ORACLE_SID:ORACLE_HOME:{Y|N}
```

where Y or N indicates whether you want to activate the dbstart and dbshut scripts. Oracle Database Configuration Assistant automatically adds an entry for each database it creates.

Apply Any Required Oracle Patches
The Oracle8i release, which this manual accompanies, includes patches that must be applied to Oracle8i or other products. Patches can be found on the Oracle8i Release 2 (8.1.6) CD-ROM in the cd_rom_mount_point/patch directory. Review the README file included with each patch for installation instructions.

Set Initialization Parameters
The default init sid .ora file shipped with the distribution is located in the $ORACLE_BASE/admin/sid/pfile directory. A template init.ora file is also in $ORACLE_HOME/dbs. The file contains settings for small, medium, and large databases, with the settings for medium and large databases commented out. The size settings are relative to each other, but do not represent an empirical size of the database.

Modify init sid .ora Parameters
When you create a database using Oracle Database Configuration Assistant your init sid .ora parameters are automatically set. You can manually modify the initialization parameters in the init sid .ora with a UNIX text editor. Activate the modified init sid .ora file by shutting down and restarting the database.

Do not use symbolic character representations such as question marks (?) for ORACLE_HOME in parameter files.

To bring rollback segments online automatically with database startup, you must uncomment the rollback_segments in the init sid .ora file.

For example, change:

```
#rollback_segments = (r0, r1, r2, r3)
```
rollback_segments = (r0, r1, r2, r3)

See Also: Oracle8i Administrator’s Reference for Sun SPARC Solaris for information on init.sid.ora parameters.

Post-Installation for Oracle Products

Perform the product-specific steps as necessary for your installation. Not all products require post-installation setup.

To review online documentation before you configure your Oracle products, see "Accessing Installed Documentation" on page 4-23. It is not necessary to read product documentation before completing the configuration tasks in this manual, but more sophisticated tuning requires information in the product documentation.

The following products have post-installation steps:

- Net8
- Oracle Internet Directory
- Oracle Enterprise Manager
- Oracle Options
- Recovery Manager
- Multi-Threaded Server
- Oracle Parallel Server Management
- Oracle Precompilers (Pro*COBOL, Pro*C/C++, Pro*FORTRAN, SQL*Module Ada)
- Oracle Supported Protocols
- Legato Storage Manager

Net8

Configuring a complete Oracle network is beyond the scope of this manual and is covered in detail in the Net8 Administrator’s Guide.

Basic configuration of Net8 is done by Net8 Configuration Assistant when it is invoked by Oracle Universal Installer during installation of Net8. For an explanation of how Net8 Configuration Assistant configures your installation, see
"Understanding Net8 Configuration" on page 2-17. For information on running Net8 Configuration Assistant as a stand-alone tool, see "Net8 Configuration Assistant" on page 4-22.

Verify and complete your initial configuration with the following steps:

1. Log in as root and reserve a port for the Net8 listener by making the following entry in the /etc/services file:

```
listener_name  1521/tcp             #Net8 listener
```

**Note:** 1521 is the default port. If you chose a different port when you configured the Net8 listener, specify that port in the /etc/services file.

2. Check the status of the listener following installation by using the command:

```
$ lsnrctl status [listener_name]
```

The **listener_name** field is required if the listener has a name other than the default, **listener**.

If the listener is not running, start it with the following command:

```
$ lsnrctl start listener_name
```

3. Install and configure Oracle client software on a remote system, if necessary, then start SQL*Plus to test the connection to the server.

```
$ sqlplus username/password@net_service_name
```

If you can successfully connect to the server with SQL*Plus, you have established network connectivity over TCP/IP. For more advanced network configuration, refer to the Net8 Administrator’s Guide.

**Oracle Internet Directory**

To complete installation of Oracle Internet Directory, you must perform the following tasks.

- Start the Directory Server
- Configure Security
Start the Directory Server

See the Oracle Internet Directory Administrator’s Guide for instructions on starting Oracle Internet Directory.

Configure Security

When you first install Oracle Internet Directory, the default configuration grants to all users complete access to the directory. One of the first things you will want to do is to establish and implement an access control policy to ensure that each user receives the appropriate authorization.

Also, in the process of loading directory entries, you are also creating a hierarchy of directory entries. You must establish the following:

- Permissions to load entries into this hierarchy
- Directory access to clients who need read, modify, and write access to the entries

Before attempting to add directory entries, see the chapters on SSL and managing directory access control in the Oracle Internet Directory Administrator’s Guide for a detailed explanation of security options and instructions for setting up security.

Oracle Enterprise Manager

If you installed Oracle Enterprise Manager through the Oracle Management Server or Custom installation types of the Oracle8i Management Infrastructure category, Oracle Enterprise Manager Configuration Assistant will automatically start at the end of the installation to guide you through repository configuration. If you installed Oracle Enterprise Manager through any other installation type, Oracle Enterprise Manager will not start automatically at the end of the installation.

Manually start Oracle Enterprise Manager Configuration Assistant after installation if a repository needs to be created configured, upgraded, or dropped. For information on running Oracle Enterprise Manager Configuration Assistant as a stand-alone tool, see "Oracle Enterprise Manager Configuration Assistant" on page 4-23.

There are further post-installation steps for Oracle Enterprise Manager that exceed the scope of this manual and are discussed in detail in the Oracle Enterprise Manager Configuration Guide.
Oracle Options

**Oracle interMedia**

- **Note:** There is no upgrade from previous releases of ConText Cartridge to Oracle interMedia Text 8.1. However, there is a migration that can be performed manually. See the Oracle8i ConText to interMedia Text Migration guide for documentation of this process.

For interMedia Text, include $ORACLE_HOME/ctx/lib in the LD_LIBRARY_PATH environment variable.

If you intend to install Oracle interMedia Text after your initial installation, ensure you have at least 10 MB of disk space for the data dictionary.

Your database must include table spaces specific to interMedia Text data. Verify that table spaces exist to serve as default and temporary table spaces for Oracle interMedia Text. Oracle interMedia Text uses the DRSYS table space for its default and temporary table spaces. If table spaces for Oracle interMedia Text do not exist or you do not want to use the DRSYS table space, create additional table spaces before proceeding.

**See Also:** Oracle8i SQL Reference for information on creating table spaces.

**Configuring the Database for Oracle Options**

If you install additional Oracle Options after the initial installation, use Oracle Database Configuration Assistant to configure your database for the options you install.

1. Start up the Oracle Database Configuration Assistant by executing dbassist, which is located at:

   $ORACLE_HOME/bin/dbassist

2. Select [Modify Database].

3. Select the appropriate database SID from the list of those detected by the Oracle Database Configuration Assistant. The database that you want to modify must already be running.

4. Choose the options you wish to enable from the list and click the [Finish] button.
Execute privileges will be granted to PUBLIC for all of the options and packages.

**Recovery Manager**

Recovery Manager is an automated recovery utility that is installed as part of Oracle8i. It stores information in a recovery catalog in a separate Oracle8i database. This second Oracle8i database should be installed on a separate machine to provide maximum fault resistance.

**Note:** If the installation and maintenance of a second Oracle8i database is impractical, Recovery Manager can also be used in a restricted mode without a recovery catalog.

To create a recovery catalog, perform the following steps:

1. Install Oracle8i on a separate machine from any other Oracle8i system and create a database for the recovery catalog.
   - If you do not write a custom script to create the database, create a typical, preconfigured database with Oracle Database Configuration Assistant. The default database is adequate for the recovery catalog.
2. Create a user in the recovery catalog database to be the **RECOVERY_CATALOG_OWNER**.
3. As the **RECOVERY_CATALOG_OWNER**, run the `createCatalog` command at the Oracle Recovery Manager prompt.

**See Also:** For more detail on Recovery Manager, see the Oracle8i Backup and Recovery Guide.

**Multi-Threaded Server**

Oracle servers configured with Multi-Threaded Server require a higher setting for the initialization parameter `SHARED_POOL_SIZE` or a custom configuration that uses `LARGE_POOL_SIZE`. If you installed your server with Oracle Universal Installer, the value of `SHARED_POOL_SIZE` is set for you automatically by Oracle Database Configuration Assistant. However, if you created a database manually you should raise `SHARED_POOL_SIZE` in the `initсид.ora` file. Typically, you should add 1 KB for each anticipated concurrent user. See Oracle8i Designing and Tuning for Performance for further information on configuring Multi-Threaded Server.
Oracle Parallel Server Management

1. To start the Oracle Parallel Server Communication Daemon automatically when the machine is rebooted, log in as the root user and add a line similar to the following in the system startup file:

   `su - oracle -c "opsd log=/tmp/opsd.log"`

   The above entry is optional. The default entry is:

   `/tmp/opsdlog`

   On Sun SPARC Solaris, the startup file is `/etc/init.d/dbora`.

   **Note:** The following two steps are not necessary if Oracle Database Configuration Assistant was used to create the database.

2. Determine the node numbers for all nodes of the cluster, by entering:

   `$ORACLE_HOME/bin/lsnodes -n`

3. Create the Oracle Parallel Server configuration file, `$ORACLE_HOME/ops/opsname.conf`, and install a copy on each node. This file contains parameters describing the configuration of Oracle Parallel Server instances and related services.

   **See Also:** The *Oracle Parallel Server Setup and Configuration Guide*.

Oracle Precompilers

**Note:** You cannot use Oracle Precompilers independently of Oracle8i to convert embedded PL/SQL.

**Pro*C/C++**

The configuration file `pcscfg.cfg` in `$ORACLE_HOME/precomp/admin` must be customized for your environment before using Pro*C/C++. This file is installed without content and may be configured with any text editor according to your site-specific requirements. See the *Pro*C/C++ Programmer’s Guide* for information on how to configure this file.
See Also: The *Programmer’s Guide to the Pro*C/C++ Precompiler* for further information on configuring the *pcscfg.cfg* file for your environment.

Pro*COBOL
The configuration file *pcbcfg.cfg* is installed without content and may be configured with any text editor according to your site-specific requirements. See the *Pro*COBOL *Programmer’s Guide* for information on how to configure this file.

Pro*FORTRAN
The configuration file is *pccfor.cfg*. This file is installed without content and may be configured with any text editor according to your site-specific requirements. See your FORTRAN77 documentation to determine how to configure this file.

SQL*Module Ada
The configuration file is *pmscfg.cfg*. This file is installed without content and may be configured with any text editor according to your site-specific requirements. See the *SQL*Module for Ada *Programmer’s Guide* for information on how to configure this file.

Oracle Supported Protocols

All Supported Protocols
Perform the following steps after installing any protocol:

1. Verify that you have created and installed the necessary configuration files for the network.
2. To start the listener automatically when the machine is rebooted, log in as the root user and add a line similar to the following in the system startup file:

   ```bash
   su - oracle -c "lsnrctl start"
   ```
On Sun SPARC Solaris, the startup file is `/etc/init.d/dbora`.

3. If you have a client/server configuration, you must set the TWO_TASK environment variable on the clients to point to the server. Set the TWO_TASK environment variable on the client machines to the service name for the server (available from the `tnsnames.ora` file). See "Set Environment Variables" on page 4-6 for information on setting environment variables.

4. Start the listener on the server:
   
   `$ lsnrctl start`

5. Check the listener process:

   `$ lsnrctl status`

6. As the `oracle` user, start SQL*Plus, to test the connection:

   `$ sqlplus username/password@service_name`

**SPX/IPX**

Before starting the Net8 listener, start the `ntisbsdm` executable:

   `$ ntspxctl`

   `ntspctl> startup`

The command’s output confirms the status of the executable.

**Configuring the Secure Socket Layer**

Once the Secure Socket Layer is installed, you must run Net8 Configuration Assistant to properly configure it for your system.

**See Also:** For more detail on Secure Socket Layer, refer to the installed documentation `Configuring Secure Socket Layer Authentication` in the Oracle Advanced Security Administrator’s Guide in the generic documentation set.

**Legato Storage Manager**

You can install Legato Storage Manager with the Installer by running the `root.sh` script as described in "Run the root.sh Script" on page 3-16. Instructions for manually installing Legato Storage Manager from the Oracle8i CD-ROM are described in "Installing Legato Storage Manager Manually" on page 3-17.
1. After the LSM installation has completed, verify that all the required packages were installed:

   # pkginfo | grep -i LSM
   application ORCLclnt       LSM (Backup/Recover) Client
   system ORCLdrvr            LSM (Backup/Recover) Device Drivers
   application ORCLman        LSM (Backup/Recover) Man Pages
   application ORCLnode       LSM (Backup/Recover) Storage Node
   application ORCLserv       LSM (Backup/Recover) Server

2. Configure the driver software to provide support for Legato Storage Manager to back up data to the SCSI storage devices attached to the system. For more information, refer to the *Legato Storage Manager Administrator’s Guide*.

**Integrating SAP R/3 with Legato Storage Manager**

To perform archive, backup, and recover operations, Legato Storage Manager provides a means to integrate SAP R/3 and Oracle8i backup and recovery. The backup and recovery is initiated from SAPDBA along with the SAP br-tools (brbackup, brarchive, and brrestore) with the LSM server.

On the Oracle8i software CD-ROM, the directory containing the Legato Storage Manager software has a subdirectory named SAP with the following files for SAP R/3 on Oracle:

- **backint** - SAP API that integrates SAP R/3 backup and recovery with third-party utilities.
- **init.utl** - Parameter file that specifies the variables used by backint during backup, recover, and archive operations.
- **README** - Text file that describes the SAP R/3 files and where to install them.

To set up and configure Legato Storage Manager with SAP R/3 on your system, perform the following tasks:

1. With SAP R/3 already installed, install Legato Storage Manager on your system. Follow the installation instructions in "Installing Legato Storage Manager Manually" on page 3-17.

2. Include the pathname of the directory containing the Legato Storage Manager executables (/usr/sbin) in the PATH environment variable for the oracle user.

3. Configure a client resource for the Oracle8i server in Legato Storage Manager, according to the instructions in Chapter 2 of the *Legato Storage Manager*...
Administrator’s Guide, which is included on the Oracle Online Generic Documentation CD-ROM.

4. From the subdirectory named SAP in the Legato Storage Manager directory on the Oracle8i CD-ROM, copy the backint program file into the directory where the SAP br-tools reside.

5. From the subdirectory named SAP in the Legato Storage Manager directory on the Oracle8i CD-ROM, copy the file init.utl into the directory where you installed LSM, /usr/sbin.

6. Instruct the SAP Database Administration program to use the backint program by setting the backup_dev_type parameter in the SAP initialization file, initsid.sap. In initsid.sap set the parameter as follows:

   backup_dev_type = util_file

7. Instruct the SAP Database Administration program to use the file initsid.utl for backint-specific parameters by setting the util_par_file parameter in the SAP initialization file, initsid.sap.

   In initsid.sap set the parameter as follows:

   util_par_file = ?/dbs/initsid.utl

The session report, backintsid.log, is created after the first backup session using SAP R/3 integrated with Legato Storage Manager. The report, typically located in the directory /nsr/logs, is appended to after each backup, recover, or archive.

Oracle Configuration Assistants

The following Oracle configuration assistants are described in this section:

- Net8 Configuration Assistant
- Oracle Data Migration Assistant
- Oracle Database Configuration Assistant
- Oracle Enterprise Manager Configuration Assistant

These configuration assistants are usually run during and installation session, but can also be run in a stand-alone mode. Like Oracle Universal Installer, each of these assistants can also be run non-interactively using a response file. See "Non-Interactive Installation and Configuration" on page 3-21 for information on using response files with the product assistants.
Net8 Configuration Assistant

When the Net8 Server or Net8 Client is installed, the Net8 Configuration Assistant is automatically launched by Oracle Universal Installer. See "Understanding Net8 Configuration" on page 2-17 for a description of how Net8 Configuration Assistant configures your installation.

If you create a database using the Oracle Database Configuration Assistant during or after installation, it will automatically update the Net8 configuration with any configuration information necessary for the new database. Oracle Database Configuration Assistant either registers the database in a supported directory service so that clients can use the directory to connect to the database, or it will create an entry in the local naming file (tnsnames.ora) that can then be distributed to client machines to connect to the database.

If you choose to do a separate Oracle8i Client install, the Net8 Configuration Assistant will automatically create a profile that is consistent with any selections you made during install. The Installer will automatically run the Net8 Configuration Assistant to set up a net service name in the Local Naming file found in the $ORACLE_HOME/network/admin directory of your client installation.

After installation is complete, more detailed configuration can be accomplished using the Net8 Configuration Assistant with the following command:

$ netasst

For information on the use and configuration of Net8, see the Net8 Administrator’s Guide.

Oracle Data Migration Assistant

If you have installed Oracle8i to use with an existing database from a prior software release, and you did not choose to upgrade the database during the installation, upgrade or migrate the database prior to mounting it using Oracle8i.

You can start Oracle Data Migration Assistant with the following command:

$ odma

The process of migrating a database exceeds the scope of this manual. See Oracle8i Migration for detailed instructions and information.
Oracle Database Configuration Assistant

Oracle Database Configuration Assistant can create a default or customized database or it can be used to configure an existing database to use Oracle options. The assistant can create the database or output a collection of shell scripts and SQL script which you can inspect, modify, and run at a later time. See "Identifying Your Database Environment" on page 2-22 for information on the types of databases that you can install using Oracle Database Configuration Assistant.

You can start Oracle Database Configuration Assistant with the following command:

$ dbassist

For help invoking Oracle Database Configuration Assistant, use the -help or -h command line parameters with dbassist.

Oracle Enterprise Manager Configuration Assistant

Oracle Enterprise Manager Configuration Assistant is a tool that enables you to create, configure, drop, or upgrade the Oracle Enterprise Manager repository.

You can start Oracle Enterprise Manager Configuration Assistant with the following command:

$ emca

For detailed information about the Oracle Enterprise Manager Configuration Assistant, see the Oracle Enterprise Manager Configuration Guide.

Accessing Installed Documentation

You can install documentation in HTML and PDF (Adobe Portable Document Format, which requires Acrobat Reader) formats. Solaris-specific documentation files are installed from the Oracle8i CD-ROM. Generic documentation files are installed from the Online Generic Documentation CD-ROM. The location of the documentation files is determined according to the following rules:

- If ORACLE_DOC is defined in the environment, the files are installed in that directory.
- If ORACLE_DOC is not defined but ORACLE_BASE is defined, the files are installed under the $ORACLE_BASE/doc directory.
De-installing Oracle Software

- If neither ORACLE_DOC nor ORACLE_BASE are defined in the environment, the files are installed under the $ORACLE_HOME/doc directory.

To access the documentation, point your browser to either index.htm or products.htm (the latter does not require a frames-enabled browser). If you prefer paper documentation, you can print the PDF files.

You can also access documentation directly from the CD-ROM as described in "Accessing Online Documentation" on page xi.

Oracle Information Navigator

Oracle Information Navigator is a Java-based search and navigation utility provided with Oracle online documentation. If you are using a Java-enabled browser, Information Navigator is launched automatically when you open the index.htm file at the top level of the CD-ROM. Information Navigator can be used with Oracle documentation, whether you are reading from the CD-ROM or from installed files.

De-installing Oracle Software

If you are completely de-installing Oracle software from your system, then you must de-configure Net8 with the Net8 Configuration Assistant and remove any installed databases with the Oracle Database Configuration Assistant. Both assistants must be run before you use the Installer to completely de-install Oracle software. A partial de-installation of Oracle software does not necessarily require you to run either Oracle Database Configuration Assistant or Net8 Configuration Assistant.

To de-install an Oracle database with Oracle Database Configuration Assistant:

1. Start the Oracle Database Configuration Assistant
   
   $ dbassist

2. From the initial screen, select "Delete a Database."

3. Click Next.

4. Select the instance for the database that you want to delete.

5. Click Finish. Verify that you want to delete the database in the windows that appear.
Because you can only delete one database at a time, you must run Oracle Database Configuration Assistant and repeat these steps for each database that you want to delete.

After you have run Oracle Database Configuration Assistant, run the Net8 Configuration Assistant in de-install mode by invoking it at the command line with the /deinst parameter:

```
$ netca /deinst
```

To de-install Oracle software using Oracle Universal Installer:

1. Start the Installer as described in "Using Oracle Universal Installer" on page 3-2.

2. Click the [De-install Products] button on the "Welcome" dialog box or the [Installed Products...] button available on any Installer screen. The "Inventory" dialog box appears, listing installed products.

3. In the "Inventory" dialog box, select any product(s) to be de-installed, then click the [Remove] button.
This appendix provides descriptions of products included with Oracle8i Release 2 (8.1.6) for Sun SPARC Solaris.

- Determining Which Products are Installed
- Product Descriptions
Determining Which Products are Installed

Refer to the following sections to determine what products are installed by each installation category and type:

- "Oracle8i Enterprise Edition" on page A-2
- "Oracle8i Client" on page A-7
- "Oracle8i Management Infrastructure" on page A-11

See "Product Installation Categories and Installation Types" on page 1-2 for an overview of these installation categories.

**Note:** The "Custom" installation type is not listed in these tables as it allows you to choose to install any product in the current installation category. Some products can only be installed in a custom installation. Such products have an availability "No" listed for other installation types in the tables in this appendix.

Oracle8i Enterprise Edition

Table A–1, "Oracle8i Enterprise Edition Installable Products" lists products available for the Oracle8i Enterprise Edition installation types.

<table>
<thead>
<tr>
<th>Product</th>
<th>Typical</th>
<th>Minimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legato Storage Manager</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Net8 Client, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net8 Assistant</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Net8 Configuration Assistant</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Protocol Support</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Note:** When Net8 Client is installed through the Typical or Minimal installation type, protocol support is automatically installed for the networking protocols detected. When installed through the Custom installation type, you are prompted to select the networking protocols for which you want support (TCP/IP, SPX/IPX, Named Pipes, and LU6.2).

<table>
<thead>
<tr>
<th>Product</th>
<th>Typical</th>
<th>Minimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net8 Server</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Connection Manager</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
### Table A–1  Oracle8i Enterprise Edition Installable Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Typical</th>
<th>Minimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object Type Translator</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Oracle Advanced Security - Export Edition, includes:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Enterprise Login Assistant</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Note:</strong> Oracle Enterprise Login Assistant is a feature of Oracle Advanced Security and can only be used if you have purchased an Oracle Advanced Security license.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Enterprise Security Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Note:</strong> Oracle Enterprise Security Manager is a feature of Oracle Advanced Security included with Oracle Enterprise Manager and can only be used if you have purchased an Oracle Advanced Security license.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Wallet Manager</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Note:</strong> Oracle Wallet Manager is a feature of Oracle Advanced Security and can only be used if you have purchased an Oracle Advanced Security license.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encryption and Integrity Support, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DES-40 Encryption Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>RC4-40 Encryption Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>DES56 Encryption Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>RC4-56 Encryption Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>MD5 Integrity Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Thin JDBC Java-based Encryption, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DES-40 Encryption Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>RC4-40 Encryption Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>DES56 Encryption Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>RC4-56 Encryption Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>MD5 Integrity Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Authentication Support, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrust Authentication Support (Beta)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Kerberos Authentication Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>RADIUS Authentication Support</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Determining Which Products are Installed

Table A–1 Oracle8i Enterprise Edition Installable Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Typical</th>
<th>Minimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>SecurID Authentication Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>CyberSafe Authentication Support</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Identix Authentication Support</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>DCE Authentication Support</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SSL Authentication Support</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Note: Authentication support methods appear in a window during installation, but are not displayed in the Available Products List window under Custom.

Oracle Call Interface                                | Yes     | Yes     |
Oracle Data Migration Assistant                      | Yes     | Yes     |
Oracle Database Configuration Assistant              | Yes     | Yes     |
Solaris Documentation (online)                       | Yes     | Yes     |
Oracle Enterprise Manager, includes:                 | Yes     | Yes     |
  Oracle Enterprise Manager Console                   | Yes     | Yes     |
Oracle DBA Management Pack, includes:                | Yes     | Yes     |
  Oracle DBA Studio                                   | Yes     | Yes     |
  Oracle Instance Manager                             | No      | No      |
  Oracle Schema Manager                               | No      | No      |
  Oracle Security Manager                             | No      | No      |
  Oracle Storage Manager                              | No      | No      |
SQL*Plus Worksheet                                   | Yes     | Yes     |
Oracle Enterprise Manager Integrated Applications, includes: | Yes | No     |
  Oracle Parallel Server Management                   | Yes     | No      |
  Oracle interMedia Text Manager                     | Yes     | No      |
  Oracle Replication Manager                         | Yes     | Yes     |
  Oracle Applications Manager                        | Yes     | No      |
  Oracle Distributed Access Manager                   | Yes     | No      |
  Oracle Developer Server Forms Manager               | Yes     | No      |
## Table A–1  Oracle8i Enterprise Edition Installable Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Typical</th>
<th>Minimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Spatial Index Advisor</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Directory Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Quick Tours</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Web Site, includes:</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Application Server Listener</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Intelligent Agent, includes:</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Data Collection Services</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Management Server, includes:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Configuration Assistant</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle interMedia, includes:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>interMedia Audio</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>interMedia Common Files</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Note: Installed with all interMedia except interMedia Text.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interMedia Image</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>interMedia Locator Service</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>interMedia Text</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>interMedia Video</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle JDBC Drivers, includes:</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Thin JDBC Driver for JDK 1.2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Thin JDBC Driver for JDK 1.1</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle JDBC/OCI Driver for JDK 1.2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle JDBC/OCI Driver for JDK 1.1</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle JServer (either JServer Enterprise Edition or JServer), includes:</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Enterprise JavaBeans and CORBA Tools</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Java Virtual Machine</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Java Tools</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle's version of Java Runtime Environment</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## Determining Which Products are Installed

### Table A–1  Oracle8i Enterprise Edition Installable Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Typical</th>
<th>Minimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Names</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Parallel Server includes:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Parallel Server Management</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Note:</strong> Oracle Parallel Server is only installed if a cluster is detected.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Partitioning</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Spatial</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Time Series</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Universal Installer</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Utilities</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Visual Information Retrieval</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle8i Server (either Oracle8i Enterprise Edition or Oracle8i)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>SQL*Plus</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>SQLJ</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>SQLJ Runtime</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>SQLJ Translator</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Oracle8i Client

Table A–2, "Oracle8i Client Installable Products" lists products available for the Oracle8i Client installation types.

<table>
<thead>
<tr>
<th>Product</th>
<th>Administrator</th>
<th>Programmer</th>
<th>Application User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net8 Client, includes:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net8 Assistant</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Net8 Configuration Assistant</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Protocol Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note: When Net8 Client is installed through the Typical or Minimal installation type, protocol support is automatically installed for the networking protocols detected. When installed through the Custom installation type, you are prompted to select the networking protocols for which you want support (TCP/IP, SPX/IPX, Named Pipes, and LU6.2).

Object Type Translator | Yes | Yes | No |

Oracle Advanced Security - Export Edition, includes:
Oracle Enterprise Login Assistant | Yes | Yes | Yes |

Note: Oracle Enterprise Login Assistant is a feature of Oracle Advanced Security included with Oracle Enterprise Manager and can only be used if you have purchased an Oracle Advanced Security license.

Oracle Enterprise Security Manager | Yes | No | No |

Note: Oracle Enterprise Security Manager is a feature of Oracle Advanced Security included with Oracle Enterprise Manager.

Oracle Wallet Manager | Yes | Yes | Yes |

Note: Oracle Wallet Manager is a feature of Oracle Advanced Security and can only be used if you have purchased an Oracle Advanced Security license.

Encryption and Integrity Support, includes:
DES-40 Encryption Support | Yes | Yes | Yes |
### Table A–2 Oracle8i Client Installable Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Administrator</th>
<th>Programmer</th>
<th>Application User</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC4-40 Encryption Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DES56 Encryption Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>RC4-56 Encryption Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>MD5 Integrity Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Thin JDBC Java-based Encryption, includes:</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DES-40 Encryption Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>RC4-40 Encryption Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DES56 Encryption Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>RC4-56 Encryption Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>MD5 Integrity Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Authentication Support, includes:</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Entrust Authentication Support (Beta)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Kerberos Authentication Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>RADIUS Authentication Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>SecurID Authentication Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CyberSafe Authentication Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Identix Authentication Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DCE Authentication Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>SSL Authentication Support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Note: Authentication support methods appear in a window during installation, but are not displayed in the Available Products List window under Custom.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Call Interface</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Solaris Documentation (online)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Enterprise Manager, includes:</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Console</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle DBA Management Pack, includes:</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
### Table A–2  Oracle8i Client Installable Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Administrator</th>
<th>Programmer</th>
<th>Application User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle DBA Studio</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Instance Manager</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Schema Manager</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Security Manager</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Storage Manager</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SQL*Plus Worksheet</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Integrated Applications, includes:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Parallel Server Management</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle interMedia Text Manager</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Replication Manager</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Applications Manager</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Distributed Access Manager</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Developer Server Forms Manager</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Spatial Index Advisor</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Directory Manager</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Quick Tours</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle interMedia Client</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle JDBC Drivers, includes:</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Thin JDBC Driver for JDK 1.2</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Thin JDBC Driver for JDK 1.1</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle JDBC/OCI Driver for JDK 1.2</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle JDBC/OCI Driver for JDK 1.1</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Java Tools</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Enterprise JavaBeans</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle’s version of Java Runtime Environment</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Universal Installer</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Table A–2  Oracle8i Client Installable Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Administrator</th>
<th>Programmer</th>
<th>Application User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Utilities</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle8i Client</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pro*C\C++</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Pro*Cobol</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Pro*FORTRAN</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SQL*Module Ada</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SQLJ</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>SQLJ Runtime</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>SQLJ Translator</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>SQL*Plus</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
### Oracle8i Management Infrastructure

Table A–3, "Oracle8i Management Infrastructure Installable Products" lists products available for the three install types of the Oracle8i Enterprise Edition installation category.

**Table A–3  Oracle8i Management Infrastructure Installable Products**

<table>
<thead>
<tr>
<th>Product</th>
<th>Oracle Management Server</th>
<th>Oracle Internet Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legato Storage Manager</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Net8 Client, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net8 Assistant</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Net8 Configuration Assistant</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Protocol Support</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Note:</strong> When Net8 Client is installed through the Typical or Minimal installation type, protocol support is automatically installed for the networking protocols detected. When installed through the Custom installation type, you are prompted to select the networking protocols for which you want support (TCP/IP, SPX/IPX, and LU6.2).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net8 Server:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Connection Manager</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Object Type Translator</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Call Interface</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Data Migration Assistant</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Database Configuration Assistant</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Directory Manager</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Solaris Documentation (online)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Enterprise Manager, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Enterprise Manager Console</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Management Server, includes:</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Configuration Assistant</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager DBA Management Pack, includes:</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle DBA Studio</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
## Determining Which Products are Installed

### Table A–3  Oracle8i Management Infrastructure Installable Products

<table>
<thead>
<tr>
<th>Product</th>
<th>Oracle Management Server</th>
<th>Oracle Internet Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Instance Manager</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Schema Manager</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Security Manager</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Storage Manager</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SQL*Plus Worksheet</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Integrated Applications, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Parallel Server Management</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle interMedia Text Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Replication Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Applications Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Distributed Access Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Developer Server Forms Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Spatial Index Advisor</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Directory Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Security Manager</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**Note:** Oracle Enterprise Security Manager can only be used if you have purchased an Oracle Advanced Security license.

<table>
<thead>
<tr>
<th>Product</th>
<th>Oracle Management Server</th>
<th>Oracle Internet Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Enterprise Manager Quick Tours</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Enterprise Manager Web Site, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Application Server Listener</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Oracle interMedia, includes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interMedia Audio</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>interMedia Common Files</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Note:** Installed with all interMedia except interMedia Text.

<table>
<thead>
<tr>
<th>Product</th>
<th>Oracle Management Server</th>
<th>Oracle Internet Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>interMedia Image</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>interMedia Locator Service</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>interMedia Text</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Product</td>
<td>Oracle Management Server</td>
<td>Oracle Internet Directory</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>interMedia Video</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Internet Directory</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Internet Directory Client Toolset</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle JDBC Drivers, includes:</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Thin JDBC Driver for JDK 1.2</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Thin JDBC Driver for JDK 1.1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle JDBC/OCI Driver for JDK 1.2</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle JDBC/OCI Driver for JDK 1.1</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle JServer (either JServer Enterprise Edition or JServer), includes:</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Enterprise JavaBeans and CORBA Tools</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Java Virtual Machine</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Java Tools</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SQLJ</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SQLJ Runtime</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>SQLJ Translator</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Names</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Partitioning</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Spatial</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Time Series</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle Universal Installer</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle’s version of Java Runtime Environment</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oracle Visual Information Retrieval</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Oracle8i Server (either Oracle8i Enterprise Edition or Oracle8i)</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>SQL*Plus</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Product Descriptions

Table A–4, "Product Descriptions" provides descriptions and release numbers of products available for installation. References are made to documentation that more fully describes these products. Some products described below are automatically installed with other products. See "Determining Which Products are Installed" for the installation types under which these products are installed.

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Common Files</td>
<td>8.1.6</td>
<td>A collection of automatically installed files required by Oracle assistants. These files include:</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ BaliShare 1.0.8 (compressed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ DBUI 1.1.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ EWT 3.3.6 (compressed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ ICE Browser 4.06.6 (compressed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ Java Swing Components 1.1.1 (compressed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ Kodiak 1.1.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ Oracle Help for Java 3.1.3 (compressed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>■ SMUI 1.0.7</td>
<td></td>
</tr>
<tr>
<td>Data Collection Services</td>
<td>2.1</td>
<td>Works as an extension of Oracle Intelligent Agent to collect system performance data (for example, file I/O or CPU usage data) for Capacity Planner and Performance Manager, which are data-collecting applications in the Oracle Diagnostics Pack.</td>
<td>Oracle Enterprise Manager Administrator’s Guide and Oracle Enterprise Manager Concepts Guide</td>
</tr>
<tr>
<td>(installed with Oracle Intelligent Agent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise JavaBeans</td>
<td>8.1.6</td>
<td>An architecture for developing transactional applications as distributed components in Java.</td>
<td>Oracle8i Enterprise JavaBeans and CORBA Developer’s Guide</td>
</tr>
<tr>
<td>interMedia Image</td>
<td>8.1.6</td>
<td>Provides for the storage, retrieval, and processing of two-dimensional, static bitmapped images. Images are stored efficiently using popular compression schemes in industry-standard desktop publishing image interchange formats.</td>
<td>Oracle8i interMedia Audio, Image, and Video User’s Guide and Reference</td>
</tr>
<tr>
<td>(installed with Oracle interMedia, formerly Oracle Image Cartridge)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>interMedia Audio (installed with</td>
<td>8.1.6</td>
<td>Provides for the storage, retrieval and management of digitized audio data</td>
<td>Oracle8i interMedia Audio, Image, and Video User's Guide and Reference</td>
</tr>
<tr>
<td>Oracle interMedia, formerly Oracle</td>
<td></td>
<td>within an Oracle database.</td>
<td></td>
</tr>
<tr>
<td>Audio Cartridge)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interMedia Common Files (installed with</td>
<td>8.1.6</td>
<td>A set of files used by Oracle interMedia components.</td>
<td>N/A</td>
</tr>
<tr>
<td>Oracle interMedia)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interMedia Video (installed with</td>
<td>8.1.6</td>
<td>Provides for the storage, retrieval, and management of digitized video data</td>
<td>Oracle8i interMedia Audio, Image, and Video User's Guide and Reference</td>
</tr>
<tr>
<td>Oracle interMedia, formerly Oracle Video Cartridge)</td>
<td></td>
<td>within an Oracle database.</td>
<td></td>
</tr>
<tr>
<td>interMedia Text (installed with</td>
<td>8.1.6</td>
<td>Manages and search for text in the database as quickly and easily as any</td>
<td>Oracle8i interMedia Text Reference</td>
</tr>
<tr>
<td>Oracle interMedia, formerly Oracle</td>
<td></td>
<td>other type of data. interMedia Text's search techniques make text a standard</td>
<td></td>
</tr>
<tr>
<td>ConText Cartridge)</td>
<td></td>
<td>datatype in the Oracle database that you can create, modify, and delete.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Additionally, with interMedia Text, new text-based developments or extensions</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>to existing applications are easy and cost-effective to build with standard</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQL tools. With interMedia Text, you can search for data in any Oracle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>database application that uses text — from search-enabling a comments field</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>in an existing application to implementing large-scale document management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>systems dealing with multiple document formats and complex search criteria.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>interMedia Text also supports basic full-text searches in most languages</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>supported by the Oracle database.</td>
<td></td>
</tr>
<tr>
<td>interMedia Locator Service (installed</td>
<td>8.1.6</td>
<td>Enables Oracle8i to support online internet-based geocoding facilities for</td>
<td>Oracle8i interMedia Locator User's Guide</td>
</tr>
<tr>
<td>with Oracle interMedia)</td>
<td></td>
<td>locator applications and proximity queries.</td>
<td>and Reference</td>
</tr>
<tr>
<td>Java Runtime Environment (Oracle's</td>
<td>1.1.8_10</td>
<td>Required for running Java applications, such as Oracle Universal Installer.</td>
<td>N/A</td>
</tr>
<tr>
<td>version)</td>
<td></td>
<td>Sun Microsystems' JRE Version 1.1.8 is the minimum standard Java platform for</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>running Java programs.</td>
<td></td>
</tr>
</tbody>
</table>

Oracle8i Products  A-15
**Oracle8i Installation Guide**

**Legato Storage Manager (LSM)**

5.5 If you are using Recovery Manager (RMAN) for Oracle database backups, a media management product such as LSM is required for backing up and restoring from tape storage. You can choose to install the media management product on your CD-ROM, which is LSM, or use a third-party media management product that also complies with Oracle's Backup Solutions Program. LSM also includes a scaled-down version of Legato NetWorker.

The Oracle Universal Installer prompts you to confirm whether or not you want to install LSM. When you confirm installation, LSM is installed automatically. To manually install LSM without using the installer, see “Installing Legato Storage Manager Manually” on page 3-17. For more information on this product, call toll free (1) 888-8-LEGATO in the United States of America, or visit the Oracle backup and recovery website: http://www.backup-oracle.com/

**Logical Unit Type 6.2 (LU6.2) protocol support**

8.1.6 The adapter is part of the IBM Advanced Program-to-Program Communication (APPC) architecture.

APPC is the IBM peer-to-peer (program-to-program) protocol for a System Network Architecture (SNA) network. SNA is an IBM reference model similar to the Open Systems Interconnect (OSI) model of the International Standards Organization (ISO).

APPC architecture lets the client and host communicate over an SNA network without forcing the client to emulate a terminal (as in terminal-to-host protocols). APPC architecture allows peer-to-peer communication; the client can initiate communication with the server.

An SNA network with the LU6.2 and Physical Unit Type 2.1 (PU2.1) protocols provides APPC. The LU6.2 protocol defines a session between two application programs; LU6.2 is a product-independent LU-type.

The LU6.2 protocol support enables an Oracle application on a PC to communicate with an Oracle database. This communication occurs over an SNA network with the Oracle database on a host system that supports APPC.
<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net8 Assistant</td>
<td>8.1.6</td>
<td>Used by network administrators and DBAs to configure Net8. See the Net8 Administrator’s Guide for additional information.</td>
<td>Net8 Administrator’s Guide</td>
</tr>
<tr>
<td><em>(Installed with Net8 Client)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net8 Client</td>
<td>8.1.6</td>
<td>Provides products that enable client connections to databases across a network. A client-side application sends a request to Net8 to be transported across the network to the server.</td>
<td>Net8 Administrator’s Guide</td>
</tr>
<tr>
<td><em>(Installed with Net8 Client)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net8 Configuration Assistant</td>
<td>8.1.6</td>
<td>Automatically started during installation to configure directory service access and Net8 client and server components. Net8 Configuration Assistant can also be run in stand-alone mode to configure Net8 after installation.</td>
<td>Net8 Administrator’s Guide</td>
</tr>
<tr>
<td><em>(Installed with Net8 Client)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net8 Server</td>
<td>8.1.6</td>
<td>Provides products that allow the listener, through a protocol, to accept connections from client applications on the network.</td>
<td>Net8 Administrator’s Guide</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note:</strong> Net8 Server is not installable through any Oracle8i Client installation types.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Net8 clients communicate with Oracle servers through net service names that are easy-to-remember aliases for database addresses. Net8 resolves net service names using the following naming methods:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Host Naming</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Local Naming</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Oracle Names</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Directory Naming</td>
<td></td>
</tr>
<tr>
<td>Object Type Translator</td>
<td>8.1.6</td>
<td>Used to create C-struct representations of Abstract Data Types (ADTs) that have been created and stored in an Oracle database. To take advantage of objects, run Object Type Translator against the database, and a header file is generated that includes the C-structs.</td>
<td>Oracle Call Interface Programmer’s Guide</td>
</tr>
</tbody>
</table>
### Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Advanced Security—Export Edition</td>
<td>8.1.6</td>
<td>Provides security services for Oracle8i. Secures connections over all protocols into Oracle8i and integrates a Public Key Infrastructure (PKI). Provides data encryption and integrity; integrates with third-party authentication, authorization and single sign-on solutions; delivers public-key solutions including Secure Sockets Layer (SSL) and X.509 certificates; and utilizes Oracle Internet Directory for storing database authorizations. Also enables enterprise user management and access to multiple accounts and applications with a single password.</td>
<td>Oracle Advanced Networking Option Administrator's Guide</td>
</tr>
<tr>
<td>Oracle Application Server Listener</td>
<td>2.1</td>
<td>Provides a preconfigured, ready-to-use listener for use with the browser-based Oracle Enterprise Manager. By using this listener, you do not need to install and configure any other webserver for the browser based Oracle Enterprise Manager.</td>
<td>Oracle Enterprise Manager Configuration Guide</td>
</tr>
<tr>
<td>(installed with Oracle Enterprise Manager Web Site)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Applications Manager</td>
<td>2.1</td>
<td>Administers Concurrent Managers, the batch-process scheduling subsystem of Oracle Applications. With this tool, an administrator can improve system performance by creating, configuring, and monitoring all Concurrent Managers on multiple Oracle Applications instances from the Oracle Applications Manager Console. Using the console, you can view details for all processes and requests, cancel or put holds on requests, and start, stop, and define new Concurrent Managers.</td>
<td>Oracle Enterprise Manager Concepts Guide</td>
</tr>
<tr>
<td>(part of Oracle Enterprise Manager Integrated Applications)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Call Interface</td>
<td>8.1.6</td>
<td>An application programming interface (API) for accessing an Oracle database from a C or C++ program. You make calls directly to the Oracle Call Interface functions from within your C or C++ program to direct the execution of your SQL statements.</td>
<td>Oracle Call Interface Programmer’s Guide</td>
</tr>
<tr>
<td>Oracle Connection Manager</td>
<td>8.1.6</td>
<td>Acts like a router through which client connection requests can either be sent to the next hop or directly to a server. Clients who route their connection requests through a Connection Manager can take advantage of the connection concentration, Net8 access control, or multi-protocol support features configured on that Connection Manager.</td>
<td>Net8 Administrator’s Guide</td>
</tr>
<tr>
<td>Oracle Data Migration Assistant</td>
<td>8.1.6</td>
<td>Migrates existing Oracle7 databases (release 7.1.3.3.6 or later) to an Oracle8i database and upgrades Oracle8 databases to the current database release.</td>
<td>Oracle8i Migration</td>
</tr>
<tr>
<td>Product</td>
<td>Release</td>
<td>Description</td>
<td>See...</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>Oracle Database Configuration Assistant</td>
<td>8.1.6</td>
<td>Automates the process of creating, modifying, and deleting an Oracle database.</td>
<td>Oracle8i Administrator’s Guide</td>
</tr>
<tr>
<td>Oracle DBA Management Pack</td>
<td>2.1</td>
<td>A set of tools and utilities bundled with Oracle Enterprise Manager. The Oracle DBA Management Pack can be used to perform most of your database administration tasks, and supports all versions of Oracle databases.</td>
<td>Oracle Enterprise Manager Administrator’s Guide</td>
</tr>
<tr>
<td>Oracle DBA Studio</td>
<td>2.1</td>
<td>Integrates the functionality of schema, security, storage, and instance management into one management tool.</td>
<td>Oracle Enterprise Manager Administrator’s Guide</td>
</tr>
<tr>
<td>Oracle Developer Server Forms Manager</td>
<td>2.1</td>
<td>Allows you to control and monitor Forms Listener, Forms Server, Load Balancer Server, and Load Balancer Client. In addition to providing some basic controls such as start up and shut down, this tool can also monitor events that include service down, excessive memory usage, and excessive CPU usage. It can also automatically fix the problem when it occurs.</td>
<td>Oracle Enterprise Manager Concepts Guide</td>
</tr>
<tr>
<td>Oracle Distributed Access Manager</td>
<td>2.1</td>
<td>Monitors and configures a distributed access system, which provide users with access to Oracle and non-Oracle systems.</td>
<td>Oracle Enterprise Manager Concepts Guide</td>
</tr>
<tr>
<td>Oracle Documentation</td>
<td>8.1.6</td>
<td>Online version of Oracle8i documentation for Sun SPARC Solaris available in HTML and PDF format.</td>
<td>&quot;Accessing Installed Documentation&quot; on page 4-23</td>
</tr>
<tr>
<td>Oracle Enterprise Login Assistant</td>
<td>1.1</td>
<td>Enables single sign on, which implements a subset of the Wallet Manager functionality for opening a user wallet and enabling applications to use it.</td>
<td>Oracle Advanced Security Administrator’s Guide</td>
</tr>
<tr>
<td>Oracle Enterprise Manager</td>
<td>2.1</td>
<td>Provides an integrated solution for centrally managing your heterogeneous environment. Oracle Enterprise Manager combines a graphical console, Oracle Management Servers, Oracle Intelligent Agents, common services, and tools to provide an integrated, comprehensive systems management platform for managing Oracle products.</td>
<td>Oracle Enterprise Manager Concepts Guide</td>
</tr>
</tbody>
</table>
### Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Enterprise Manager Configuration Assistant (part of Oracle Management Server)</td>
<td>2.1</td>
<td>Assists administrators with Oracle Enterprise Manager repository creation, removal, upgrade, and configuration.</td>
<td>Oracle Enterprise Manager Configuration Guide</td>
</tr>
</tbody>
</table>
| Oracle Enterprise Manager Console             | 2.1     | Client interface for the first tier of Oracle Enterprise Manager, which  
|                                               |         | ■ Centrally administers, diagnoses, and tunes multiple databases  
|                                               |         | ■ Manages other Oracle products and services  
|                                               |         | ■ Monitors and responds to the status of Oracle components and third-party services 24 hours a day  
|                                               |         | ■ Schedules jobs on multiple nodes at varying time intervals  
|                                               |         | ■ Monitors networked services for events  
|                                               |         | ■ Customizes your display by organizing databases and other service into logical administrative groups                                                                                               | Oracle Enterprise Manager Administrator’s Guide |
| Oracle Enterprise Manager Integrated Applications | 2.1     | Applications integrated and installed with Oracle Enterprise Manager that are used to manage your Oracle environment. The applications can be accessed from the Oracle Enterprise Manager Navigator pane, the console application drawers, or from your operating system. | Oracle Enterprise Manager Concepts Guide     |
| Oracle Enterprise Manager Quick Tours         | 2.1     | HTML-based training tools that provide a fast and easy way to learn a variety of Oracle Enterprise Manager products without having to actually install them. Quick tours are provided for the following components:  
|                                               |         | ■ Oracle Enterprise Manager Console  
|                                               |         | ■ Oracle DBA Management Pack                                                                                                                        | Oracle Enterprise Manager Administrator’s Guide |
| Oracle Enterprise Manager Web Site            | 2.1     | Enables administrators to access the Oracle Enterprise Manager Console from a Web browser.                                                                                                               | Oracle Enterprise Manager Configuration Guide |
| Oracle Enterprise Security Manager (part of Oracle Enterprise Manager) | 2.0     | Helps you administer the Oracle environment for user security using an LDAP-compliant directory server. This tool allows an administrator to manage enterprise-level role authorization among multiple databases simultaneously. | Oracle Enterprise Manager Concepts Guide     |
### Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oracle Instance Manager</strong>&lt;br&gt;(part of Oracle DBA Management Pack)</td>
<td>2.1</td>
<td>Manages database instances and sessions in your Oracle environment.</td>
<td>Oracle Enterprise Manager Administrator's Guide</td>
</tr>
<tr>
<td><strong>Oracle Intelligent Agent</strong></td>
<td>2.1</td>
<td>Monitors services on the managed node for registered events and scheduled jobs sent by the console.</td>
<td>Oracle Intelligent Agent User's Guide</td>
</tr>
<tr>
<td><strong>Oracle interMedia</strong>&lt;br&gt; 8.1.6 Oracle enables file management in a variety of media, including text, audio, and video. Files in each medium are managed through a specific component of interMedia. This multi-component product requires a separate license.</td>
<td>Oracle8i interMedia Text Reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oracle interMediaClient</strong>&lt;br&gt;(part of Oracle interMedia)</td>
<td>8.1.6</td>
<td>Provides an Oracle8i interMedia Audio, Image, and Video Java interface that lets you use client-side applications to manipulate and/or modify multimedia data stored in a network accessible database on the server.</td>
<td>Oracle8i interMedia Text Reference</td>
</tr>
<tr>
<td><strong>Oracle interMedia Text Manager</strong>&lt;br&gt;(part of Oracle Enterprise Manager Integrated Applications)</td>
<td>2.1</td>
<td>A application for administering interMedia Text functionality.</td>
<td>Oracle Enterprise Manager Concepts Guide</td>
</tr>
<tr>
<td><strong>Oracle Internet Directory</strong>&lt;br&gt; 2.0.6 An Oracle8i database-based LDAP V3 directory service, included for exclusive use by the Oracle8i database, which can be configured prior to server installation for use in centralizing database user, Net8 network connector, and database listener parameters. Oracle8i Custom installation prompts for the LDAP directory server to use for storing these “entry attributes”. A typical installation scenario is to install the Oracle Internet Directory on a dedicated server (distinct from the target of a particular Oracle8i database installation).</td>
<td>Oracle Internet Directory Administrator's Guide</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oracle Internet Directory Client Toolset</strong>&lt;br&gt; 2.0.6 The command line tools and Oracle Directory Manager use with Oracle Internet Directory.</td>
<td>Oracle Internet Directory Administrator's Guide</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Internet Directory Manager (Oracle Directory Manager)</td>
<td>2.0.6</td>
<td>A Java-based tool for administering most functional areas of Oracle Internet Directory and its related processes.</td>
<td>Oracle Internet Directory Administrator’s Guide</td>
</tr>
<tr>
<td>Oracle Java Database Connectivity (JDBC) Drivers</td>
<td>8.1.6</td>
<td>A standard set of Java classes, specified by JavaSoft, that provides vendor-independent access to relational data from Java.</td>
<td>Oracle8i JDBC Developer’s Guide and Reference</td>
</tr>
<tr>
<td>Oracle JServer Enterprise Edition</td>
<td></td>
<td>Provides Oracle’s Java Virtual Machine, a CORBA 2.0 Object Request Broker, embedded JDBC drivers, a SQLJ translator, and an Enterprise JavaBeans transaction server.</td>
<td>Oracle8i Java Developer’s Guide</td>
</tr>
<tr>
<td>Oracle Java Tools</td>
<td>8.1.6</td>
<td>Provides Java tools to build and deploy Java stored procedures, CORBA objects, and Enterprise JavaBeans with Oracle’s Java Virtual Machine.</td>
<td>Oracle8i SQLJ Developer’s Guide and Reference</td>
</tr>
<tr>
<td>Oracle Management Server</td>
<td>2.1</td>
<td>The middle tier of Oracle Enterprise Manager, which provides centralized intelligence and distribution control between console clients and managed nodes.</td>
<td>Oracle Enterprise Manager Administrator’s Guide</td>
</tr>
<tr>
<td>Oracle Names</td>
<td>8.1.6</td>
<td>A distributed naming service developed for Oracle environments to help simplify the setup and administration of global, client/server computing networks. Oracle Names does this by establishing and maintaining an integrated system of Names servers. Oracle Names servers work like a directory service storing addresses for all the database services on a network and making them available to clients that want to make a connection.</td>
<td>Net8 Administrator’s Guide</td>
</tr>
<tr>
<td>Oracle Objects Functionality</td>
<td>8.1.6</td>
<td>Lets you create and manipulate objects, as well as to integrate objects with standard relational functionality.</td>
<td></td>
</tr>
<tr>
<td>Oracle Parallel Server</td>
<td>8.1.6</td>
<td>Enables multiple Oracle instances to share a single Oracle database.</td>
<td>Oracle8i Parallel Server Setup and Configuration</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>This product requires a separate license.</em></td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>Release</td>
<td>Description</td>
<td>See...</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Oracle Parallel Server Management</td>
<td>8.1.6</td>
<td>Oracle Parallel Server Manager is an extension to the Oracle Enterprise Manager Console, which enables administration of databases that use the Oracle Parallel Server Option. Once discovered, Parallel Server Databases appear in the Databases folder of the Console’s navigator panel alongside single-instance databases. Parallel Servers behave similarly to single-instance databases, and the database administrator can start up, shut down, or check the status of Parallel Server databases.</td>
<td>Oracle8i Parallel Server Setup and Configuration</td>
</tr>
<tr>
<td>Oracle Parallel Server Manager</td>
<td>2.1</td>
<td>Discovers and manages databases that use the Oracle Parallel Server option. An extension to the Oracle Enterprise Manager Console, Oracle Parallel Server Management lists all discovered parallel servers alongside single-instance databases in the Navigator’s Databases folder. Using property sheets, you can start up and shut down databases using the Parallel Server option, as well as check the status of instances, datafiles, in-doubt transactions, profiles, redo log groups, roles, rollback segments, schema objects, users, and tablespaces.</td>
<td>Oracle8i Parallel Server Setup and Configuration and Oracle Enterprise Manager Concepts Guide</td>
</tr>
<tr>
<td>Oracle Partitioning</td>
<td>8.1.6</td>
<td>Provides more control in managing tables and indexes by directing all maintenance operations to individual partitions rather than to tables and index names.</td>
<td>This product requires a separate license.</td>
</tr>
<tr>
<td>Oracle Replication Manager</td>
<td>2.1</td>
<td>Enables an administrator to quickly set up, configure, and manage an Oracle Replication environment. This tool provides a comprehensive wizard to prepare a database for supporting multimaster and/or snapshot replication. Once set up, additional wizards help you replicate schema objects using either multimaster or a combination of multimaster/snapshot replication. After configuring your replication environment, you can use the Oracle Enterprise Manager Navigator tree and property pages to monitor and modify your replication environment.</td>
<td>Oracle Enterprise Manager Concepts Guide</td>
</tr>
<tr>
<td>Oracle Schema Manager</td>
<td>2.1</td>
<td>Enables you to create, alter, or drop schema objects such as clusters, indexes, snapshots, tables, and views.</td>
<td>Oracle Enterprise Manager Administrator’s Guide</td>
</tr>
</tbody>
</table>
### Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Security Manager</td>
<td>2.1</td>
<td>Manages database users and their corresponding privileges, profiles, and roles.</td>
<td>Oracle Enterprise Manager Administrator’s Guide</td>
</tr>
<tr>
<td>(part of Oracle DBA Management Pack)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Spatial</td>
<td>8.1.6</td>
<td>Oracle Spatial makes the storage, retrieval, and manipulation of spatial data easier and more intuitive to users.</td>
<td>Oracle8i Spatial User’s Guide and Reference</td>
</tr>
<tr>
<td>(formerly Oracle Spatial Data Cartridge)</td>
<td></td>
<td><em>This product requires a separate license.</em></td>
<td></td>
</tr>
<tr>
<td>Oracle Spatial Index Advisor</td>
<td>2.1</td>
<td>Helps you analyze and tune spatial indexes on data. With the analyzer, you can see if indexes are properly defined for optimum query performance. The analyzer also provides an understanding of distribution of the data through visual inspection.</td>
<td>Oracle Enterprise Manager Concepts Guide</td>
</tr>
<tr>
<td>(part of Oracle Enterprise Manager Integrated Applications)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Storage Manager</td>
<td>2.1</td>
<td>Enables you to administer tablespaces, datafiles, redo logs, and rollback segments for optimum database storage.</td>
<td>Oracle Enterprise Manager Administrator’s Guide</td>
</tr>
<tr>
<td>(part of Oracle DBA Management Pack)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle8i Server</td>
<td>8.1.6</td>
<td>The database component of the Oracle8i Enterprise Edition or Oracle8i software.</td>
<td>Getting to Know Oracle8i</td>
</tr>
<tr>
<td>Oracle Time Series</td>
<td>8.1.6</td>
<td>Oracle Time Series stores and retrieves time-stamped data through object data types (ODTs).</td>
<td>Oracle8i Time Series User’s Guide</td>
</tr>
<tr>
<td>(formerly Oracle8i Time Series Cartridge)</td>
<td></td>
<td><em>This product requires a separate license.</em></td>
<td></td>
</tr>
<tr>
<td>Oracle Universal Installer</td>
<td>1.7.0.x</td>
<td>A GUI application that lets you quickly install, update, and remove Oracle products.</td>
<td>Oracle8i Installation Guide</td>
</tr>
<tr>
<td>Oracle Utilities</td>
<td>8.1.6</td>
<td>A suite of products used for database administration. Oracle Utilities include Server Manager, Export Utility, Import Utility, ORADIM, SQL*Loader, DBVERIFY, TKPROF, Migration Utility, Recovery Manager, OCOPY, Server Manager, and the Password Utility.</td>
<td>Oracle8i Utilities</td>
</tr>
</tbody>
</table>
## Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Visual Information Retrieval</td>
<td>8.1.6</td>
<td>Provides image storage, content-based retrieval, and format conversion capabilities through an object data type. This option is a building block for various imaging applications, rather than being an end-user application. Some common applications for this option consist of digital art galleries and museums, real estate marketing, document imaging, and stock photo collections for fashion designers and architect. A demonstration is also available.</td>
<td>Oracle8i Visual Information Retrieval User’s Guide and Reference</td>
</tr>
<tr>
<td>Oracle Wallet Manager</td>
<td>2.1</td>
<td>Generates a public-private key pair, creates a certificate request for submission to a certificate authority, and installs and configures a trusted certificate for the identity.</td>
<td>Oracle Advanced Security Administrator’s Guide</td>
</tr>
</tbody>
</table>
| Pro*C/C++                                    | 8.1.6   | The Pro*C/C++ precompiler takes SQL statements embedded in your C and C++ program and converts them to standard C code. When you precompile this code, the result is a C or C++ program that you can compile and use to build applications that access an Oracle database.  

*This product requires a separate license as a part of Oracle Programmer.* | Pro*C/C++ Precompiler Programmer’s Guide |
| Pro*COBOL                                    | 8.1.6   | The Pro*COBOL precompiler takes SQL statements embedded in your COBOL program and converts them to standard COBOL code. When you precompile this code, the result is a COBOL program that you can compile and use to build applications that access an Oracle database.  

*This product requires a separate license as a part of Oracle Programmer.* | Pro*COBOL Precompiler Programmer’s Guide |
| Pro*FORTRAN                                  | 8.1.6   | The Pro*FORTRAN precompiler takes SQL statements embedded in your FORTRAN program and converts them to standard FORTRAN code. When you precompile this code, the result is a FORTRAN program that you can compile and use to build applications that access an Oracle database.  

*This product requires a separate license as a part of Oracle Programmer.* | Pro*Fortran Supplement to the Oracle Precompilers Guide (7.3.4) |
### Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
</tr>
</thead>
</table>
| SQL*Module Ada           | 8.1.6   | The SQL*Module Ada precompiler takes SQL statements embedded in your Ada program and converts them to standard Ada code. When you precompile this code, the result is a Ada program that you can compile and use to build applications that access an Oracle database.  
  *This product requires a separate license as a part of Oracle Programmer.* |
| SQL*Plus                 | 8.1.6   | Command line interface that allows you to use the SQL and PL/SQL database languages with an Oracle database |
| SQL*Plus Worksheet       | 2.1     | Graphical user interface for manually entering SQL, PL/SQL, and DBA commands or running stored scripts. |
| SQLJ                     | 8.1.6   | Oracle SQLJ, a standard way to embed SQL statements in Java programs.        |
| SQLJ Runtime (installed with SQLJ) | 8.1.6   | A thin layer of pure Java code that runs above the JDBC driver. When Oracle SQLJ translates your SQLJ source code, embedded SQL commands in your Java application are replaced by calls to the SQLJ runtime. |

### Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
</tr>
</thead>
</table>
| SQL*Module Ada           | 8.1.6   | The SQL*Module Ada precompiler takes SQL statements embedded in your Ada program and converts them to standard Ada code. When you precompile this code, the result is a Ada program that you can compile and use to build applications that access an Oracle database.  
  *This product requires a separate license as a part of Oracle Programmer.* |
| SQL*Plus                 | 8.1.6   | Command line interface that allows you to use the SQL and PL/SQL database languages with an Oracle database |
| SQL*Plus Worksheet       | 2.1     | Graphical user interface for manually entering SQL, PL/SQL, and DBA commands or running stored scripts. |
| SQLJ                     | 8.1.6   | Oracle SQLJ, a standard way to embed SQL statements in Java programs.        |
| SQLJ Runtime (installed with SQLJ) | 8.1.6   | A thin layer of pure Java code that runs above the JDBC driver. When Oracle SQLJ translates your SQLJ source code, embedded SQL commands in your Java application are replaced by calls to the SQLJ runtime. |
### Table A–4  Product Descriptions

<table>
<thead>
<tr>
<th>Product</th>
<th>Release</th>
<th>Description</th>
<th>See...</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQLJ Translator</td>
<td>8.1.6</td>
<td>A preprocessor for Java programs that contain embedded SQL statements. Oracle SQLJ Translator converts the SQL statements to JDBC calls.</td>
<td>Oracle8i SQLJ Developer’s Guide and Reference</td>
</tr>
<tr>
<td>(installed with SQLJ)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPX Protocol Support</td>
<td>8.1.6</td>
<td>Enables client/server conversation over a network using SPX/IPX and Net8. This combination of Oracle products enables an Oracle application on a client to communicate with remote Oracle databases through SPX/IPX (if the Oracle database is running on a host system that supports network communication using SPX/IPX). This protocol is predominantly used in Novell Netware environments.</td>
<td>Net8 Administrator’s Guide</td>
</tr>
<tr>
<td>TCP/IP Protocol Support</td>
<td>3.510.300, 2.13</td>
<td>Enables client/server conversation over a network using TCP/IP and Net8. This combination of Oracle products enables an Oracle application on a client to communicate with remote Oracle databases through TCP/IP (if the Oracle database is running on a host system that supports network communication using TCP/IP). Multi-Threaded Server Support (MTS) is available in TCP/IP networks. Connection Pooling is available only with MTS on TCP/IP networks.</td>
<td>Net8 Administrator’s Guide</td>
</tr>
</tbody>
</table>
Index

A

account
  creating the oracle account, 2-6
Administrator, 3-11
  disk space requirements, 1-5
  response file, 3-22
administrators
  role, 2-6
  UNIX accounts, 2-3, 4-2
  UNIX groups, 2-3
Application User, 3-11
  disk space requirements, 1-5
  response file, 3-22
Assistant Common Files, A-14
authentication methods, A-3, A-8
  CyberSafe, 1-10
  Identix, 1-10
  Kerberos, 1-10
  RADIUS, 1-10
  requirements, 1-10
  Secure Socket Layer, 1-10
  SecurID, 1-10
  supported for Oracle Advanced Security, 1-10
automating startup and shutdown, 4-4
Available Products window, 3-6

C

CD-ROM
  mounting the, 3-2
character mode
  issues and restrictions, 1-13
CLASSPATH variable, 4-8

clientadmin.rsp file, 3-22
clientappuser.rsp file, 3-22
clientcustom.rsp file, 3-22
clientprogrmr.rsp file, 3-22
COBLIB variable, 2-14
commands
  ipcs, 2-4
  mount, 3-2
  pkgrm, 2-15, 3-20
  rcp, 2-14
  runInstaller, 3-3
  parameters, 3-22
  umask, 2-7
  umount, 3-2
Configuration Tools window, 3-9
connect descriptors, 2-20
coraenv script
  multiple instance machine, 4-9
  single-instance machine, 4-9
CyberSafe authentication, A-4, A-8
  requirements, 1-10

D

Data Collection Services, A-5, A-14
database
  automating startup and shutdown, 4-4
  creation methods, 2-23, 4-23
    minimal, 3-7
    Oracle Internet Directory, 3-14
    typical, 3-7
deletion, 4-24
global name, 3-8
  instance name, 3-8, 4-8
migration, 3-7, 4-22
mount points, 2-5
starter database, 1-14
system identifier (SID), 3-8
upgrading, 4-22
Database File Location window, 3-8
Database Identification window, 3-8
dba UNIX group, 2-3, 2-6, 2-12, 3-7
creating for Oracle Parallel Server, 2-12
DBAs
See administrators
DBCA_RAW_CONFIG variable, 2-12
dbca.rsp file, 3-22
dbora file, 4-5, 4-19
dbshut script, 4-4
dbstart script, 4-4
DCE authentication, A-4, A-8
Decision Support System, 2-23
de-installation
Legato Storage Manager, 2-15
with Oracle Universal Installer, 4-24
DES-40 Encryption Support, A-3, A-7
DES56 Encryption Support, A-3, A-8
directory services
configuring, 2-15, 2-20, 2-22
DISPLAY variable, 2-8
accessing, 4-23
navigation files, 4-23
related, xi
viewing requirements, 1-7
where installed, 4-23

E
emca.rsp file, 3-22
Encryption Support, A-3, A-7
Entrust authentication, A-8
environment
creating common, 4-9
requirements, 2-8
updating current session, 2-11
environment variables
CLASSPATH, 4-8
COBLIB, 2-14
DBCA_RAW_CONFIG, 2-12
descriptions and settings, 4-6
DISPLAY, 2-8
LD_LIBRARY_PATH, 2-14, 4-7
NLS_LANG, 2-10, 2-16
ORA_NLS33, 2-10
ORACLE_BASE, 2-10, 4-7
ORACLE_DOC, 2-11, 4-23
ORACLE_HOME, 2-10, 3-4, 4-8
ORACLE_SID, 2-10, 4-8
PATH, 2-9, 4-8
TNS_ADMIN, 4-9, 4-18
TWO_TASK, 4-9
executables
required for installation, 1-6, 1-7

F
File Locations window, 3-4
file systems
raw devices, 2-11
requirements, 1-14
files
coraenv, 4-9
dbora, 4-5, 4-19
dbshut, 4-4
dbstart, 4-4
init.ora, 4-11
installActions.log, 3-17, 3-23
installation logs
non-interactive, 3-23
ldap.ora, 2-20
Legato Storage Manager configuration, 3-21
listener.ora, 2-19, 2-20, 4-13
listener.ora file, 4-18
login files, 2-11, 4-6
Net8 configuration, 2-18, 4-13
Oracle Universal Installer log files, 3-16
oraenv, 4-9
orainst.loc, 1-12, 2-4, 3-16
orainstRoot.sh, 3-5
oratab, 4-5, 4-11
pcbcfg.cfg, 4-18
pcocfg.cfg, 4-18

Index-2
pcscfg.cfg, 4-17
permissions, 4-2
permissions for creation, 2-3
pmcfg.cfg, 4-18
response files, 3-21, 3-22
root.sh, 3-16, 4-8
security, 4-2
setting permissions for creation, 2-7
silentInstall.log, 3-23
size limits, 1-15
sqlnet.ora, 2-19, 2-20, 4-13
support for very large files, 1-15
supported file systems, 1-14
tnsnames.ora, 2-19, 2-20, 2-22, 4-13, 4-22

G
global database name, 3-8
groups, 2-6
dba, 2-3, 2-6, 2-12, 3-7
how to create, 2-6
oinstall, 2-3, 2-6, 2-12, 3-5, 4-2
OSDBA and OSOPER, 2-3, 2-12, 3-7, 4-2
requirements, 2-3
UNIX Group Name window, 3-5

H
home directory, 2-7

I
Identix authentication, A-4, A-8
requirements, 1-10
initialization files, 2-11, 4-6
init.ora file, 4-11
installActions.log file, 3-17, 3-23
installation
aborted, 3-17
categories and types, 1-3, A-2, A-7, A-11
cleaning up, 3-17
non-interactive, 1-13, 3-21
   error handling, 3-23
log files, 3-23
response files, 3-21
Oracle Internet Directory, 3-14
Oracle Management Server, 3-12
Oracle Parallel Server, 3-17
oracle software owner, 2-3
Oracle8i Client, 3-10, A-7
Oracle8i Management Infrastructure, 3-12, A-11
overview, 1-2
post-installation tasks, 4-1
pre-installation tasks, 2-1
requirements
   environment, 2-8
   Optimal Flexible Architecture, 1-14
Installation Types window, 3-7
interMedia, A-5, A-12
   requirements, 1-8
   SYSTEM tablespace, 4-15
interMedia Audio, A-5, A-12, A-15
interMedia Client, A-9
interMedia Common Files, A-5, A-12, A-15
interMedia Image, A-5, A-12, A-14
interMedia Locator Service, A-5, A-12, A-15
interMedia Text, A-5, A-12, A-15
data dictionary space requirements, 1-8, 4-15
   Manager, A-4
interMedia Text Manager, A-9, A-12, A-21
Interprocess Communication parameters
   requirements, 2-4
ipcs command, 2-4
issues and restrictions
   port-specific, 1-12

J
   CLASSPATH variable, 4-8
   operating system patches, 1-12
   requirements, 1-8, 1-12
JRE
   See Java Runtime Environment

Index-3
K

Kerberos authentication, A-3, A-8
requirements, 1-10
kernel
parameter settings, 2-2, 2-4

L

LD_LIBRARY_PATH variable, 2-14, 4-7
LDAP
configuring, 2-15
Net8 Configuration Assistant, 2-19
ldap.ora file, 2-20
Legato NetWorker, A-16
and Legato Storage Manager, 1-11
Legato Storage Manager, A-2, A-11, A-16
contacting Legato, A-16
files, 3-21
integrating with SAP R/3, 4-20
post-installation tasks, 4-19
pre-installation tasks, 2-14
removing, 2-15, 3-20
requirements, 1-9, 1-11
listener.ora file, 2-19, 2-20, 4-13, 4-18
listeners, 3-5
commands, 2-17
local naming, 2-20, 2-22, 4-22
Logical Unit Type 6.2 (LU6.2) protocol
support, A-16
requirements, 1-9
supporting networks, A-16
login files, 2-11, 4-6

M

MD5 Integrity Support, A-3, A-8
migration, 3-7, 4-22
Oracle Data Migration Assistant, 1-14
Migration utility, 1-14
mount command, 3-2
mount points
naming conventions, 2-5
requirements, 2-3
multipurpose database environment, 2-23
Multi-Threaded Server
post-installation tasks, 4-16

N

National Language Support
Oracle Internet Directory, 2-16
Net8
and Oracle Advanced Security, 1-10
connect descriptors, 2-20
directory service, 2-20, 2-22
LDAP, 2-15, 2-19
listeners, 2-16, 2-20, 3-5
local naming, 2-20, 2-22
naming methods, 2-19, 2-20, 2-22
local, 4-9, 4-22
Net8 Client configuration, 2-21
Net8 Server configuration, 2-18
post-installation tasks, 4-9
pre-installation tasks, 2-16
TNS_ADMIN variable, 4-9
Net8 Assistant, A-2, A-7, A-11, A-17
Net8 Configuration Assistant, 2-17, 3-9, 4-12, 4-22,
A-2, A-7, A-11, A-17
de-configuring Net8, 4-24
LDAP, 2-19
response file, 3-22
Net8 Server, A-2, A-11, A-17
net8ca.rsp file, 3-22
NLS_LANG variable, 2-10, 2-16
non-interactive installation, 1-13

O

Object Type Translator, A-3, A-7, A-11, A-17
OFA
See Optimal Flexible Architecture
oinstall UNIX group, 2-3, 2-6, 2-12, 3-5, 4-2
OLTP
database environment, 2-23
omicustom.rsp file, 3-22
omioid.rsp file, 3-22
omioms.rsp file, 3-22
Online Transaction Processing
See OLTP
Open Systems Interconnect (OSI) model, A-16
operating system
configuration, 2-2
packages, 1-6
determining which are installed, 1-7
patches, 1-6
requirements, 1-6, 1-14
OPERATOR role, 2-6
Optimal Flexible Architecture, 2-3
installation issues and restrictions, 1-14
options
setup tasks, 2-11
ORA_NLS33 variable, 2-10
oracle account
home directory, 2-7
how to create, 2-6
Oracle Parallel Server requirements, 2-12
post-installation tasks, 4-6
pre-installation tasks, 2-7
requirements, 2-6
authentication methods, 1-10
Oracle Wallet Manager, 1-10
requirements, 1-9, 1-10
Oracle Application Server Listener, A-5, A-12, A-18
Oracle Applications Manager, A-4, A-9, A-12, A-18
Oracle Call Interface, A-4, A-8, A-11, A-18
Oracle Connection Manager, A-2, A-11, A-18
Oracle Data Migration Assistant, 1-14, 3-7, 3-9, 4-22, A-4, A-11, A-18
and Oracle7, 1-8, 1-14
requirements, 1-8
Oracle Database Configuration Assistant, 3-7, 3-9, 4-23, A-4, A-11, A-19
creating a multipurpose database, 2-23
creating an OLTP database, 2-23
creating a Warehousing database, 2-23
database creation methods, 2-23
custom, 2-26
minimal, 2-25
typical, 2-24
DBCA_RAW_CONFIG variable, 2-12
deleting a database, 4-24
interMedia, 2-24, 2-25, 2-26
Net8 configuration, 2-19, 2-20, 4-22
Oracle Parallel Server, 2-12
oratab file, 4-11
response file, 3-22
Oracle Developer Server Forms Manager, A-4, A-9, A-12, A-19
Oracle Distributed Access Manager, A-4, A-9, A-12, A-19
Oracle Enterprise Login Assistant, A-3, A-7, A-19
post-installation tasks, 4-14
pre-installation tasks, 2-17
repository, 2-17, 3-12, 4-23
requirements, 1-9
running from a website, 1-9
Oracle Enterprise Manager Configuration Assistant, 3-9, 4-14, 4-23, A-5, A-11, A-20
response file, 3-22
Oracle Enterprise Manager Console, A-4, A-8, A-11, A-20
Oracle Enterprise Manager DBA Management Pack, A-11
Oracle Enterprise Manager Quick Tours, A-5, A-9, A-12, A-20
Oracle Enterprise Manager Web Site, A-5, A-12, A-20
Oracle Information Navigator, 4-24
Oracle Instance Manager, A-4, A-9, A-12, A-21
Oracle Intelligent Agent, A-5, A-21
Oracle interMedia, A-5, A-12
Oracle Internet Directory, A-13, A-21
database creation, 3-14
Database File Location window, 3-15
default settings, 3-14
administrator password, 3-14
disk space requirements, 1-5
installation, 3-14
National Language Support, 2-16
Index-6

NLS_LANG variable, 2-16
post-installation tasks, 4-13
pre-installation tasks, 2-16
requirements, 1-8
response file, 3-22
Secure Socket Layer, 4-14
security, 4-14
Oracle Internet Directory Client Toolset, A-13
Oracle inventory
    JRE locations, 1-12
    log files, 3-16
    requirements, 1-8
    disk space requirements, 1-5
    repository, 3-12
    requirements, 1-9
    response file, 3-22
Oracle Management Server Repository
    window, 3-12
Oracle Names, A-6, A-13, A-22
Oracle Objects, A-22
Oracle Options
    requirements, 1-8
    setup tasks, 2-11
Oracle Parallel Server, A-6, A-22
    ASCII file, 2-12
    Cluster Membership Monitor, 2-13
    create oracle software owner, 2-12
    creating the dba group, 2-12
    file permissions, 2-12
    installation, 3-17
    issues and restrictions, 1-15
Oracle Database Configuration Assistant, 2-12
ORACLE_HOME variable, 2-13
OSDBA and OSOPER groups, 2-12
post-installation tasks, 4-17
pre-installation tasks, 2-11
rcp command, 2-14
re-installing, 3-17
requirements, 1-8
root.sh script, 3-16
UNIX groups, 2-12
user equivalence setup, 2-14
Oracle Parallel Server Management, A-4, A-6, A-9,
    A-12, A-23
Oracle Parallel Server Manager, A-23
Oracle Partitioning, A-6, A-13, A-23
Oracle Precompilers
    post-installation tasks, 4-17
Oracle Replication Manager, A-4, A-9, A-12, A-23
Oracle roles
    SYSDBA and SYSOPER, 2-6
Oracle Schema Manager, A-4, A-9, A-12, A-23
Oracle Server
    automating startup and shutdown, 4-4
    re-installing cleanly, 4-4
    shutting down cleanly, 4-4
oracle software owner
    See oracle account
Oracle Spatial, A-6, A-13, A-24
Oracle Storage Manager, A-4, A-9, A-12, A-24
    Available Products window, 3-6
    Configuration Tools window, 3-9
    database creation methods, 2-23
    Database File Location window, 3-8
    Database Identification window, 3-8
de-installing products, 4-24
    File Locations window, 3-4
    Installation Types window, 3-7
    inventory, 1-12, 2-3, 3-16
    log files, 3-16
Oracle Internet Directory, 3-14
Oracle Internet Directory Database File Location
    window, 3-15
Oracle Management Server Repository
    window, 3-12
Oracle Parallel Server, 2-13
Oracle8i Enterprise Edition, 3-7
Privileged Operating System Groups
    window, 3-7
    response files, 3-22
    error handling, 3-22
specifying a response file, 3-22
validation, 3-23
Select Starter Database window, 3-7
silent install
  See installation, non-interactive
UNIX Group Name window, 3-5
Upgrade or Migrate an Existing Database window, 3-7
Welcome window, 3-3
Oracle Utilities, A-6, A-10, A-24
  requirements, 1-8
  and Secure Socket Layer, 1-10
ORACLE_BASE variable, 2-10, 4-7
  requirements, 2-3
ORACLE_DOC variable, 2-10, 4-7
ORACLE_HOME variable, 2-10, 3-4, 4-8
  oracle account home directory, 2-7
Oracle Parallel Server, 2-13
  requirements, 1-12
ORACLE_SID variable, 2-10, 4-8
Oracle7
  and Oracle Data Migration Assistant, 1-8
  and Oracle Management Server repository, 2-17
  migration, 1-14
Oracle8i Client, A-10
  disk space requirements, 1-5
  installation types, 3-10
  response file, 3-22
Oracle8i Enterprise Edition
  disk space requirements, 1-5
  installation types, 3-7
Oracle8i Management Infrastructure
  disk space requirements, 1-5
  installation types, 3-12
Oracle8i Server, A-6, A-13
oraenv script
  multiple instance machine, 4-9
  single-instance machine, 4-9
oraInst.loc file, 1-12, 2-4, 3-16
orainstRoot.sh file, 3-5
oraInventory directory, 3-16
oratab file, 4-5
post-installation tasks, 4-11
OSDBA and OSOPER groups, 2-3, 2-6, 3-7, 4-2

P

packages
  operating system, 1-6
parameters
  initialization, 4-11
  init.ora file, 4-11
patches
  Java Runtime Environment, 1-12
  operating system, 1-6
  Oracle, 4-11
PATH variable, 1-7, 2-9, 4-8
pcbcfg.cfg file, 4-18
pccfor.cfg file, 4-18
pcscfg.cfg file, 4-17
permissions
  file creation, 2-3
  setting with umask, 2-7
pkginfo command, 1-7
pkgrm command, 2-15, 3-20
pmscfg.cfg file, 4-18
post-installation tasks
  automate database startup and shutdown, 4-4
  configuration assistants, 4-21
  Legato Storage Manager, 4-19
  Multi-Threaded Server, 4-16
  Oracle Internet Directory, 4-13
  Oracle Parallel Server, 4-17
  Oracle Precompilers, 4-17
  product-specific, 4-12
  Recovery Manager, 4-16
  running root.sh, 3-16
  Secure Socket Layer, 4-19
precompilers
  requirements, 1-8
pre-installation tasks
  as the root user, 2-3
  Legato Storage Manager, 2-14
  Net8, 2-16
  Oracle Enterprise Manager, 2-17
  Oracle Internet Directory, 2-16
  Oracle Parallel Server, 2-11
Pro*C/C++, 2-14
Pro*COBOL, 2-14
Pro*FORTRAN, 2-14
raw devices, 2-11
SQL*Module*Ada, 2-14
Privileged Operating System Groups window, 3-7
Pro*C/C++, A-10, A-25
configuration files, 4-17
post-installation tasks, 4-17
pre-installation tasks, 2-14
requirements, 1-8
Pro*COBOL, A-10, A-25
configuration files, 4-18
post-installation tasks, 4-18
pre-installation tasks, 2-14
requirements, 1-8
Pro*FORTRAN, A-10
configuration files, 4-18
post-installation tasks, 4-18
pre-installation tasks, 2-14
requirements, 1-8
Programmer, 3-11
disk space requirements, 1-5
response file, 3-22
protocol support, A-2, A-7, A-11
Logical Unit Type 6.2 (LU6.2), A-16
post-installation tasks, 4-18
Secure Socket Layer, 4-19
SPX/IPX, 4-19, A-27
TCP/IP, A-27

R

RADIUS authentication, A-3, A-8
requirements, 1-10
raw devices
creating, 2-11
RC4-40 Encryption Support, A-3, A-8
RC4-56 Encryption Support, A-3, A-8
rcp command, 2-14
Recovery Manager, 4-16
related documentation, xi
remote login
user equivalence, 2-14
repository
Oracle Enterprise Manager, 4-23
Oracle Management Server, 2-17
requirements
authentication methods, 1-10
CD-ROM, 1-4
CyberSafe authentication, 1-10
disk space, 1-5
file permissions, 2-3
file systems, 1-14
hardware, 1-4
Identix authentication, 1-10
interMedia, 1-8
Interprocess Communication parameters, 2-4
Java Runtime Environment, 1-8, 1-12
Kerberos authentication, 1-10
kernel parameter settings, 2-2, 2-4
LDAP, 2-15
Legato Storage Manager, 1-9, 1-11
Logical Unit Type 6.2 (LU6.2), 1-9
memory, 1-4
mount points, 2-3, 2-5
operating system, 1-6
operating system executables, 1-6, 1-7
operating system version, 1-14
oracle account, 2-6
Oracle Advanced Security, 1-9, 1-10
Oracle Data Migration Assistant, 1-8
Oracle Enterprise Manager, 1-9
Oracle Internet Directory, 1-8
Oracle JServer, 1-8
Oracle Management Server, 1-9
Oracle Options, 1-8
Oracle Parallel Server, 1-8
Oracle Visual Information Retrieval, 1-8
ORACLE_BASE variable, 2-3
ORACLE_HOME, 1-12
precompilers, 1-8
Pro*C/C++, 1-8
Pro*COBOL, 1-8
Pro*FORTRAN, 1-8
RADIUS authentication, 1-10
Secure Socket Layer, 1-9, 1-10
SecurID authentication, 1-10
semaphores, 2-2
software, 1-6
SPX/IPX, 1-9
SQL*Module Ada, 1-8
swap space, 1-4
system installation, 1-4
tools, 1-8
UNIX accounts, 2-3
UNIX groups, 2-3, 2-6
UNIX system configuration, 2-2
window manager, 1-6
response files, 3-22
tools, 1-8
UNIX accounts, 2-3
UNIX groups, 2-3, 2-6
UNIX system configuration, 2-2
window manager, 1-6
root user
  post-installation tasks, 4-2
  pre-installation tasks, 2-3
root.sh script, 4-8
root.sh script, running the, 3-16
runInstaller command, 3-3
parameters, 3-22
S
SAP R/3, 4-20
scripts
dbshut, 4-4
dbstart, 4-4
oraenv (coraenv), 4-9
root.sh, 3-16
Secure Socket Layer, A-4
  Oracle Internet Directory, 4-14
  post-installation tasks, 4-19
  requirements, 1-9, 1-10
SecurID authentication, A-4, A-8
  requirements, 1-10
security, 2-6
  Oracle Internet Directory, 4-14
  verifying for files, 4-2
Select Starter Database window, 3-7
semaphores
  requirements, 2-2
  setting the values, 2-4
setup tasks
  options, 2-11
  Oracle Options, 2-11
  TCP/IP protocol support, 2-17
SGA
  See Shared Global Area
Shared Global Area
  setting shared memory, 2-4
shared memory
  configuring, 2-4
  ipcs command, 2-4
  maximum, 2-4
  shutdown and startup, 4-4
silent install
  See installation, non-interactive
  silentInstall.log file, 3-23
software
  mount points, 2-5
Solaris
  issues and restrictions, 1-14
SPX/IPX protocol support, A-27
  post-installation tasks, 4-19
  requirements, 1-9
SQL*Module Ada, A-10
  configuration files, 4-18
  post-installation tasks, 4-18
  pre-installation tasks, 2-14
  requirements, 1-8
SQL*Plus Worksheet, A-4, A-9, A-12, A-26
SQLJ, A-6, A-10, A-13, A-26
SQLJ Runtime, A-6, A-10, A-13, A-26
sqlnet.ora file, 2-19, 2-20, 4-13
SSL authentication, A-8
startup and shutdown, 4-4
svrcustom.rsp file, 3-22
svrminimal.rsp file, 3-22
svrtypical.rsp files, 3-22
SYSDBA and SYSOPER roles, 2-6
System Global Area
  init.ora file, 4-11
  system identifier, 4-8
System Network Architecture (SNA), A-16
  system requirements, 1-4
SYSTEM tablespace
  interMedia Option database objects, 4-15
TCP/IP protocol support, A-27
  and Secure Socket Layer, 1-9
setup tasks, 2-17
TNS_ADMIN variable, 4-9, 4-18
tnsnames.ora file, 2-19, 2-20, 2-22, 4-13, 4-22
tools
  requirements, 1-8
TWO_TASK variable, 4-9, 4-19
ulimit command, 1-15
umask command
  setting, 2-7
umount command, 3-2
uname command, 1-6
UNIX accounts
  how to create, 2-6
  requirements, 2-3
UNIX Group Name window, 3-5
UNIX kernel
  how to configure, 2-4
  parameter settings, 2-2, 2-4
UNIX system
  summary of requirements, 2-2
Upgrade or Migrate an Existing Database
  window, 3-7
upgrading, 1-14, 3-4, 3-7
user equivalence, checking for, 2-14
very large files
  support, 1-15
Warehousing database environment, 2-23
Welcome window, 3-3
window manager
  requirements, 1-6