

Oracle8i

Installation Guide

Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)

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Oracle8i Installation Guide, Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)

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for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)**

Part No. A87437_01

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Preface

Purpose of this Guide

This guide, with the *Oracle8i Release Notes Release 3 (8.1.7) for Solaris Intel UNIX*, the *Oracle8i Release Notes Release 3 (8.1.7) for Intel UNIX (DG/UX Intel and SCO UnixWare)* and the *Oracle8i Administrator's Reference Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)*, describes how to install and configure Oracle8i release 3 (8.1.7) on Intel UNIX. For additional product information, see the *Oracle8i Generic Documentation Set*.

Audience

This guide is intended for anyone responsible for installing Oracle8i release 3 (8.1.7) on Intel UNIX systems.

Oracle8i and Oracle8i Enterprise Edition

The information in this guide is common to both Oracle8i and Oracle8i Enterprise Edition.

Typographic Conventions

The following typographic conventions are used in this guide:

`monospace` Monospace type indicates UNIX commands, directory names, user names, path names, file names, and text quoted from screen output.

brackets []	Words enclosed in brackets indicate button and key names (for example, Press [Return]). Note that brackets have a different meaning when used in command syntax.
<i>italics</i>	Italic type indicates variables, including variable portions of file names. It is also used for emphasis.
UPPERCASE	Uppercase letters indicate Structured Query Language (SQL) reserved words, initialization parameters, and environment variables.

Command Syntax

All examples that show commands or file contents appear in monospace font and assume the use of the Bourne shell. The dollar prompt (\$) at the beginning of the UNIX command examples is the default UNIX command prompt. Do not enter it in the examples.

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: <pre>dd if=/dev/rdskc0t1d0s6 of=/dev/rst0 bs=10b \ count=10000</pre>
braces { }	Braces indicate required items: <code>.DEFINE {macro1}</code>
brackets []	Brackets indicate optional items: <code>cvtcrt termname [outfile]</code> Note that brackets have a different meaning when used in regular text.
ellipses ...	Ellipses indicate an arbitrary number of similar items: <code>CHKVAL fieldname value1 value2 ... valueN</code>
<i>italics</i>	Italic type indicates a variable. Substitute a value for the variable: <code>library_name</code>
vertical line	A vertical line indicates a choice within braces or brackets: <code>SIZE filesize [K M]</code>

Accessing Installed Documentation

Oracle8i release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel) documentation includes this guide and the *Oracle8i Administrator's Reference Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)*. You can install documentation in HTML and PDF (Adobe Portable Document Format, which requires Acrobat Reader) formats. Platform-specific documentation files are installed from the Oracle8i CD-ROM. Generic documentation files are installed from the Oracle8i Online Generic Documentation CD-ROM. The location of the documentation files is determined according to the following rules:

- If the ORACLE_DOC environment variable is defined, the files are installed in that directory.
- If the ORACLE_DOC environment variable is not defined but the ORACLE_BASE environment variable is defined, the files are installed in the \$ORACLE_BASE/doc directory.
- If neither the ORACLE_DOC nor the ORACLE_BASE environment variables are defined, the files are installed in the \$ORACLE_HOME/doc directory.

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

Oracle Product Documentation

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

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. You can use the Information Navigator with Oracle documentation, whether you are reading from the CD-ROM or from installed files.

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 on system administration and tuning a production database system is provided in these documents:

- *Oracle8i Release Notes Release 3 (8.1.7) for Solaris Intel UNIX*
- *Oracle8i Release Notes Release 3 (8.1.7) for Intel UNIX (DG/UX Intel and SCO UnixWare)*
- *Oracle8i Administrator's Reference Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)*
- *Net8 Administrator's Guide*
- *Oracle8i Designing and Tuning for Performance*

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

Information on installing Oracle Internet Directory is provided in the *Oracle Internet Directory Installation Guide*.

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<http://www.oracle.com>

The following sections provide URLs for selected services.

Oracle Support Services

Technical Support contact information worldwide is listed at:

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

This site provides templates to help you prepare information on your problem before you call. You also need your CSI number (if applicable) or complete contact details, including any special project information relating to the problem.

Products and Documentation

Customers in the U.S.A. can contact the Oracle Store at:

<http://store.oracle.com>

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

Product documentation is available at:

<http://docs.oracle.com>

Customer Service

Global Customer Service contacts are listed at :

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

Education and Training

Information on training and worldwide training schedules is available at:

<http://education.oracle.com>

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OTN provides technical papers, code samples, product documentation, self-service developer support, and Oracle key developer products to enable rapid development and deployment of applications built on Oracle technology.

Support for the Hearing-Impaired

To avail of TTY access to Oracle Support Services within the United States of America, phone 1-800-446-2398.

System Requirements

This chapter describes the software dependent space requirements for installing Oracle8i on Intel UNIX. Verify that your system meets these requirements before you start an installation. This chapter contains the following sections:

- [Installation Overview](#)
- [System Installation Requirements](#)
- [Intel UNIX and Installation-Specific Issues and Restrictions](#)

Installation Overview

To install Oracle8i, perform the following steps:

1. *Satisfy Prerequisites:* Make sure that the system meets the hardware, software, memory, and disk space requirements for the products that you want to install. These requirements and restrictions are described in this chapter.
2. *Pre-Installation:* Make sure that the UNIX environment is properly set up and complete the pre-installation tasks for the products that you want to install. See [Chapter 2](#) for more information.
3. *Installation:* Use the Oracle Universal Installer provided on the software CD-ROM to install Oracle products. See [Chapter 3](#) for more information.
4. *Post-Installation:* Create database objects, establish the user environment, and configure the installed Oracle products for the system. See [Chapter 4](#) for more information.
5. *Client Installations:* If you want to install client tools, applications, and client interfaces not included on the Oracle8i release 3 (8.1.7) CD-ROM, check the requirements and instructions in the documentation for those products.

Product Categories and Installation Types

There are three product categories included with Oracle8i release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel):

- Oracle8i Enterprise Edition
- Oracle8i Management and Integration
- Oracle8i Client

Each product category provides multiple installation types. [Table 1-1](#) provides an overview of these product categories and installation types. For descriptions and release numbers of individual software products included on the Oracle8i release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel) CD-ROM, refer to [Appendix A](#).

Table 1–1 Oracle8i Product Categories and Installation Types

Product Category	Installation Types
Oracle8i Enterprise Edition	<p data-bbox="472 305 558 336">Typical</p> <p data-bbox="519 348 1310 505">Installs a preconfigured starter database, licensable Oracle options, networking services, Oracle utilities, Oracle Enterprise Manager Console (including enterprise management tools, Solaris Intel only), and online documentation. This installation type is recommended for users who want the set of products most commonly of use for standard database environments.</p> <p data-bbox="472 522 572 553">Minimal</p> <p data-bbox="519 565 1310 696">Gives you the option of installing a preconfigured starter database, networking services, Oracle Enterprise Manager Console (including enterprise management tools, Solaris Intel only), and Oracle utilities. This installation type is recommended for users who want a minimal database package.</p> <p data-bbox="472 713 562 744">Custom</p> <p data-bbox="519 756 1310 805">Lets you selectively install products from the preceding installation types and customize your database and networking configurations.</p>
Oracle8i Management and Integration	<p data-bbox="472 822 772 854">Oracle Management Server</p> <p data-bbox="519 866 1310 944">Installs the Oracle Enterprise Manager Console (including enterprise management tools, Solaris Intel only), networking services, utilities, basic client software, and online documentation.</p> <p data-bbox="472 961 958 992">Oracle Internet Directory (Solaris Intel only)</p> <p data-bbox="519 1005 1310 1053">Installs the Oracle Internet Directory Server, client tools, and the database schema required by Oracle Internet Directory.</p> <p data-bbox="472 1071 562 1102">Custom</p> <p data-bbox="519 1114 1310 1156">Lets you selectively install and customize products from the preceding installation types.</p>

Table 1–1 Oracle8i Product Categories and Installation Types (Cont.)

Product Category	Installation Types
Oracle8i Client	Administrator Installs the Oracle Enterprise Manager Console (including enterprise management tools, Solaris Intel only), networking services, utilities, basic client software, and online documentation. Programmer Installs development tools and interfaces for creating applications that access an Oracle8i database. This installation package includes precompilers, networking services, and documentation. Application User Provides networking services and support files that enable database application users to connect to and interact with an Oracle8i database. Custom Lets you selectively install products from the preceding installation types.

System Installation Requirements

Verify that your system meets the requirements described in the following sections before you install Oracle8i release 3 (8.1.7) products.

Note: You cannot complete an installation if your system does not meet the minimum requirements for the Oracle products that you select.

- [Hardware Requirements](#)
- [Disk Space Requirements](#)
- [Operating System Software Requirements](#)
- [Additional Product-Specific Installation Requirements](#)

Hardware Requirements

To install the Oracle8i products included with this release, your system must meet the minimum hardware requirements listed in [Table 1-2](#), [Table 1-3](#), or [Table 1-4](#).

[Table 1-2](#) lists hardware requirements for DG/UX Intel.

Table 1-2 Hardware Requirements for DG/UX Intel

Hardware Item	DG/UX Intel Requirement
CPU	A DG AViiON Server based on the Intel chip set.
Memory	A minimum of 128 MB is required to install Oracle8i products. Oracle8i Client products require 64 MB.
Swap Space	Typically, three times the amount of RAM is recommended.
Disk Space	At least 750 MB is required when installing the entire Oracle8i Server distribution. Less space is required if installing only a subset of the available products. If you are using the Optimal Flexible Architecture (OFA) model, at least four devices are required: one for the Oracle software distribution and three for creating an OFA-compliant database. Note: Typically, Oracle Corporation recommends that disk space be spread across more, smaller drives, rather than fewer, larger ones for improved performance and fault tolerance.
CD-ROM Device	A RockRidge format CD-ROM drive supported by DG/UX Intel.
Ethernet Controller	An Ethernet card supported by DG/UX Intel.

[Table 1-3](#) lists hardware requirements for SCO UnixWare.

Table 1-3 Hardware Requirements for SCO UnixWare

Hardware Item	SCO UnixWare Requirement
CPU	An Intel based system. See your UnixWare documentation for a list of supported hardware systems.
Memory	A minimum of 128 MB is required to install Oracle8i products. Oracle8i Client products require 64 MB.
Swap Space	Typically, three times the amount of RAM is recommended.

Table 1–3 Hardware Requirements for SCO UnixWare (Cont.)

Hardware Item	SCO UnixWare Requirement
Disk Space	<p>At least 750 MB is required when installing the entire Oracle8i Server distribution. Less space is required if installing only a subset of the available products. If you are using an OFA-compliant model, at least four devices are required: one for the Oracle software distribution and three for creating an OFA-compliant database.</p> <p>Note: Typically, Oracle Corporation recommends that disk space be spread across more, smaller drives, rather than fewer, larger ones for improved performance and fault tolerance.</p>
CD-ROM Device	A RockRidge format CD-ROM drive supported by SCO UnixWare is required.
Ethernet Controller	An Ethernet card supported by SCO UnixWare.

[Table 1–4](#) lists hardware requirements for Solaris Intel.

Table 1–4 Hardware Requirements for Solaris Intel

Hardware Item	Solaris Intel Requirement
CPU	An Intel based system. See your Solaris Intel documentation for a list of supported hardware systems.
Memory	A minimum of 128 MB is required to install Oracle8i products. Oracle8i Client products require 64 MB.
Disk Space	<p>At least 750 MB is required when installing the entire Oracle8i Server distribution. Less space is required if installing only a subset of the available products. If you are using an OFA-compliant model, at least four devices are required: one for the Oracle software distribution and three for creating an OFA-compliant database.</p> <p>Note: Typically, Oracle Corporation recommends that disk space be spread across more, smaller drives, rather than fewer, larger ones for improved performance and fault tolerance.</p>
CD-ROM Device	A RockRidge format CD-ROM drive supported by Solaris Intel is required.
Ethernet Controller	An Ethernet card supported by Solaris Intel is required.

Random Access Memory Requirements

To determine the amount of random access memory installed in your system, enter one of the following commands:

- On DG/UX Intel, enter:
`$ /usr/sbin/dg_sysreport`
- On SCO UnixWare, enter:
`$ /usr/sbin/rtpm`
- On Solaris Intel, enter:
`$ /usr/sbin/prtconf | grep size`

Swap Space Requirements

To determine the amount of swap space currently configured in your system, enter one of the following commands and multiply the value shown in the BLOCKS column by 512:

- On DG/UX Intel, enter:
`$ /usr/bin/sysadm`
- On SCO UnixWare, enter:
`$ /usr/sbin/swap -l`
- On Solaris Intel, enter:
`$ swap -e`

Disk Space Requirements

The Oracle Universal Installer allows you to choose your product category and installation type as described in [Table 1-1](#). Your choice determines how much disk space you require, as shown in [Table 1-5](#), [Table 1-6](#), and [Table 1-7](#). Disk space requirements shown do not include 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 installation time.

Table 1-5 *Disk Space Requirements for Oracle8i Enterprise Edition*

Installation Type	Required Disk Space
Typical	960 MB
Minimal	800 MB
Custom	Up to 1.1 GB

Table 1-6 *Disk Space Requirements for Oracle8i Client*

Installation Type	Required Disk Space
Administrator	385 MB
Programmer	298 MB
Application User	217 MB
Custom	Up to 385 MB

Table 1-7 *Disk Space Requirements for Oracle8i Management and Integration*

Installation Type	Required Disk Space
Oracle Management Server	337 MB
Oracle Internet Directory (Solaris Intel only)	699 MB
Custom	Up to 923 MB

Temporary Disk Space Required by the Oracle Universal Installer

The Oracle Universal Installer requires up to 75 MB of space in the `/tmp` directory. If you do not have enough space in the `/tmp` directory, set the `TMPDIR` environment variable to specify a directory with sufficient space.

Operating System Software Requirements

To install the Oracle*8i* products included with this release, your system must meet the operating system requirements listed in [Table 1-8](#), [Table 1-9](#), or [Table 1-10](#).

[Table 1-8](#) lists the operating system requirements for DG/UX Intel.

Table 1-8 Operating System Requirements for DG/UX Intel

Software Item	DG/UX Intel Requirement
Operating System	DG/UX Intel R4.20 MU06 and other patches with SDK and ACO options.
Operating System Patches	dgux_R4.20MU05.p15 dgux_R4.20MU05.p22 sdk_R4.20mu05.p04
GUI Requirements	X11R5 from the current system release.
Clusters Package	The Distributed Lock Manager must be installed from DG Clusters 1.2.6 to use the Oracle Parallel Server option. Note that Clusters 1.2.6 must be installed on top of DG/UX Intel R4.20 MU06.
UNIX Kernel Parameters	The recommended values for the DG/UX Intel kernel parameters are listed in Table 2-1 on page 2-2.

Table 1–9 lists the operating system requirements for SCO UnixWare.

Table 1–9 Operating System Requirements for SCO UnixWare

Software Item	SCO UnixWare Requirement
Operating System	UnixWare7 Server release 7.1. The Optimizing C compilation system is required.
Operating System Patches	ptf7045 ptf7129 ptf7401 ptf7402 ptf7406 ptf7408 ptf7410 ptf7413 ptf7414 ptf7417 ptf7418 ptf7419 ptf7420 ptf7424
GUI Requirements	X11R6 from the current system release.
UNIX Kernel Parameters	The recommended values for the SCO UnixWare UNIX kernel parameters are listed in Chapter 2.

Table 1–10 lists the operating system requirements for Solaris Intel.

Table 1–10 Operating System Requirements for Solaris Intel

Software Item	Solaris Intel Requirement
Operating System	Solaris 7 for Intel. The 11/99 patch is recommended. The C compiler is not required for installation, but it is required for compiling the C demonstration programs.
Operating System Patches	Use the latest kernel patch for Solaris Intel. Sun provides patch information at: http://sunsolve.sun.com Solaris Intel requires at least kernel jumbo patch revision #106542-09 to successfully install Oracle8i release 3 (8.1.7).

Table 1–10 Operating System Requirements for Solaris Intel (Cont.)

Software Item	Solaris Intel Requirement
Remove ULIMIT Value	Before installing Oracle8i, you must remove the line containing the value for ULIMIT from the <code>/etc/default/login</code> file. You cannot install Oracle8i with the default value of ULIMIT in the <code>/etc/default/login</code> file.
GUI Requirements	The Motif Runtime Kit package <code>SUNWmfrun</code> bundled with Solaris Intel should be installed.
Reconfigure UNIX Kernel Parameters	Before installing the Solaris7 Server, you must reconfigure the UNIX kernel. You cannot install Oracle8i with the default UNIX kernel. The recommended values for the Solaris Intel kernel parameters are listed in Table 2–3, "UNIX Kernel Parameter Settings for Solaris Intel" on page 2-6.

Operating System Information

To determine your current operating system information, enter one of the following commands:

- On DG/UX Intel, enter:


```
$ /usr/sbin/dg_sysreport -g dgux
```
- On Solaris Intel and SCO UnixWare, enter:


```
$ pkginfo
```

Operating System Patches

To determine which operating system patches are installed, enter one of the following commands:

- On SCO UnixWare and DG/UX Intel, enter:


```
$ pkginfo
```
- On Solaris Intel, enter:


```
$ showrev -p
```

Window Manager

To determine if the X-windows system is configured correctly 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 2-17 for instructions on configuring X-windows.

Required Executables

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

- On DG/UX Intel, enter:

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

- On SCO UnixWare, enter:

```
$ /usr/bin/type make
$ /usr/bin/type ar
$ /usr/bin/type ld
$ /usr/bin/type nm
```

- On Solaris Intel, enter:

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

Each command should specify the `/usr/bin` directory on DG/UX Intel and SCO UnixWare and the `/usr/ccs/bin` directory on Solaris Intel. If not, add one of the following directories to the beginning of the `PATH` environment variable in the current shell:

- On DG/UX Intel and SCO UnixWare, add the `/usr/bin` directory .
- On Solaris Intel, add the `/usr/ccs/bin` directory.

See "[PATH](#)" on page 2-18 for instructions on setting the `PATH` environment variable.

Online Documentation Requirements

To view the online documentation included on 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 must use Adobe Acrobat Reader version 3.0 or higher. You can download Adobe Acrobat Reader from:

<http://www.adobe.com/products/acrobat/readstep.html>

Additional Product-Specific Installation Requirements

This section provides product-specific information in addition to the hardware and software requirements provided earlier in this chapter. For descriptions of these products, see [Appendix A](#).

Oracle8i and Options

[Table 1–11](#) describes Oracle8i and options restrictions, requirements, and installation tasks.

Table 1–11 Oracle8i Restrictions, Requirements, and Installation Tasks

Product Name	Restrictions and Requirements
Oracle8i, release 8.1.7	None.
Oracle HTTP [Apache Server]	Solaris Intel only. Requires JDK 1.2.2.05a or higher. See Table 1–15 , "Patches for JDK 1.2.2" for required patches.
Oracle Parallel Server, release 8.1.7	DG/UX Intel only, with Oracle Enterprise Edition. The Oracle Parallel Server option requires DG Clusters version 1.2.6.
Oracle <i>interMedia</i> , release 8.1.7	You must have at least 10 MB of additional disk space available for the <i>interMedia</i> Text data dictionary.
Oracle Internet Directory, release 2.0.6	Solaris Intel only. Requires an installation of Oracle8i Enterprise Edition, release 3 (8.1.7) with character set UTF8 and an instance dedicated to the Oracle Internet Directory. If this installation does not already exist, the Oracle Universal Installer installs it automatically as part of the OiD installation. Use the following SQL command to determine the database character set: <pre>SQL> SELECT VALUE FROM \ NLS_DATABASE_PARAMETERS SQL> WHERE PARAMETER = 'NLS_CHARACTERSET' ;</pre>

Table 1–11 Oracle8i Restrictions, Requirements, and Installation Tasks (Cont.)

Product Name	Restrictions and Requirements
Oracle Partitioning Option, release 8.1.7	None.
Oracle Programmer, release 8.1.7	None.
Oracle Visual Information Retrieval, release 8.1.7	Requires Oracle <i>interMedia</i> , release 8.1.7.

Tools and Precompilers

[Table 1–12](#) provides information on tool and precompiler restrictions and requirements.

Table 1–12 Tool and Precompiler Restrictions and Requirements

Product Name	Restrictions and Requirements
Oracle Data Migration Assistant, release 8.1.7	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 release 8.1.5 to be upgraded.
Oracle8i JVM, release 8.1.7 includes Java Virtual Machine (JVM) and Java utilities	See the Java README file on the Oracle8i CD-ROM for restrictions and requirements.
Pro*C/C++, release 8.1.7	DG/UX Intel requires Edinburgh Portable Compiler C++ 5.0. SCO UnixWare requires UDK Optimizing C compilation system 7 and UDK C++ compilation system 7.1. Solaris Intel requires the C compilation system from Solaris Intel Workshop 5.0 and the C++ compilation system from Solaris Intel Workshop 4.2.
Pro*COBOL, release 1.8.52	DG/UX Intel requires MicroFocus COBOL release 4.0 or higher. Solaris Intel and SCO UnixWare require Micro Focus COBOL release 4.1 or higher.

Table 1–12 Tool and Precompiler Restrictions and Requirements(Cont.)

Product Name	Restrictions and Requirements
Pro*COBOL, release 8.1.7	DG/UX Intel requires MicroFocus COBOL release 4.0. Solaris Intel and SCO UnixWare require Micro Focus COBOL release 4.1 or higher
Pro*FORTRAN, release 1.8.7 (DG/UX Intel only)	Requires Edinburgh Portable Compilers FORTRAN77 V2.7.
JRE	Solaris Intel requires JRE release 1.1.8.10. SCO UnixWare requires JRE release 1.1.7B. DG/UX Intel requires JRE release 1.1.7.1 and patches (JDK-117-po2 and JDK-117-p03).

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 before you install Net8 products. Refer to the operating system and networking product documentation for more information on installing network software. Net8 release 8.1.7 products require Oracle8i release 3 (8.1.7).

[Table 1–13](#) describes networking and system management product restrictions and requirements.

Table 1–13 Networking and System Management Product Restrictions and Requirements

Product Name	Restrictions and Requirements
Oracle Advanced Security: Export Edition, release 8.1.7	See Table 1–14 for information on Oracle Advanced Security authentication support requirements.
Oracle Enterprise Manager	Available on Solaris Intel only.
Oracle Intelligent Agent, release 8.1.7	None.
Oracle Names, release 8.1.7	None.
Oracle Net8, release 8.1.7	Solaris Intel requires JRE release 1.1.8.10. SCO UnixWare requires JRE release 1.1.7B. DG/UX Intel requires JRE release 1.1.7.1 and patches (JDK-117-po2 and JDK-117-p03).

Table 1–13 Networking and System Management Product Restrictions and Requirements(Cont.)

Product Name	Restrictions and Requirements
Oracle Connection Manager, release 8.1.7	None.
Oracle SSL Protocol, release 8.1.7	None.
Oracle TCP/IP with SSL Protocol Support, release 8.1.7	Requires SSL 3.0 or later.

Transparently Installed Products

Some products are automatically included with the Oracle8i Server. These products do not appear on lists of products that are included in your installation even though they have appeared as independent products in previous releases:

- PL/SQL, release 8.1.7
- Oracle Database Utilities, release 8.1.7
- Oracle Objects, release 8.1.7
- Migration Utility, release 8.1.7
- Server Manager, release 8.1.7

Oracle Intelligent Agent automatically installs Oracle Data Gatherer.

Oracle Parallel Server automatically installs Oracle Parallel Server Management (for DG/UX Intel only).

Oracle Advanced Security automatically installs SSL Protocol Support and Oracle Wallet Manager.

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 server and the client.

Oracle Advanced Security release 8.1.7 requires Net8 release 8.1.7 and supports Oracle8i Enterprise Edition. Install Oracle Advanced Security on each server and client where Oracle Advanced Security is required.

Table 1–14 describes requirements for authentication protocols supported by Oracle Advanced Security. See the *Oracle Advanced Security Administrator's Guide* for more information.

Note: You do not require any additional authentication protocol software to relink Oracle products. However, Oracle does not provide the third-party authentication servers (for example, Kerberos).

Table 1–14 Supported Authentication Methods and Requirements

Authentication Method	Requirements
Kerberos	MIT Kerberos version 5, release 1.1. The Kerberos authentication server must be installed on a physically secure system.
SecurID	ACE/Server release 3.3 or higher running on the authentication server.
Identix Biometric	Identix hardware and driver installed on each Biometric Manager station and client.
RADIUS	A RADIUS server that is compliant with the standards in the Internet Engineering Task Force (IETF) RFC #2138, <i>Remote Authentication Dial In User Service</i> (RADIUS) and RFC #2139, <i>RADIUS Accounting</i> . 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.
Secure Socket Layer (SSL)	A wallet that is compatible with the Oracle Wallet Manager release 2.1. Wallets created in earlier releases of the Oracle Wallet Manager are not forward compatible.

Intel UNIX and Installation-Specific Issues and Restrictions

The following issues and restrictions can affect the installation or use of Oracle8i on Intel UNIX. Check the Release Notes that accompany this release and the README files in the `$ORACLE_HOME/relnotes` directory of the CD-ROM before using Oracle8i. For release 3 (8.1.7), 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.

Using Hummingbird Exceed

If you are using the Hummingbirds Exceed X-windows server while installing and using Oracle8i, set the window manager to run in "Native" mode so that Microsoft windows functions as the window manager. See the Exceed documentation for instructions on configuring the window manager.

Re-Installing Oracle8i Release 3 (8.1.7)

If you re-install Oracle8i Server into an Oracle home directory where Oracle8i Server release 3 (8.1.7) is already installed, you must also re-install any product options, such as Oracle Partitioning, that were enabled before you began the re-installation.

New Oracle Home Directory

Oracle Corporation recommends that you install Oracle8i release 3 (8.1.7) products into a new Oracle home directory. Do not install Oracle8i release 3 (8.1.7) into an Oracle home directory that already contains Oracle products.

If you must install Oracle8i release 3 (8.1.7) into an Oracle home directory that contains release 8.1.5 or release 8.1.6 products, remove the release 8.1.5 or release 8.1.6 products with Oracle Universal Installer before beginning the new installation.

Backing Up the root.sh Script

After the successful installation of Oracle8i, copy the `$ORACLE_HOME/root.sh` script to `$ORACLE_HOME/root.sh.save`. If you install another product category (such as Oracle8i Management Infrastructure) into the same Oracle home directory, Oracle Universal Installer deletes the content of the `root.sh` script during the installation. If you require the original `root.sh` script, you can recover it from the `$ORACLE_HOME/root.sh.save` file.

Java Runtime Environment

Oracle Java applications such as the Oracle Universal Installer use the Java Runtime Environment (JRE) provided with this installation. This JRE is certified for use with Oracle8i and is the only one supported to run with Oracle8i applications. Customers should not modify this JRE, unless it is done through a patch provided by Oracle Support Services.

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

Products in an Oracle home directory access the JRE through a symbolic link in the `$ORACLE_HOME/JRE` directory to the actual location of a JRE within the inventory. Only modify the symbolic link using a patch provided by Oracle Support Services.

Solaris Intel systems require the patches listed in [Table 1-15](#) for JRE release 1.1.8.10. They are available from:

<http://sunsolve.sun.com>

Table 1-15 Patches for JDK 1.2.2

Patch ID	Description	Required or Recommended?
106981 - 10	Libthread patch	Required
107637-03	X Input & Output Method Patch	Required
107082-11	Motif 1.2.7_x86 and 2.1.1_x86: Runtime library patch for Solaris 7	Required
108377-03	OpenWindows 3.6.1_x86:Xsun Patch	Required

Character Mode Installer

Oracle no longer provides a character mode installer. However, you can configure the Oracle Universal Installer to perform a non-interactive installation of Oracle products. You can run the Installer in non-interactive mode directly from your system's X-windows console or through 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 "Silent" Installation and Configuration"](#) on page 3-35.

Upgrading and Migrating

If you are upgrading an existing system, see *Oracle8i Migration* for more information on upgrade and migration procedures.

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 3 (8.1.7). To migrate from an Oracle7 database lower than release 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), the Oracle 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.

Very Large Files

Note: The `ulimit` command is only available in the Korn and Bourne shell.

Oracle8i release 3 (8.1.7) includes native support for files greater than 2 GB. Check your shell to determine whether it imposes 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
```

Multiply the `file (blocks)` value by 512 to obtain the maximum file size imposed by the shell. A value of `unlimited` is the operating system default (the maximum value of 1 TB). [Table 1-16](#) lists Oracle file size limits. The `DB_BLOCK_SIZE` parameter is defined in the `$ORACLE_HOME/dbs/initsid.ora` file.

Table 1-16 Oracle File Size Limits

File Type	Maximum Size in Bytes
Datafiles where <code>db_block_size</code> is 2048	8,589,932,544
Datafiles where <code>db_block_size</code> is 4096	17,179,865,088
Datafiles where <code>db_block_size</code> is 8192	34,359,730,176
Datafiles where <code>db_block_size</code> is 16384	68,719,460,352

Pre-Installation Tasks

After you have verified that your system meets the requirements described in [Chapter 1](#), use this chapter to help you prepare your system for installing Oracle8i. It contains the following sections:

- [UNIX System Configuration](#)
- [Understanding Pre-Installation Setup Tasks](#)
- [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

Tables 2-1, 2-2, and 2-3 summarize the UNIX kernel parameter settings that you must verify before installing Oracle8i. If your system fails to meet any listed requirement, perform the tasks listed on page 2-9 as necessary to set up your environment to meet these requirements.

Note: If any of the recommended kernel parameter values in the following tables are less than the current system value, continue to use the current value. These are the requirements for Oracle8i only. If you have other programs that use shared memory and semaphores, you must adjust the values accordingly. You must reboot the system before kernel changes take affect.

Table 2-1 describes UNIX kernel parameter settings for DG/UX Intel.

Table 2-1 UNIX Kernel Parameter Settings for DG/UX Intel

Parameter	Recommended Value	Description
SEMMNI	100	The maximum number of semaphore identifiers in the system. SEMMNI determines the number of semaphore sets that can be created at any one time.
SEMMSL	10 + (the largest value of the PROCESSES parameter for any Oracle database on the system)	The maximum number of semaphores that can be in one semaphore set. Should be equal to the maximum number of Oracle processes. The PROCESSES parameter is specified in each <code>initsid.ora</code> file, located in the <code>\$ORACLE_HOME/dbs</code> directory. The default value of the PROCESSES parameter for the preconfigured database created by the Oracle Database Configuration Assistant is 50.

Table 2–1 UNIX Kernel Parameter Settings for DG/UX Intel

Parameter	Recommended Value	Description
SEMMNS	Sum of the PROCESSES parameter values for each Oracle database, adding the largest value twice, plus an additional 10 for each database.	The maximum number of semaphores in the system. See " Configure the UNIX Kernel for Oracle8i " on page 2-9 for an example of this formula.
SEMOPM	100	The maximum number of operations for each <code>semop</code> call.
NPROC	$20 + (8 * \text{MAXUSERS})$	The maximum number of processes. Set by the formula $20 + (8 * \text{MAXUSERS})$, to a maximum of 21845.
PERCENTBUF	System default	The maximum percentage of physical memory that can be occupied by data files (for example, non-program files)
SDESLIM	$50 + (\text{total number of database files})$	The maximum number of descriptors a process is allowed to have at one time.
PERCENTLOCKABLE	System default	The maximum percentage of physical memory available for locking by user processes.

[Table 2–2](#) describes UNIX kernel parameter settings for SCO UnixWare.

Table 2–2 UNIX Kernel Parameter Settings for SCO UnixWare

Parameter	Recommended Value	Description
SHMMAX	$0.5 * (\text{physical memory present in the system})$	The maximum size (in bytes) of a single shared memory segment. 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 affect operating system kernel resources.

Table 2-2 UNIX Kernel Parameter Settings for SCO UnixWare (Cont.)

Parameter	Recommended Value	Description
SHMMIN	1	The minimum size (in bytes) of a single shared memory segment.
SHMMNI	100	The maximum number of shared memory identifiers in the system.
SHMSEG	10	The maximum number of shared memory segments that can be attached by a process.
SEMMNI	100	The maximum number of semaphore identifiers in the system. SEMMNI determines the number of semaphore sets that can be created at any one time.
SEMMSL	10 + (the largest value of the PROCESSES parameter for any Oracle database on the system)	The maximum number of semaphores that can be in one semaphore set. Should be equal to the maximum number of Oracle processes. The PROCESSES parameter is specified in each <code>init_{sid}.ora</code> file, located in the <code>\$ORACLE_HOME/dbs</code> directory. The default value of the PROCESSES parameter for the preconfigured database created by Oracle Database Configuration Assistant is 50.
SEMMNS	Sum of the PROCESSES parameter values for each Oracle database, adding the largest value twice, plus an additional 10 for each database.	The maximum number of semaphores in the system. See "Configure the UNIX Kernel for Oracle8i" on page 2-9 for an example of this formula.
SEMOPM	100	The maximum number of operations for each <code>semop</code> call.
SCORLIM	0X7FFFFFFF	The core dump size soft limit.
HCORLIM	0X7FFFFFFF	The core dump size hard limit. Set this parameter to the maximum value permitted by your system.

Table 2–2 UNIX Kernel Parameter Settings for SCO UnixWare (Cont.)

Parameter	Recommended Value	Description
SDATLIM	0X7FFFFFFF	The process heap space. Set this parameter to the maximum value possible.
HDATLIM	0X7FFFFFFF	This parameter is the same as SDATLIM.
SVMMLIM	0X7FFFFFFF	The process virtual memory size. Set this parameter to the maximum value possible.
DEDICATED_MEMORY	No recommended value.	The number of 4K pages of physical memory reserved for special shared memory segments. To be set if you are using systems with very large physical memory.
HVMMLIM	0X7FFFFFFF	This parameter is the same as SVMMLIM.
SFSZLIM	0X7FFFFFFF	The largest file size a process may have. Set this parameter to the maximum value possible.
HFSZLIM	0X7FFFFFFF	This parameter is the same as SFSZLIM.
HFNOLIM	2048	Maximum number of file descriptors (open files) a process may have.
SFNOLIM	1024	Maximum number of file descriptors (open files) a process may have.
NPROC	20 + (8 * MAXUSERS)	Maximum number of processes. Set by the formula 20 + (8 * MAXUSERS) to a maximum of 12500.
ARG_MAX	1,048,576	Controls the maximum length of the command line for a program. The default for this parameter is 5 KB. Set this parameter to a higher value for Oracle Applications.
NPBUF	100	Maximum number of raw I/O requests that can be active at any given time.

Table 2–2 UNIX Kernel Parameter Settings for SCO UnixWare (Cont.)

Parameter	Recommended Value	Description
MAXUP	1000	Limits the number of processes that a userid can create. If you have remote clients connecting to the database server using SQL*Net V2, set this value to be greater than the maximum concurrent connections expected.
STRTHRESH	0x500000	Maximum number of bytes that can be allocated on the system for Stream's resources.
ULIMIT	Unlimited	In the default parameter login file, (<code>/etc/default/login</code>), change the value of <code>ULIMIT</code> to be larger than the largest database file size (in bytes) you want to create, or unset it altogether.

[Table 2–3](#) describes UNIX kernel parameter settings for Solaris Intel.

Table 2–3 UNIX Kernel Parameter Settings for Solaris Intel

Parameter	Recommended Value	Description
SHMMAX	0.5 * (physical memory present in the system)	The maximum size (in bytes) of a single shared memory segment. 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 affect operating system kernel resources.
SHMMIN	1	The minimum size (in bytes) of a single shared memory segment.
SHMMNI	100	The maximum number of shared memory identifiers in the system.
SHMSEG	10	The maximum number of shared memory segments that can be attached by a process.

Table 2-3 UNIX Kernel Parameter Settings for Solaris Intel (Cont.)

Parameter	Recommended Value	Description
SEMMNI	100	The maximum number of semaphore identifiers in the system. SEMMNI determines the number of semaphore sets that can be created at any one time.
SEMMSL	10 + (the largest value of the PROCESSES parameter for any Oracle database on the system)	The maximum number of semaphores that can be in one semaphore set. Should be equal to the maximum number of Oracle processes. The PROCESSES parameter is specified in each <code>initsid.ora</code> file, located in the <code>\$ORACLE_HOME/dbs</code> directory. The default value of the PROCESSES parameter for the preconfigured database created by Oracle Database Configuration Assistant is 50.
SEMMNS	Sum of the PROCESSES parameter values for each Oracle database, adding the largest value twice, plus an additional 10 for each database.	The maximum number of semaphores in the system. See " Configure the UNIX Kernel for Oracle8i " on page 2-9 for an example of this formula.
SEMOPM	100	The maximum number of operations for each <code>semop</code> call.
SEMMNI	100	The maximum number of semaphore identifiers in the system. SEMMNI determines the number of semaphore sets that can be created at any one time.
SSEMMNS	Sum of the PROCESSES parameter values for each Oracle database, adding the largest value twice, plus an additional 10 for each database.	The maximum number of semaphores in the system. See " Configure the UNIX Kernel for Oracle8i " on page 2-9 for an example of this formula.

Table 2-4 describes UNIX environment requirements.

Table 2-4 UNIX Environment Summary

Environmental Factor	Oracle8i Requirement
Mount Points (Storage Devices)	The Oracle Universal Installer requires only two mount points: one for the software, and one for the database files. A database that complies with Optimal Flexible Architecture (OFA) 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.
ORACLE_BASE	Not required, but recommended as part of an OFA-compliant installation. See "PATH" on page 2-18 for more information.
UNIX Groups for Oracle Roles	A UNIX group is required for the OSDBA role. This guide assumes that the group is named <code>dba</code> . The OSOPER role may belong to the same group as the OSDBA or to a different group.
Special UNIX Group for the Installer <code>oraInventory</code> directory	All users installing Oracle8i products in any Oracle home directory must belong to the same UNIX group. The Installer inventory is shared by all Oracle home directories on a system, and is group writable. Set <code>oinstall</code> to your primary group before installing Oracle8i.
UNIX Accounts	A UNIX account that is dedicated solely to installing and upgrading the Oracle8i system. The account must be a member of the group used by OSDBA.
Permissions for File Creation	Use the <code>umask</code> command to set the file creation mask for the <code>oracle</code> account to <code>022</code> .

Understanding Pre-Installation Setup Tasks

The following setup tasks configure your system and set up the accounts, groups, variables, and permissions required to run Oracle8i. If you do not perform these tasks before the installation, during installation the Installer gives you the option to log on as the `root` user and run the `oraInstRoot.sh` script. The `oraInstRoot.sh` script performs many of these setup task for you. However, running `oraInstRoot.sh` may not provide a satisfactory environment for your system and needs. Oracle Corporation recommends that you perform these steps manually.

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 the Oracle Software](#)
- [Create a UNIX Account to Own the Apache Server \(Solaris Intel Only\)](#)

Configure the UNIX Kernel for Oracle8i

Follow the steps in this section to configure the UNIX kernel Interprocess Communication (IPC) parameters to accommodate the System Global Area (SGA) structure of Oracle8i. You cannot start up the database if the system does not have enough shared memory to accommodate the SGA. To configure the IPC parameter:

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

Because the shared memory in Intel UNIX 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 for each `semop` call (SEMOPM)
- Semaphore maximum value (SEMVMX)

The total allowable shared memory is determined by the following formula:

$$\text{SHMMAX} * \text{SHMSEG}$$

The required settings are listed in [Table 2-1](#) on page 2-2 for DG/UX Intel, [Table 2-2](#) on page 2-3 for SCO UnixWare, and [Table 2-3](#) on page 2-6 for Solaris Intel.

The settings in these tables should be acceptable for most installations.

Set the SEMMNS parameter 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.ora` files set to the following values:

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

Calculate the value of the SEMMNS parameter for this system as follows:

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

Setting parameters too high for the operating system can prevent the system from booting. Refer to Intel UNIX system administration documentation for parameter limits.

The following Solaris Intel example shows additions to the `/etc/system` file to configure the UNIX kernel with the minimum recommended values:

```
set shmsys:shminfo_shmmax=4294967295
set shmsys:shminfo_shmmni=1
set shmsys:shminfo_shmni=100
set shmsys:shminfo_sshmseg=10
set semsys:seminfo_semni=100
set semsys:seminfo_semsl=100
set semsys:seminfo_semns=200
set semsys:seminfo_semopm=100
set semsys:seminfo_semvmx=100
```

3. If you have modified the kernel, shared memory, or semaphore parameters, perform one of the following:
 - On Solaris Intel, reboot the system.
 - On DG Intel and SCO UnixWare, rebuild the kernel and reboot the system.

Note: On SCO UnixWare, use the `id tune` command to change the default values of UNIX kernel parameters. This command changes the `/etc/conf/cf.d/stune` file. Use `id build(1M)` to rebuild the kernel for the changes to take effect.

Caution: You may also have to edit the `/etc/conf/cf.d/mtune` file if the maximum permissible value for a given parameter is not as large as the value required in the `/etc/conf/cf.d/stune` file. Not all parameters can be modified in the `mtune` file. For example, modifying the `SHMMAX` parameter causes system problems. For more information, check with your operating system support.

Create Mount Points

Oracle8i requires at least two mount points:

- One for the software
- At least one for the database files

Oracle8i requires at least four mount points when creating an OFA-compliant installation:

- One for the software
- 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 2-5 shows a sample naming scheme.

Table 2-5 Sample Mount Point Naming Scheme

Mount Point	Name
Software	/u01
Database	/u02, /u03, /u04

See Also: Optimal Flexible Architecture is described in detail in the *Oracle8i Administrator's Reference Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)*.

Create UNIX Groups for Database Administrators

During installation, two Oracle roles are created:

- SYSDBA
- 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 groups 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 a system administration 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 `dba` UNIX group 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 prompts you to enter the groups that you have created for these roles.

Use one of the following system administration tools to create the `dba` group:

- On DG/UX Intel, use the `sysadm` utility.
- On SCO UnixWare, use the `scoadmin` utility.
- On Solaris Intel, use the `admintool` utility.

The Installer assigns both Oracle DBA and OPERATOR privileges to the UNIX group, `dba`, by default. If you have not created a `dba` group, you are prompted to enter the name or names you have chosen.

(Oracle8i documentation refers to these UNIX groups as the OSDBA and OSOPER groups.)

Create a UNIX Group for the Oracle Universal Installer Inventory

Use a system administration utility to create a group named `oinstall`. The `oinstall` group owns the Oracle Universal Installer's `oraInventory` directory after installation. The `oracle` user account that runs the installation must have the `oinstall` group as its primary group.

Create a UNIX Account to Own the Oracle Software

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

Use one of the following system administration tools to create the `oracle` account:

- On DG/UX Intel, use the `sysadm` utility.
- On SCO UnixWare, use the `scoadmin` utility.
- On Solaris Intel, use the `admintool` utility.

Table 2-6 describes the properties of the `oracle` account.

Table 2-6 Properties of the oracle Account

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

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

On systems with multiple Oracle home directories you can perform multiple Oracle8i installations with the same `oracle` account, or you can use a separate `oracle` account for each installation. Each `oracle` account must have `oinstall` as its primary group.

Create the `oratab` File

Information on Oracle instances is stored in the `oratab` file. The `oracle` account owns this file, but it is located in a directory that requires `root` privileges when creating the file. Run the `cdrom_mount_point/orainst/oratab.sh` script to create or set the permissions of the `oratab` file in the following directories:

- On DG/UX Intel, the `/etc/oratab` directory
- On SCO UnixWare, the `/var/opt/oracle` directory
- On Solaris Intel, the `/var/opt/oracle` directory

Create these directories if they do not exist.

Create a UNIX Account to Own the Apache Server (Solaris Intel Only)

The `Apache` account is a UNIX user account that owns the Apache server after installation. The default Apache configuration listens to ports lower than 1024, which are reserved for `root`. For security reasons, if you use the default Apache configuration, Oracle Corporation recommends that you create a separate Apache account owner. Use the Apache `USER` parameter to configure the Apache server to assign ownership of listener and module actions to the Apache account owner. The `user` parameter resets account ownership after the server is started.

The Apache account owner should have minimal user privileges, and should not be a member of any groups whose files are not intended to be visible to the outside world. The `nobody` account, which many UNIX versions have, may serve as a model for the Apache account.

Caution: Configuring the Apache user with `dba` group or `oracle` account privileges compromises database security. If additional rights are required to run certain programs, use the Apache `suEXEC` feature to obtain additional rights for the Apache account. If a user other than `root` starts the Apache server, any scripts, servlets, or programs that Apache spawns have the same privileges as that user.

Use a system administration utility to create an Apache account with the following properties:

Table 2-7 Properties of the Apache Account

Property	Description
Login Name	Any name, but this guide refers to it as the Apache account.
Primary GID	The primary group must be the same group that owns the <code>oraInventory</code> directory. The location of this directory is defined in the <code>/var/opt/oracle/oraInst.loc</code> directory. The default group name that has the ownership of the <code>oraInventory</code> directory is the <code>oinstall</code> group. For security reasons, you should change this group ownership after installation. See "Change Group Membership of the Apache Account (Solaris Intel Only)" on page 4-6.
Secondary GID	The secondary group should be one in which only the Apache account is a member.
Home Directory	Choose a home directory consistent with other user home directories.

Oracle Corporation recommends caution when adding servlet classes, modifying or upgrading Apache modules not certified with this version of Oracle8i, or upgrading the Apache server to later versions than the one certified with this version of Oracle8i. Patches provided by Oracle and configurations of Apache are supported, but it is possible for users to change Apache in ways that are difficult or impossible for Oracle to support.

See also: See *Apache Version 1.3 User's Guide* for information and examples on configuring Apache Server.

Setup Tasks to Perform as the oracle User

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

- ❑ [Set Permissions for File Creation](#)
- ❑ [Set Environment Variables](#)
- ❑ [Update the Environment for the Current Session](#)

Set Permissions for File Creation

Use the `umask` command to set the creation mask of the `oracle` account to `022`. This setting ensures that `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 `022`, set the creation mask to `022` 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 all required environment variables, including the `DISPLAY` and `PATH` environment variables. [Table 2–8](#) 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 in your system, its settings may affect the settings that you choose for the new environment.

Table 2–8 *Environment Variable Summary*

Variable	Description	Required?
DISPLAY	The name, server number, and screen number of the system where you run the Oracle Universal Installer.	Yes
PATH	The shell's search path for executables.	Yes
ORACLE_BASE	The directory at the top of the Oracle software and administrative file structure.	No

Table 2–8 Environment Variable Summary (Cont.)

Variable	Description	Required?
<code>ORACLE_HOME</code>	The directory containing Oracle software for a given release.	No
<code>NLS_LANG</code>	The language, territory, and character set that the Installer uses when installing the software.	No
<code>ORA_NLS33</code>	The location of National Language Support character set data.	No
<code>ORACLE_SID</code>	The Oracle server instance identifier that the Installer uses when installing the software.	No
<code>ORACLE_DOC</code>	The directory where documentation is installed.	No
<code>TMPDIR</code>	A directory with at least 100 MB available space where the <code>oracle</code> account has write permission.	No

DISPLAY

On the system where you want to 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 system 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.

You might get an Xlib error similar to "Failed to connect to server", "Connection refused by server" or "Can't open display" when starting the Installer. If you do, run the following commands on your X workstation:

On the server where you want to install the Oracle database, enter the following:

```
$ DISPLAY=workstation_name:0.0
$ export DISPLAY
```

In the session on your workstation, enter the following:

```
$ xhost +server_host_name
```

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

PATH

Set the shell's search path to include the following directories:

- `$ORACLE_HOME/bin`, `/bin`, and `/usr/bin`
- The local `bin` directory you created

Note: On Solaris Intel, verify that the search path also includes the `/usr/css/bin` and `/opt/SUNWspro/bin` directories if the SUN C Compiler is present. On DG/UX Intel, omit the `/usr/ucb/`, `usr/css/bin` and `usr/openwin/bin` directories.

Note: If you require the `usr/ucb` directory in your search path, make sure that it comes after the `/usr/css/bin` directory in the `PATH` setting.

ORACLE_BASE

`ORACLE_BASE` specifies the directory at the top of the Oracle software and administrative file structure. The value recommended for an OFA configuration 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 particular release. The value recommended by the Optimal Flexible Architecture is `$ORACLE_BASE/product/release`. For example:

```
/u01/app/oracle/product/817
```

Ensure that the value of the `ORACLE_HOME` environment variable specifies a directory that does not already contain any Oracle software release earlier than Oracle8i release 1 (8.1.5).

NLS_LANG

Set `NLS_LANG` if you want to create a database that uses a character set other than US7ASCII (the default). If you want to install Oracle Internet Directory (Solaris Intel only), set `NLS_LANG` to `UTF8`.

Oracle supports client/server environments where clients and servers use different character sets. The character set used by a client is defined by the value of the `NLS_LANG` parameter for the client session. The character set used by a server is its database character set. Data conversion occurs automatically between these character sets if they are different.

See Also: For more information on National Language Support features, refer to *Oracle8i Reference*. A complete list of valid character sets is available in the *Oracle8i National Language Support Guide*.

ORA_NLS33

This environment variable specifies the directory in which the Oracle `*.nls` files are placed. The `*.nls` files define languages, territories, character sets, and linguistic sorting orders. Setting this environment variable is necessary only if one Oracle home directory has more than one directory in which `*.nls` files are installed.

When `ORA_NLS33` is not set, the default value `$ORACLE_HOME/ocommon/nls/admin/data` is used.

See Also: For more information, see the *Oracle8i National Language Support Guide*.

ORACLE_SID

If you want to create a database during the installation, you can set `ORACLE_SID` to the value of the Oracle server instance identifier (referred to in this installation guide as the *sid*).

ORACLE_DOC

`ORACLE_DOC` specifies the directory where online documentation is installed. See "[Accessing Installed Documentation](#)" on page xi to determine where documentation is installed if you do not set `ORACLE_DOC`.

TMPDIR

You must specify a directory with at least 100 MB free space, where the Installer has write permission.

- On DG/UX Intel, the default setting is `/tmp`.
- On SCO UnixWare and Solaris Intel, the default setting is `/var/tmp`.

Update the Environment for the Current Session

Using a text editor, add the settings for the environment variables listed in [Table 2-8](#) to the `.profile` or `.login` file of the `oracle` account. When you have finished editing these initialization files, update the environment in the current shell session before beginning installation by entering one of the following commands:

For the Bourne or Korn shell:

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

For the C shell:

```
% source .login
```

Setup Tasks for Oracle Products

Before beginning the installation, review the following sections for products that you intend to install:

- [Pre-Installation Steps for Oracle Options](#)
- [Tools and Precompilers](#)
- [Networking and System Management Products](#)

Pre-Installation Steps for Oracle Options

Complete the following pre-installation steps before installing Oracle Options:

Pre-Installation Steps for Oracle Parallel Server (DG/UX Intel Only)

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 be located 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: See the *Oracle8i Administrator's Reference* for information on creating raw devices.

Note: The following steps only apply if you are performing a Typical installation of Oracle8i. These steps are not required for the Custom installation type. See "[Installation](#)" on page 3-1 for more information on installation.

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

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

3. Set the DBCA_RAW_CONFIG environment variable to specify 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 to build the tablespaces.

Steps to Perform as the root User

Perform the steps in the following section as the `root` user:

1. Make sure you have a UNIX group that serves as the OSDBA group defined in the `/etc/group` file on all nodes of the cluster. 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`. A separate group should be created to own the Oracle Universal Installer `oraInventory` file. This group is referred to as the `oinstall` group in Oracle documentation. It may be given another name of your choosing.
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:
 - 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: For recommended naming conventions for Oracle mount points, see "[Create Mount Points](#)" on page 2-11.
4. On the node from which you 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.
5. Exit the `root` account.

Steps to Perform as the oracle User

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 does not have the same attributes on all the nodes. The Installer cannot use the `rcp` command to copy Oracle products to the remote directories without user equivalence.

Tools and Precompilers

Complete the pre-installation steps for the following tools and precompilers before installing them.

Pre-Installation Steps for the Pro*COBOL Precompiler

Perform the following steps:

1. Verify that the COBOL compiler executable is included in the PATH setting.
2. Verify that \$COBLIB is in the LD_LIBRARY_PATH setting.

See Also: To determine what to set the COBDIR and COBLIB environment variables, refer to 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.

Pre-Installation Steps for Pro*FORTRAN Precompiler (DG/UX Intel Only)

Verify that the FORTRAN compiler executable is included in the PATH setting.

Networking and System Management Products

If the Net8 Server or Net8 Client is installed, the Installer automatically launches the Net8 Configuration Assistant, which enables you to configure Net8.

Configuring LDAP Services

Lightweight Directory Access Protocol (LDAP) version 3 is the Internet open standard directory access protocol. Some products included with Oracle8i release 3 (8.1.7) can be configured to use the LDAP version 3 directory service provided by Oracle Internet Directory (Solaris Intel only). 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.

Oracle Internet Directory (Solaris Intel Only)

Complete the following steps in addition to those steps listed in the *Oracle Internet Directory Administrator's Guide*.

If Oracle8i release 3 (8.1.7) 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* parameter is required if the listener has a name other than the default, *listener*.

If Oracle8i release 3 (8.1.7) is not already installed on your system, then the Oracle Universal Installer installs it with Oracle Internet Directory.

Net8 Server

If an existing Net8 Server is already installed in your system, shut down all listeners before installing Net8. To determine if any listeners are running, enter the following command:

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

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

To shut down a running listener, enter the following command:

```
$ lsnrctl stop listener_name
```

See "[Understanding Net8 Configuration](#)" on page 2-25 to determine how to install and configure Net8 in your system.

Oracle Supported Protocols

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

TCP/IP

The TCP/IP protocol adapter 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
```

Understanding Net8 Configuration

The Installer asks you to make various choices about Net8 configuration during the installation process. The following sections describe the choices you are asked to make, and how they affect the configuration of Oracle8i. Review these product configuration guidelines to ensure that you make choices that best match your system and your requirements.

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. You can also manually start it as a stand alone tool.

Note: This chapter describes how to use Net8 Configuration Assistant from within Oracle Universal Installer. See the *Net8 Administrator's Guide* for information on running Net8 Configuration Assistant as a stand alone tool.

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

- Automatically configures your network for standard database connection methods with minimal user input
- Creates a customized network by prompting you for extensive input

The configuration process creates and modifies network files located in the `$ORACLE_HOME/network/admin` directory.

Server Network Configuration

The following tables describe the network configuration types created by a Typical, Minimal, or Custom installation. Review the following tables and identify the network configuration that best matches your requirements and network configuration expertise.

If you Select...	Then...
Oracle8i Enterprise Edition or Oracle8i for: <ul style="list-style-type: none"> ■ <i>Typical</i> ■ <i>Minimal</i> 	<p>Net8 Configuration Assistant creates a network service name for use when connecting to a database. Net8 Configuration Assistant then automatically creates your Net8 server environment by configuring the following files:</p> <ul style="list-style-type: none"> ■ <code>listener.ora</code> <p>Configures and starts a listener named <code>listener</code> 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. It also configures services information for external procedures.</p> ■ <code>sqlnet.ora</code> <p>Configures the Net8 Naming domain (set to be the same as the network domain in which your computer is located). This domain is automatically appended to any unqualified network service name given in the connect string. An unqualified network service name does not contain a Net8 Naming domain.</p> <p>If you do not define a domain for the system in the Global Database Name field during installation, the system domain setting defaults to the null domain. In that case, Net8 does not define a new domain setting for the <code>NAMES.DIRECTORY_PATH</code> parameter in <code>sqlnet.ora</code>.</p> ■ <code>tnsnames.ora</code> <p>Creates a network service name (<code>EXTPROC_CONNECTION_DATA</code>) in the <code>tnsnames.ora</code> file to use for external procedures.</p> <p>Oracle Database Configuration Assistant configures additional Net8 Server information in the following files after it successfully creates the Oracle8i database:</p>

If you Select...	Then...
Oracle8i Enterprise Edition or Oracle8i Custom installation (and then select Net8 Server and Net8 Client)	<ul style="list-style-type: none"> ■ listener.ora Configures static service information for the Oracle8i database in the listener.ora file. ■ At the end of client configuration, Net8 Configuration Assistant prompts you for an Oracle database network service name that is normally the same as your global database name. The tnsnames.ora file is used by clients and distributed database servers to identify potential server destinations. It stores the service names of database addresses. <p>Note: You cannot configure access to a lightweight directory access protocol (LDAP) directory service through the <i>Typical</i> or <i>Minimal</i> installation types. LDAP directory configuration is available through the <i>Custom</i> installation type.</p>
	<p>Net8 Configuration Assistant first prompts you to:</p> <ul style="list-style-type: none"> ■ Configure the directory service access. Enter a directory server type and location, and verify that the administrative context from which the server can look up, create, and modify network service names. You are prompted for this information if you have never configured this ORACLE_HOME for directory service access. ■ Create listeners and select network protocols to use for database connections. ■ Select the naming methods to use when connecting to the database. By default, the Installer configures the Local naming method and localized management network model. Under a localized management network configuration model, network addresses are mapped in the tnsnames.ora file on each node. Other naming methods within this model are Host naming, and External naming (using third-party naming services). Under a centralized management network configuration model, the Oracle Names naming method is available. In this configuration, an Oracle Names Server stores client configuration profiles in one location. See the <i>Net8 Administrator's Guide</i> for more information on naming methods, and on other issues connected with the installation and configuration of naming services. <p>Depending on the naming method you use, Net8 Configuration Assistant automatically creates the Net8 server environment by configuring the following files:</p>

If you Select...	Then...
	<ul style="list-style-type: none"> ■ <code>listener.ora</code> Configures a listener with the name and protocol address that you choose. It also configures a protocol address and static service information for external procedures. ■ <code>sqlnet.ora</code> 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. It also configures the naming methods the server uses to resolve a name to a connect descriptor. ■ <code>tnsnames.ora</code> Creates a network service name entry to use for external procedure connections. ■ <code>ldap.ora</code> Configures directory service access by identifying the directory server type. It may also identify the location and the administrative context. <p>Oracle Database Configuration Assistant automatically configures additional Net8 server information in the <code>listener.ora</code> file during the creation of the Oracle8i database.</p>

Client Network Configuration

The type of network configurations created with the client installation types and the amount of user input required are described in the following table. Review the selections below prior to starting Oracle Universal Installer. Identify the network configuration that best matches your network requirements and configuration expertise.

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

Any Oracle8i client installation type.

Net8 Configuration Assistant first prompts you to select one of the following naming methods to provide access to your Oracle8i database:

- Local Naming
Specify a network service name to resolve network addresses. This name is configured and stored in configuration files on each individual client.
- Directory Naming
Specify an Oracle Names Server or third-party naming service to resolve service names and network addresses. This enables client connections to Oracle8i databases using information registered with the naming service when the databases were created.

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:

- `tnsnames.ora`
Specifies a network service name (if Local naming was selected).
- `ldap.ora`
Configures naming service access by identifying the directory server type (if Directory naming was selected). It may also identify the location and the administrative context of the naming service.
- `sqlnet.ora`
Configures the naming methods a client uses to resolve a name to a connect descriptor. It also 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 network service name given in the connect string. An unqualified network service name does not contain a network domain.

If you have not defined a domain for the client in the Global Database Name field during installation, the system domain setting defaults to the null domain. In that case, Net8 does not define a new domain setting for the `NAMES.DIRECTORY_PATH` parameter in `sqlnet.ora`.

For more information on installation, configuring service names, and client configuration, see the Net8 Administrator's Guide.

Identifying Your Database Environment

Oracle Universal Installer enables you to configure your Oracle8i database to operate in one of the following environments. To identify which type of database environment is appropriate for your needs, see [Table 2-9](#):

Table 2-9 Oracle8i Database Environment Descriptions

Environment	Description
Online Transaction Processing (OLTP)	<p>Many users perform large numbers of concurrent transactions, where each transaction is a relatively simple operation processing a small amount of data. Billing databases, such as those commonly found on Internet commerce sites, are the most common example of this database type.</p> <p>Transactions consist of reading (SELECT statements), writing (INSERT and UPDATE statements), and deleting (DELETE statements) data in database tables.</p>
Warehousing, or Decision Support System (DSS)	<p>Users perform numerous complex queries that access and process large volumes of data.</p> <p>These queries (typically read-only) range from a simple query of a few records to numerous complex queries that sort thousands of records from many different tables. Historical databases are the most common example of this database type. Warehousing environments are also known as Decision Support System (DSS) environments.</p>
Multipurpose	<p>Both types of database use are given support with this database environment configuration. Select this environment if average database use will be varied.</p>

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

See Also: Many Oracle documents provide more information on database environments, their effect on performance, and how they may be tuned to maximize performance. Use the Oracle Information Navigator to search for information on areas in which you are interested. *Oracle8i Concepts*, *Oracle8i Tuning*, and *Oracle Parallel Server Setup and Configuration Guide* discuss database environment issues in detail.

Selecting a Database Creation Method

Oracle Database Configuration Assistant is a GUI tool that enables you to create an Oracle8i database for an OLTP, Warehousing, or Multipurpose environment. Oracle Database Configuration Assistant automatically starts from within Oracle Universal Installer when you choose to create an Oracle8i database during installation. You can also run it in as a stand alone tool.

Note: This chapter describes running Oracle Database Configuration Assistant from within Oracle Universal Installer. See "[Oracle Database Configuration Assistant](#)" on page 4-17 for information on running Oracle Database Configuration Assistant as a stand alone tool.

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 in the following table. Review these selections and identify the database that best matches your database requirements and your database creation expertise.

If You Perform These Steps... Then...

- | | |
|--|---|
| <p>1. Select the <i>Typical</i> installation type.</p> | <p>Oracle Database Configuration Assistant automatically starts at the end of Oracle8i installation and creates a pre-configured, ready-to-use multipurpose starter database with:</p> <ul style="list-style-type: none">■ Default initialization parameters■ Automatic installation and configuration of Oracle options and <i>interMedia</i>¹■ Advanced replication capabilities■ Database configuration of dedicated server mode²■ Archiving mode of NOARCHIVELOG <p>You only need to provide the global database name and SID when prompted. You can reset database character sets with the Oracle Database Configuration Assistant. For more information on database character sets, see <i>Oracle8i National Language Support Guide</i></p> |
|--|---|

¹ Oracle Database Configuration Assistant configures options that were installed through Oracle Universal Installer.

² See Chapter 5 of *Oracle8i Administrator's Guide* for a description of dedicated server mode and multi-threaded server mode (also known as shared server mode).

If You Perform These Steps...	Then...
<ol style="list-style-type: none">1. Select the <i>Minimal</i> installation type.2. Select "Yes" when prompted to create a starter database.	Oracle Database Configuration Assistant automatically starts at the end of Oracle8i installation and creates the same Oracle8i database that a <i>Typical</i> installation creates, but without installing Oracle options or <i>interMedia</i> .
<p>Note: If you select "No", all server products are installed, including the database software, but no database is created during installation. Oracle recommends that you allow the Installer to create a starter database to verify installation, and also to use as a model for understanding Oracle naming conventions, roles, and default users and their privileges. If you choose not to install the starter database, you can create your database later by manually running Oracle Database Configuration Assistant or by using a SQL script. See the <i>Oracle8i System Administrator's Guide</i> for instructions.</p>	
<p>Note: A database is also installed through the Oracle Internet Directory installation type of Oracle8i Management Infrastructure. This database is used only for storing Oracle Internet Directory information.</p>	

If You Perform These Steps... Then...

- | | |
|---|--|
| <ol style="list-style-type: none">1. Select the <i>Custom</i> installation type.2. Select Oracle Server and additional products in the <i>Available Products</i> window.3. Select "Yes" when prompted to create a starter database. | <p>Oracle Database Configuration Assistant guides you through the creation of a database fully customized to match your selected environment (OLTP, warehousing, or multipurpose) and database configuration mode (dedicated server or Multi-threaded Server). You can automatically or manually configure options and <i>interMedia</i> components (if installed) and advanced replication (if selected).</p> <p>Select this option only if you are experienced with advanced database creation procedures, such as customizing:</p> <ul style="list-style-type: none">■ Data, control, and redo log file settings■ Tablespace and extent sizes■ Database memory parameters■ Archiving modes, formats, and destinations■ Trace file destinations■ Character set values |
|---|--|
-

Installation

This chapter describes how to start the Oracle Universal Installer and install Oracle8i products in your system. Review and complete the tasks listed in [Chapter 1, "System Requirements"](#), and [Chapter 2, "Pre-Installation Tasks"](#), before beginning the installation. This chapter contains the following sections:

- [Using Oracle Universal Installer](#)
- [Non-Interactive "Silent" Installation and Configuration](#)

Using Oracle Universal Installer

Complete the following tasks to start the Oracle Universal Installer:

- [Mount the Oracle8i CD-ROM](#)
- [Start Oracle Universal Installer](#)

Note: Using the Oracle Installer shipped with releases 7.x and 8.0.x to install products into a release 8.1.x Oracle home directory is *not* supported. Likewise, you cannot install release 8.1.x products into a release 7.x, 8.0.x, 8.1.3, or release 8.1.4 Oracle home directory.

Mount the Oracle8i CD-ROM

The Oracle8i CD-ROMs are in ISO 9660 format with Rockridge extensions. There are two CD-ROM discs included with Oracle8i release 3 (8.1.7). Use disc one to begin the installation. Mount disc two when prompted to do so.

Note: See the release notes for your platform for information on mounting discs for Oracle8i release 3 (8.1.7).

If you are using Volume Management software (available by default on Intel UNIX) the CD-ROM is mounted automatically to `/cdrom/oracle8i` when you insert 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 use the `umount` command to unmount the CD-ROM before removing it from the drive. To mount the Oracle8i CD-ROM manually:

1. Place the Oracle8i CD-ROM in the CD-ROM drive.
2. Log in as the `root` user and, if necessary, 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, then exit the `root` account:

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

Example 3-1 shows how to mount the CD-ROM manually.

Example 3-1 Mounting the CD-ROM Manually

The following examples show how to manually mount the CD-ROM on DG/UX Intel, SCO UnixWare, and Solaris Intel:

- On DG/UX Intel, enter:

```
$ /etc/mount -t cdrom '/dev/pdsk/device_name' /cdrom
```

- On SCO UnixWare, enter:

```
$ mount -F cdfs -oro /dev/cdrom/c0b0t410 /cdrom
```

- On Solaris Intel, enter:

```
$ /etc/mount -F hsfs -r /dev/dsk/c0t6d0p0 /cdrom
```

Start Oracle Universal Installer

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

To start the Oracle Universal Installer:

1. Log in as the `oracle` user.
2. Change directory to the CD-ROM mount-point directory:

```
$ cd cdrom_mount_point_directory
```

3. Start the Installer by entering the following command:

```
$ ./runInstaller
```

Note: The Oracle Universal Installer is capable of running a non-interactive installation of Oracle products. You can optionally configure it for “silent” mode which does not display anything on the screen. For information on using this feature, see ["Non-Interactive “Silent” Installation and Configuration"](#) on page 3-35.

Caution: The Oracle Universal Installer automatically installs the Oracle version of the Java Runtime Environment (JRE). This version is required to run the Oracle Universal Installer and several Oracle assistants. Only modify the JRE with a patch provided by Oracle Support Services.

After the Installer starts, the Welcome window appears.

4. Click [Next] in the Welcome window.

The File Locations window appears. Do not change the text in the Source field. The Source field specifies the location of the files that you want to install.

5. Enter the Oracle home directory path in the Destination field, then click [Next].

The Destination field is the directory in which you want to install the Oracle8i products. If you set the ORACLE_HOME environment variable before starting the Installer, the Installer uses this directory path as the default value in the Destination field.

If the destination directory you choose contains Oracle8i release 1 (8.1.5) or release 2 (8.1.6) software, the older version of the software is upgraded to release 3 (8.1.7). Oracle Corporation recommends that you install release 3 (8.1.7) products into a new Oracle home directory.

Caution: If you have an existing Oracle home directory created with a release of Oracle Server earlier than Oracle8i, you must change the default Oracle8i installation location to a different location.

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 directory.

If this is the first time that any Oracle8i products are installed on the current system, the UNIX Group Name window appears. If the Available Product window appears, go to step 8.

6. In the UNIX Group Name field, specify the group that has permission to update Oracle software on the system, then click [Next].

This group should typically be the `oinstall` group that you created in "[Create a UNIX Group for the Oracle Universal Installer Inventory](#)" on page 2-13.

7. If prompted, run the `/tmp/OraInstall/orainstRoot.sh` script as the `root` user in another terminal window .

If the `/var/opt/oracle` directory does not exist or is not writable by the `oracle` user, an Installer window appears prompting you to run the `/tmp/OraInstall/orainstRoot.sh` script. After you have done so, click [Retry] to continue the installation.

The Available Products window appears.

Note: The `orainstRoot.sh` Installer window opens only if you have not completed all pre-installation steps. If you choose to run the `orainstRoot.sh` script, the `oraInventory` file and other files Oracle uses are written in the Oracle home directory to ensure that Oracle has write access. This configuration may not be optimal for your system and your needs. Oracle Corporation recommends that you complete the steps described in [Chapter 2](#).

8. In the Available Products window, select the Oracle8i product category you want to install, click [Next] and proceed to one of the following installation guide sections based on your selection.

If you selected...	See...
Oracle8i Enterprise Edition	"Installing Oracle8i Enterprise Edition" on page 3-6.
Oracle8i Client	"Installing Oracle8i Client" on page 3-17.
Oracle8i Management and Integration	"Installing Oracle8i Management and Integration" on page 3-21.

See Also: For a list of products installed with each installation type, see the appropriate product section in [Appendix A](#).

See ["Product Categories and Installation Types"](#) on page 1-2 for a description of each product category.

Installing Oracle8i Enterprise Edition

After selecting Oracle8i Enterprise Edition in the Available Products window, the Installation Types window appears. To install Oracle8i Enterprise Edition:

1. Select Typical, Minimal, or Custom Installation, then click [Next].
2. Go to one of the following sections, based on the selection that you made in step 1:

If you selected...	See...
Typical	"Oracle8i Enterprise Edition Typical Installation" on page 3-7.
Minimal	"Oracle8i Enterprise Edition Minimal Installation" on page 3-10.
Custom	"Oracle8i Enterprise Edition Custom Installation" on page 3-14.

Oracle8i Enterprise Edition Typical Installation

To perform an Oracle8i Enterprise Edition Typical installation:

1. If the `oracle` user is not a member of the `dba` group created in "[Create UNIX Groups for Database Administrators](#)" on page 2-12, or if there is a UNIX group with a name other than `dba` that performs the role of the OSDBA group, the Privileged Operating System Groups window appears. Enter the UNIX group name that serves as the OSDBA group. If a separate UNIX group performs the role of the OSOPER group, specify it in this window as well. Click [Next].
2. If the Oracle Universal Installer detects an earlier version of an Oracle database in the system, you are prompted to upgrade or migrate the database using the Oracle Data Migration Assistant.

Note: Do not upgrade an Oracle8i database configured for use with Oracle Internet Directory through this installation type. Oracle8i database and Oracle Internet Directory upgrades must be performed by following the procedures in "[Oracle Internet Directory Installation \(Solaris Intel Only\)](#)" on page 3 - 25.

- To upgrade or migrate your database to an Oracle8i release 3 (8.1.7) database, select the Upgrade or Migrate an Existing Database check box, then click [Next].

The Oracle Data Migration Assistant starts immediately *after* installation to upgrade or migrate your database to an Oracle8i release 3 (8.1.7) database.

The Summary windows appears. Go to step 6.

- If you do not want to migrate you database to an Oracle8i release 3 (8.1.7) database, leave the Upgrade or Migrate an Existing Database check box unselected. Click [Next].

The Select Starter Database window appears.

3. Click [Yes] to install an Oracle8i database. Clicking [No] installs all server products, but does not create a new database. If you click [No], you can create your database later by manually running the Oracle Database Configuration Assistant or running a SQL script.

The Database Identification window appears.

4. Enter the global database name and SID in the appropriate fields, then click [Next]:

In...	Enter the...
The Global Database Name field	<p>Full database name that uniquely distinguishes it from any other database in your network domain. For example:</p> <p><code>sales.acme.com</code></p> <p>In the preceding example <code>sales</code> is the name you want to call your database and <code>acme.com</code> is the network domain in which the database is located.</p>
The SID field	<p>System Identifier, the database instance name that uniquely distinguishes the database from any other database in your system. The default value of the SID field is the name portion of the Global Database Name (<code>sales</code> in the previous example) until it reaches eight characters in length or you enter a period. You can accept or change the default value.</p>

The Database File Location window appears.

5. In the Directory for Database Files field, enter the directory location of the database file, then click [Next]. Alternatively, use the [Browse...] button to navigate to the directory location of the database file, then click [Next].

Note: Oracle Corporation recommends that you install database files and Oracle software files on separate disks.

The Summary window appears.

6. Review the information in the Summary window, then click [Install].

If a message appears telling you that you do not have enough disk space to install the products, do one the following:

- Install Oracle8i on a different disk.
- Create space on the current disk.

The Install window appears and displays a progress meter.

7. Run the `root.sh` script when prompted.

The Installer creates the `root.sh` script in the Oracle home directory and prompts you to run the script when it finishes installing Oracle products. Log in

as the `root` user and run the script. The `root.sh` script sets the necessary file permissions for Oracle products and performs other `root`-related configuration activities. To run the `root.sh` script, enter:

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

If you install Oracle Parallel Server (OPS) (DG/UX Intel only), you must run the `root.sh` script on every node of the cluster.

The `root.sh` script prompts you to confirm the environment before it performs any actions. To reset the environment, terminate the `root.sh` script. It is not necessary to run the Oracle Universal Installer again. Click [OK] in the alert window after the `root.sh` script 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.

The `root.sh` script also asks you to specify the local `bin` directory. If this directory does not already exist, `root.sh` creates it for you.

8. The Configuration Tools window appears at the end of installation depending on the selections you made previously.

The configuration assistants help you create and configure the database and network environments.

[Table 3–1](#) describes the configuration assistants.

Table 3–1 Configuration Assistants

The...	Starts...	And ...
Net8 Configuration Assistant	In all cases	Automatically configures the Net8 server networking software. See "Understanding Net8 Configuration" on page 2-25 for a description of these configuration procedures.
Apache Web Server Configuration Assistant	In all cases (Solaris Intel only)	Starts the HTTP Listener in non-SSL mode on port 7777.

Table 3–1 Configuration Assistants

The...	Starts...	And ...
Oracle Database Configuration Assistant	If you decided not to upgrade or migrate an existing database instance when prompted at step 2	Automatically creates an Oracle8i release 8.1.7 database. See "Identifying Your Database Environment" on page 2-30 for information on database types.
Oracle Database Migration Assistant	If you decided to migrate or upgrade a database when prompted at step 2	Migrates or upgrades the selected database to Oracle8i release 8.1.7.

If a configuration assistant fails, the Configuration Tools window displays messages indicating the reason for the failure. Correct the cause of the failure then click [Retry] to reattempt the configuration, or click [Next] to continue.

The End of Installation window appears.

9. Click [Exit] to exit the Oracle Universal Installer, or click [Next Install] to install additional products. Selecting [Next Install] returns you to the File Locations window.

See Also: See ["Reviewing a Log of an Installation Session"](#) on page 3-34 to view a log file summary of your installation session.

Oracle8i Enterprise Edition Minimal Installation

To perform an Oracle8i Enterprise Edition Minimal installation:

1. If the `oracle` user is not a member of the `dba` group created in ["Create UNIX Groups for Database Administrators"](#) on page 2-12, or if there is a UNIX group with a name other than `dba` that performs the role of the OSDBA group, the Privileged Operating System Groups window appears. Enter the UNIX group name that serves as the OSDBA group. If a separate UNIX group performs the role of the OSOPER group, specify it in this window as well. Click [Next].
2. If the Oracle Universal Installer detects an earlier version of an Oracle database in the system, you are prompted to upgrade or migrate the database using the Oracle Data Migration Assistant.

Note: Do not upgrade an Oracle8i database configured for use with Oracle Internet Directory through this installation type. Oracle8i database and Oracle Internet Directory upgrades must be performed by following the procedures in "[Oracle Internet Directory Installation \(Solaris Intel Only\)](#)" on page 3 - 25.

- To upgrade or migrate your database to an Oracle8i release 3 (8.1.7) database, select the Upgrade or Migrate an Existing Database check box, then click [Next].

The Oracle Data Migration Assistant starts immediately *after* installation to upgrade or migrate your database to an Oracle8i release 3 (8.1.7) database.

The Summary windows appears. Go to step 6.

- If you do not want to migrate you database to an Oracle8i release 3 (8.1.7) database, leave the Upgrade or Migrate an Existing Database check box unselected. Click [Next].

The Select Starter Database window appears.

Note: Do not upgrade an Oracle8i database configured for use with Oracle Internet Directory through this installation type. Oracle8i database and Oracle Internet Directory upgrades must be performed by following the procedures in "[Oracle Internet Directory Installation \(Solaris Intel Only\)](#)" on page 3 - 25.

3. Click [Yes] to install an Oracle8i database. Clicking [No] installs all server products, but does not create a new database. You can create your database later by manually running the Oracle Database Configuration Assistant or running a SQL script.

The Database Identification window appears.

4. Enter the Global Database Name and SID in the appropriate fields, then click [Next]:

In...	Enter the...
The Global Database Name field	<p>Full database name that uniquely distinguishes it from any other database in your network domain. For example:</p> <p><code>sales.acme.com</code></p> <p>In the preceding example <code>sales</code> is the name you want to call your database and <code>acme.com</code> is the network domain in which the database is located.</p>
The SID field	<p>System Identifier, the database instance name that uniquely distinguishes the database from any other database in your system. The default value of the SID field is the name portion of the Global Database Name (<code>sales</code> in the previous example) until it reaches eight characters in length or you enter a period. You can accept or change the default value.</p>

The Database File Location window appears.

5. In the Directory for Database Files field, enter the directory location of the database file, then click [Next]. Alternatively, use the [Browse...] button to navigate to the directory location of the database file, then click [Next].

Note: Oracle Corporation recommends that you install database files and Oracle software files on separate disks.

The Summary window appears.

6. Review the information in the Summary window, then click [Install].

If a message appears telling you that you do not have enough disk space to install the products, do one the following:

- Install Oracle8i on a different disk.
- Create space on the current disk.

The Install window appears and displays a progress meter.

7. Run the `root.sh` script when prompted.

The Installer creates the `root.sh` script in the Oracle home directory and prompts you to run the script when it finishes installing Oracle products. Log in

as the `root` user and run the script. The `root.sh` script sets the necessary file permissions for Oracle products and performs other `root`-related configuration activities. To run the `root.sh` script, enter:

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

If you install Oracle Parallel Server (OPS) (DG/UX Intel only), you must run the `root.sh` script on every node of the cluster.

The `root.sh` script prompts you to confirm the environment before it performs any actions. To reset the environment, terminate the `root.sh` script. It is not necessary to run the Oracle Universal Installer again. Click [OK] in the alert window after the `root.sh` script 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.

The `root.sh` script also asks you to specify the local `bin` directory. If this directory does not already exist, `root.sh` creates it for you.

8. The Configuration Tools window appears at the end of installation depending on the selections you made previously.

The configuration assistants help you create and configure the database and network environments.

[Table 3–2](#) describes the configuration assistants.

Table 3–2 Configuration Assistants

The...	Starts...	And...
Net8 Configuration Assistant	If you selected any products that require network configuration	Automatically configures your Net8 server networking software. See " Understanding Net8 Configuration " on page 2-25 for a description of the configuration procedures performed.
Apache Web Server Configuration Assistant	If you selected the Oracle HTTP Server in the Available Products window (Solaris Intel only)	Starts the HTTP Listener in non-SSL mode on port 7777.

Table 3–2 Configuration Assistants (Cont.)

The...	Starts...	And...
Oracle Database Configuration Assistant	If you selected [Yes] when prompted to install an Oracle8i database and selected not to upgrade or migrate a database in step 2	Automatically creates an Oracle8i release 8.1.7 database. See "Identifying Your Database Environment" on page 2-30.
Oracle Database Migration Assistant	If you selected to migrate or upgrade a database when prompted in step 2.	Migrates or upgrades the selected database to Oracle8i release 8.1.7.

If a configuration assistant fails, the Configuration Tools window displays messages indicating the reason for the failure. Correct the cause of the failure then click [Retry] to reattempt the configuration, or click [Next] to continue.

The End of Installation window appears.

- Click [Exit] to exit the Oracle Universal Installer, or click [Next Install] to install additional products. Selecting [Next Install] returns you to the File Locations window.

See Also: See ["Reviewing a Log of an Installation Session"](#) on page 3-34 to view a log file summary of your installation session.

Oracle8i Enterprise Edition Custom Installation

When you select Custom and click [Next] in the Installation Types window, the Available Products window appears.

Note: This is a different Available Products window to the one where you previously selected the Oracle Enterprise Edition product category.

To perform an Oracle8i Enterprise Edition custom installation:

- In the Available Products window, select the products that you want to install (or deselect products that you do not want to install), then click [Next].

The Available Products window displays all products available for installation. A typical Custom installation configuration is displayed by default.

2. Provide responses to any prompts that appear.

The Summary window appears.

3. Review the information in the Summary window, then click [Install].

If a message appears telling you that you do not have enough disk space to install the products, do one the following:

- Install Oracle8i on a different disk.
- Create space on the current disk.
- Go to step 1 and deselect products in the Available Products window.

The Install window appears and displays a progress meter.

Note: You cannot make any product or space allocation changes after the installation begins.

4. Run the `root.sh` script when prompted.

The Installer creates the `root.sh` script in the Oracle home directory and prompts you to run the script when it finishes installing Oracle products. Log in as the `root` user and run the script. The `root.sh` script sets the necessary file permissions for Oracle products and performs other `root`-related configuration activities. To run the `root.sh` script, enter:

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

If you install Oracle Parallel Server (OPS) (DG/UX Intel only), you must run the `root.sh` script on every node of the cluster.

The `root.sh` script prompts you to confirm the environment before it performs any actions. To reset the environment, terminate the `root.sh` script. It is not necessary to run the Oracle Universal Installer again. Click [OK] in the alert window after the `root.sh` script 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.

The `root.sh` script also asks you to specify the local `bin` directory. If this directory does not already exist, `root.sh` creates it for you.

- The Configuration Tools window appears at the end of installation depending on the selections you made previously.

The configuration assistants help you create and configure the database and network environments.

[Table 3-3](#) describes the configuration assistants.

Table 3-3 Configuration Assistants

The...	Starts...	And...
Net8 Configuration Assistant	If you selected any products that require network configuration	Automatically configures your Net8 server networking software. See " Understanding Net8 Configuration " on page 2-25 for a description of the configuration procedures performed.
Apache Web Server Configuration Assistant	If you selected the Oracle HTTP Server in the Available Products window (Solaris Intel only)	Starts the HTTP Listener in non-SSL mode on port 7777.
Oracle Database Configuration Assistant	If you selected Oracle8i Server in the Available Products window and decided not to upgrade/migrate when prompted and you answered [Yes] when prompted to install an Oracle8i database	Automatically creates an Oracle8i release 8.1.7 database. See " Identifying Your Database Environment " on page 2-30.
Oracle Database Migration Assistant	If you decided to migrate or upgrade a database when prompted	Migrates or upgrades the selected database to Oracle8i release 8.1.7.
Oracle Enterprise Manager Configuration Assistant	If you decided to install Oracle Management Server in the available products window (Solaris Intel only).	Allows you to use an existing release 2.2 repository or configures a new Enterprise Manager repository. See the Oracle Enterprise Manager Configuration Guide for information on how to use the assistant.

If a configuration assistant fails, the Configuration Tools window displays messages indicating the reason for the failure. Correct the cause of the failure then click [Retry] to reattempt the configuration, or click [Next] to continue.

The End of Installation window appears.

6. Click [Exit] to exit the Oracle Universal Installer, or click [Next Install] to install additional products. Selecting [Next Install] returns you to the File Locations window.

See Also: See "[Reviewing a Log of an Installation Session](#)" on page 3-34 to view a log file summary of your installation session.

Installing Oracle8i Client

After selecting Oracle8i Client in the Available Products window, the Installation Types window appears.

1. Select the Oracle Client installation that type you want to install, then click [Next].
2. Go to one of the following sections, based on the selection that you made in step 1.

If You Selected...	See...
Administrator, Programmer, or Application User	"Oracle8i Client Administrator, Programmer or Application User Installation" on page 3-17.
Custom	"Oracle8i Client Custom" on page 3-19.

See Also: For a list of products installed with each installation type, see the appropriate product section in [Appendix A](#).

Oracle8i Client Administrator, Programmer or Application User Installation

To perform a Client Administrator, Programmer, or Application User installation:

1. Review the information in the Summary window, then click [Install].

If a message appears telling you that you do not have enough disk space to install the products, do one the following:

- Install Oracle8i on a different disk.
- Create space on the current disk.

The Install window appears and displays a progress meter.

2. Run the `root.sh` script when prompted.

The Installer creates the `root.sh` script in the Oracle home directory and prompts you to run the script when it finishes installing Oracle products. Log in as the `root` user and run the script. The `root.sh` script sets the necessary file permissions for Oracle products and performs other `root`-related configuration activities. To run the `root.sh` script, enter:

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

If you install Oracle Parallel Server (OPS) (DG/UX Intel only), you must run the `root.sh` script on every node of the cluster.

The `root.sh` script prompts you to confirm the environment before it performs any actions. To reset the environment, terminate the `root.sh` script. It is not necessary to run the Oracle Universal Installer again. Click [OK] in the alert window after the `root.sh` script 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.

The `root.sh` script also asks you to specify the local `bin` directory. If this directory does not already exist, `root.sh` creates it for you.

3. The Configuration Tools window appears at the end of installation depending on the selections you made previously.

The configuration assistants help you create and configure the database and network environments.

Table 3–4 describes the configuration assistants.

Table 3–4 Configuration Assistants

The...	Starts...	And...
Net8 Configuration Assistant	If you selected any products that require network configuration	Automatically configures your Net8 server networking software. See " Understanding Net8 Configuration " on page 2-25 for a description of the configuration procedures performed.

If a configuration assistant fails, the Configuration Tools window displays messages indicating the reason for the failure. Correct the cause of the failure then click [Retry] to reattempt the configuration, or click [Next] to continue.

The End of Installation window appears.

- Click [Exit] to exit the Oracle Universal Installer, or click [Next Install] to install additional products. Selecting [Next Install] returns you to the File Locations window.

See Also: See "[Reviewing a Log of an Installation Session](#)" on page 3-34 to view a log file summary of your installation session.

Oracle8i Client Custom

When you select Custom and click [Next] in the Installation Types window, the Available Products window appears.

Note: This is a different Available Products window to the one where you previously selected the Oracle8i Client product category.

To perform a Client Custom installation:

- In the Available Products window, select the products that you want to install (or deselect products that you do not want to install), then click [Next].

The Available Products window displays all products available for installation. A typical Custom install configuration is selected by default.

- Provide responses to any prompts that appear.

The Summary window appears.

3. Review the information in the Summary window, then click [Install].

If a message appears telling you that you do not have enough disk space to install the products, do one the following:

- Install Oracle8i on a different disk.
- Create space on the current disk.
- Go to step 1 and deselect products in the Available Products window.

The Install window appears and displays a progress meter.

Note: You cannot make any product or space allocation changes after the installation begins.

4. Run the `root.sh` script when prompted.

The Installer creates the `root.sh` script in the Oracle home directory and prompts you to run the script when it finishes installing Oracle products. Log in as the `root` user and run the script. The `root.sh` script sets the necessary file permissions for Oracle products and performs other `root`-related configuration activities. To run the `root.sh` script, enter:

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

If you install Oracle Parallel Server (OPS) (DG/UX Intel only), you must run the `root.sh` script on every node of the cluster.

The `root.sh` script prompts you to confirm the environment before it performs any actions. To reset the environment, terminate the `root.sh` script. It is not necessary to run the Oracle Universal Installer again. Click [OK] in the alert window after the `root.sh` script 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.

The `root.sh` script also asks you to specify the local `bin` directory. If this directory does not already exist, `root.sh` creates it for you.

5. The Configuration Tools window appears at the end of installation depending on the selections you made previously.

The configuration assistants help you create and configure the database and network environments.

[Table 3-5](#) describes the configuration assistants.

Table 3-5 Configuration Assistants

This Assistant...	Starts...	And does the following...
Net8 Configuration Assistant	If you selected any products that require network configuration	Automatically configures your Net8 server networking software. See " Understanding Net8 Configuration " on page 2-25 for a description of the configuration procedures performed.

If a configuration assistant fails, the Configuration Tools window displays messages indicating the reason for the failure. Correct the cause of the failure then click [Retry] to reattempt the configuration, or click [Next] to continue.

The End of Installation window appears.

6. Click [Exit] to exit the Oracle Universal Installer, or click [Next Install] to install additional products. Selecting [Next Install] returns you to the File Locations window.

See Also: See "[Reviewing a Log of an Installation Session](#)" on page 3-34 to view a log file summary of your installation session.

Installing Oracle8i Management and Integration

After selecting Oracle8i Client from the Available Products window, the Installation Types window appears. To install Oracle8i Management and Integration.

1. Select Oracle Management Server, Oracle Internet Directory, or Custom, then click [Next].

- Go to one of the following sections based on the selection you made in step 1:

If You Selected...	See...
Oracle Management Server	"Oracle Management Server Installation (Solaris Intel Only)" on page 3-22
Oracle Internet Directory	"Oracle Internet Directory Installation (Solaris Intel Only)" on page 3-25
Custom	"Oracle8i Management and Integration Custom Installation" on page 3-30

See Also: For a list of products installed with each installation type, see [Appendix A](#).

Oracle Management Server Installation (Solaris Intel Only)

After selecting Oracle Management Serve in the Installation Types window, the Oracle Management Server Repository window appears. To install Oracle Management Server:

- Select the repository that you want to use with Oracle Management Server, then click [Next]:

Choose...	If...
An existing repository	A release 2.2 repository has already been created and configured for the environment you want to manage and you want this management server to share the existing 2.2 repository, or you want to upgrade or migrate an existing repository from a previous release 2.x repository.
A new repository	A release 2.2 repository has not been created and configured for the environment you want to manage, or you want to migrate an existing release 1.x repository.

The Summary window appears.

- Review the information in the Summary window, then click [Install].

If a message appears telling you that you do not have enough disk space to install the products, do one the following:

- Install Oracle8i on a different disk.
- Create space on the current disk.

The Install window appears and displays a progress meter.

3. Run the `root.sh` script when prompted.

The Installer creates the `root.sh` script in the Oracle home directory and prompts you to run the script when it finishes installing Oracle products. Log in as the `root` user and run the script. The `root.sh` script sets the necessary file permissions for Oracle products and performs other `root`-related configuration activities. To run the `root.sh` script, enter:

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

If you install Oracle Parallel Server (OPS) (DG/UX Intel only), you must run the `root.sh` script on every node of the cluster.

The `root.sh` script prompts you to confirm the environment before it performs any actions. To reset the environment, terminate the `root.sh` script. It is not necessary to run the Oracle Universal Installer again. Click [OK] in the alert window after the `root.sh` script 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.

The `root.sh` script also asks you to specify the local `bin` directory. If this directory does not already exist, `root.sh` creates it for you.

4. Oracle Enterprise Manager Configuration Assistant starts after the installation (Solaris Intel only). Provide responses to Oracle Enterprise Manager Configuration Assistant (EMCA):

If you selected...	You must...
Existing repository	<p>Provide the following repository connection information:</p> <ul style="list-style-type: none">■ A database user name and password for the existing repository■ A database service containing the existing repository, using the following format: <i>hostname:port_number:SID</i> <p>If the existing repository is a release 1.x repository, you cannot migrate until a release 2. 2 repository exists. Do the following:</p> <ol style="list-style-type: none">1. Cancel EMCA.2. Exit the Installer.3. Launch EMCA in stand alone mode.4. Create a new release 2.2 repository.5. Launch EMCA6. Choose [new repository] to create a new repository, then exit. <p>At this point you may use EMCA to migrate your release 1.x repository to the new release 2.2 repository. See the Oracle Enterprise Manager Configuration Guide for information on repository migration.</p>
New repository	<p>Provide the following repository connection information:</p> <ul style="list-style-type: none">■ A database user name and password for the existing repository■ A database service containing the existing repository, using the following format: <i>hostname:port_number:SID</i>

Note: The default port number used by most databases is 1521. Additional windows appear to help you create a repository in the selected database.

See Also: See the Oracle Enterprise Manager Configuration Guide for additional information on repositories.

5. If you use Enterprise Manager Configuration Assistant, click [Close] to exit. The End of Installation window appears.

6. Click [Exit] to exit the Oracle Universal Installer, or click [Next Install] to install additional products. Selecting [Next Install] returns you to the File Locations window.

See Also: See "[Reviewing a Log of an Installation Session](#)" on page 3-34 to view a log file summary of your installation session.

Oracle Internet Directory Installation (Solaris Intel Only)

If an Oracle8i release 3 (8.1.7) database is not currently installed, the Oracle Universal Installer automatically installs one in the same Oracle home directory in which Oracle Internet Directory is installed.

If the 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.

If you intend to upgrade an existing Oracle Internet Directory installation and Oracle8i Enterprise Edition, and you initially installed Oracle Internet Directory separately, then you should upgrade each program separately to ensure that all components of Oracle Internet Directory are upgraded.

Before upgrading Oracle Internet Directory, stop the following processes:

- Oracle listener server
- Oracle database server
- Oracle Internet Directory server (Solaris Intel only)

Note: If an Oracle8i release 3 (8.1.7) database is currently installed, ensure that the database and the listener are running, and that you can connect using the INTERNAL database account without being prompted for a password. Enter the following command:

```
$ sqlplus INTERNAL
```

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

Depending on the window that appears, follow the steps listed in the following table:

If Oracle8i database...	Then the...	Go to...
Release 8.1.7 is already installed on the computer, but Oracle Internet Directory release 2.1 is not installed	Using an Existing Instance window appears, you are prompted for the SID to use, and another <i>Oracle8i</i> database is not installed.	Step 1 " Installing Oracle Internet Directory for the First Time (Solaris Intel Only) " on page 3 - 26.
Release 8.1.5, 8.1.6 and release 8.1.7 and Oracle Internet Directory release 2.0.4, 2.0.6 and release 2.1 are <i>not</i> installed on the computer	Database Identification window appears and an Oracle8i release 8.1.7 database is automatically installed in the same Oracle home directory with Oracle Internet Directory release 2.1.	Step 3 of " Installing Oracle Internet Directory for the First Time (Solaris Intel Only) " on page 3 - 26.
Release 8.1.5 or 8.1.6 and Oracle Internet Directory release 2.0.4 or release 2.0.6 are already installed on the computer	Upgrade OiD window appears and prompts you to upgrade to Oracle8i release 8.1.7 database and Oracle Internet Directory release 2.1.	" Upgrading Oracle Internet Directory (Solaris Intel Only) " on page 3 - 29.

Installing Oracle Internet Directory for the First Time (Solaris Intel Only)

To install Oracle Internet Directory for the first time:

1. To use the installed database with Oracle Internet Directory, click [Yes] in the Using an Existing Instance window, then click [Next]. Otherwise, go to step 3.
The Oracle SID window appears.
2. Enter the SID of the installed database, then click [Next].
The Oracle Internet Directory Database File Location window appears.
Go to step 5.
3. To use a different database with Oracle Internet Directory, click [No] in the Using an Existing Instance window, then click [Next].
The Database Identification window appears.
4. Enter values for the Global Database Name and SID in the appropriate fields, then click [Next]:

In...	Enter the...
The Global Database Name field	<p>Full database name that uniquely distinguishes the database from any other database in your network domain. For example:</p> <p><code>sales.acme.com</code></p> <p>In the preceding example <code>sales</code> is the name you want to call your database and <code>acme.com</code> is the network domain in which the database is located.</p>
The SID field	<p>System Identifier, the database instance name that uniquely distinguishes the database from any other database in your system. The default value of the SID field is the name portion of the Global Database Name (<code>sales</code> in the previous example) until it reaches eight characters in length or you enter a period. You can accept or change the default value.</p>

The Oracle Internet Directory Database File Location window appears.

5. Enter a directory location in which to install the Oracle Internet Directory database files, then click [Next].

Oracle Corporation recommends installing database files and Oracle software on separate drives. These database files contain tables specific to Oracle Internet Directory that were created during configuration.

The Summary window appears.

6. Review the information in the Summary window, then click [Install].

If a message appears telling you that you do not have enough disk space to install the products, do one the following:

- Install Oracle8i on a different disk.
- Create space on the current disk.

The Install window appears and displays a progress meter.

The following information is automatically set during installation:

Setting	Value
Use of an Encrypted Password	Yes
Encryption Schema	MD4
Approximate number of directory entries to be stored in Oracle Internet Directory	Under 10,000 entries
Password of the Administrator Distinguished Name	welcome

See Also: For a list of products installed with each installation type, see the appropriate product section in [Appendix A](#).

7. Run the `root.sh` script when prompted.

The Installer creates the `root.sh` script in the Oracle home directory and prompts you to run the script when it finishes installing Oracle products. Log in as the `root` user and run the script. The `root.sh` script sets the necessary file permissions for Oracle products and performs other `root`-related configuration activities. To run the `root.sh` script, enter:

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

If you install Oracle Parallel Server (OPS) (DG/UX Intel only), you must run the `root.sh` script on every node of the cluster.

The `root.sh` script prompts you to confirm the environment before it performs any actions. To reset the environment, terminate the `root.sh` script. It is not necessary to run the Oracle Universal Installer again. Click [OK] in the alert window after the `root.sh` script 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.

The `root.sh` script also asks you to specify the local `bin` directory. If this directory does not already exist, `root.sh` creates it for you.

8. The Configuration Tools window appears at the end of installation and automatically starts the following assistants to create and configure your network and Oracle Internet Directory environments:

The...	Starts...	And...
Net8 Configuration Assistant	If Net8 is not currently installed on this computer	Prompts you to configure the Net8 server networking software. Select Perform typical configuration and accept all default settings by choosing the [Next] button as each window appears. See Also: See " Server Network Configuration " on page 2-26 for a description of the configuration procedures performed.
OiD Configuration Assistant	In all cases	Creates Oracle Internet Directory tablespaces and schema in the Oracle8i database and starts the Oracle Internet Directory directory server. Note: If a database must be installed, the OiD Configuration Assistant automatically launches the Oracle Database Configuration Assistant to create a database with the UTF8 character set.

If a configuration assistant fails, the Configuration Tools window displays messages indicating the reason for the failure. Correct the cause of the failure then click [Retry] to reattempt the configuration, or click [Next] to continue.

The End of Installation window appears.

9. Click [Exit] to exit the Oracle Universal Installer, or click [Next Install] to install additional products. Selecting [Next Install] returns you to the File Locations window.

See Also: See "[Reviewing a Log of an Installation Session](#)" on page 3-34 to view a log file summary of your installation session.

Upgrading Oracle Internet Directory (Solaris Intel Only)

The Upgrade OiD window appears if you have a previously-installed version of Oracle Internet Directory in the system. To upgrade Oracle Internet Directory:

1. Click [Yes] to upgrade an existing Oracle8i database previously configured for use with Oracle Internet Directory, then click [Next].

The Oracle SID window appears.

2. Enter the SID of the Oracle8i database that must be upgraded, then click [Next].

The OiD Password window appears.

3. Enter the password for the Oracle Directory Server user (ODS by default) and Oracle Internet Directory administrator (WELCOME by default), then click [Next].
4. The Configuration Tools window appears and automatically starts the following assistants to upgrade the Oracle8i database and Oracle Internet Directory environments:

The...	Upgrades...
Oracle Data Migration Assistant	Oracle8i database release 8.1.5 or release 8.1.6 to release 8.1.7.
OiD Upgrade Assistant	Oracle Internet Directory release 2.0.4 or release 2.0.6 to release 2.1.

Oracle8i Management and Integration Custom Installation

When you select Custom and click [Next] in the Installation Types window, the Available Products window appears.

Note: This is a different Available Products window to the one where you previously selected the Oracle8i Management and Integration product category.

To perform an Oracle8i Management and Integration custom installation:

1. Select the products you want to install in the Available Products window (or deselect products you do not want to install) then click [Next].
2. Provide responses to any window prompts that appear.
3. Review the information in the Summary window, then click [Install].

If a message appears telling you that you do not have enough disk space to install the products, do one the following:

- Install Oracle8i on a different disk.
- Create space on the current disk.
- Go to step 1 and deselect products in the Available Products window.

The Install window appears and displays a progress meter.

Note: You cannot make any product or space allocation changes after the installation begins.

4. Run the `root.sh` script when prompted.

The Installer creates the `root.sh` script in the Oracle home directory and prompts you to run the script when it finishes installing Oracle products. Log in as the `root` user and run the script. The `root.sh` script sets the necessary file permissions for Oracle products and performs other `root`-related configuration activities. To run the `root.sh` script, enter:

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

If you install Oracle Parallel Server (OPS) (DG/UX Intel only), you must run the `root.sh` script on every node of the cluster.

The `root.sh` script prompts you to confirm the environment before it performs any actions. To reset the environment, terminate the `root.sh` script. It is not necessary to run the Oracle Universal Installer again. Click [OK] in the alert window after the `root.sh` script 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.

The `root.sh` script also asks you to specify the local `bin` directory. If this directory does not already exist, `root.sh` creates it for you.

5. The Configuration Tools window appears at the end of installation depending on the selections you made previously.

The configuration assistants help you create and configure the database and network environments.

[Table 3-6](#) describes the configuration assistants.

Table 3–6 Configuration Assistants

The...	Starts...	And...
Net8 Configuration Assistant	If you selected any products that require network configuration	Automatically configures your Net8 server networking software. See " Understanding Net8 Configuration " on page 2-26 for a description of the configuration procedures performed.
Apache Web Server Configuration Assistant	If you selected the Oracle HTTP Server in the Available Products window (Solaris Intel only).	Starts the HTTP Listener in non-SSL mode on port 7777.
Oracle Database Configuration Assistant	If you selected the Oracle8i Server in the Available Products window and you chose not to upgrade/migrate when prompted and you answered [Yes] when prompted to install an Oracle8i database.	Automatically creates an Oracle8i release 8.1.7 database. See " Identifying Your Database Environment " on page 2-30.
Oracle Database Migration Assistant	If you selected to migrate or upgrade a database when prompted	Migrates or upgrades the selected database to Oracle8i release 8.1.7.
Oracle Enterprise Manager Configuration Assistant	If you selected to install Oracle Management Server in the Available Products window (Solaris Intel only).	Allows you to use an existing release 2.2 repository or configures a new Enterprise Manager repository. Refer to the Oracle Enterprise Manager Configuration Guide for instructions on how to use the assistant.

Note: If you use the Custom installation type to install Oracle Advanced Security into an existing Oracle home directory that already contains Oracle8i Enterprise Edition, you must install Oracle Advanced Security separately from any other product options.

If a configuration assistant fails, the Configuration Tools window displays messages indicating the reason for the failure. Correct the cause of the failure then click [Retry] to reattempt the configuration, or click [Next] to continue.

The End of Installation window appears.

6. Click [Exit] to exit the Oracle Universal Installer, or click [Next Install] to install additional products. Selecting [Next Install] returns you to the File Locations window.

See Also: See "[Reviewing a Log of an Installation Session](#)" on page 3-34 to view a log file summary of your installation session.

Oracle Parallel Server Installation Notes (DG/UX Intel Only)

The following section includes notes on installing Oracle Parallel Server.

Creating Raw Devices

The size of the raw device that you create for the SYSTEM tablespace must be at least 275 MB. This requirement supersedes the corresponding file size requirement listed in the Oracle8i Parallel Server Setup and Configuration Guide. For more information on creating raw devices on Intel UNIX systems, see the *Oracle8i Administrator's Reference Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)*.

Oracle Parallel Server Installed Software Location

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

See Also: For more information on OPS, see the *Oracle8i Parallel Server Setup and Configuration Guide*, and *Oracle8i Parallel Server Installation, Configuration, and Administration*.

Re-Installing Oracle Parallel Server

If the installation fails before completion and you must re-install, click [Yes] on all Installer dialog boxes that ask "Do you want to re-install *name of a product*?" The remote copy operation only re-installs products that you confirm this way.

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 in your system as well as other installation information.

On SCO UnixWare and Solaris Intel, the location of the `oraInventory` directory is stored in the `/var/opt/oracle/oraInst.loc` file. On DG/UX Intel, the location of this directory is stored in the `/etc/oraInst.loc` file.

The log file of the most recent installation is `oraInventory_location/logs/installActions.log`. Previous installation log files use the following log file name format:

`installActionsdatetime.log`.

For example:

`installActions1999-07-14_09-00-56-am.log`

Note: Do not delete or manually alter the `oraInventory` directory or its contents. Doing so can prevent the Installer from locating products that you install in your system.

The `make.log` file in the `$ORACLE_HOME/install` directory contains a log of every make file action executed during the installation process. The `make.log` file also records any link errors during installation. Do not delete or alter the `make.log` file.

Cleaning Up After a Failed Installation

If an installation fails, you might need to remove files that the Installer created during the failed installation. To clean up after a failed installation:

1. Start the Oracle Universal Installer.
The Welcome window appears.
2. Click [De-install Products].
The Products Currently Installed window appears.
3. Select any products remaining after the failed installation.
4. Click [Remove].

To complete the clean up, manually remove the Oracle home directory. This is necessary because the Installer may have copied files to your system but failed to register them during the unsuccessful installation. This step is not required if de-installation deletes all files from the Oracle home directory.

Non-Interactive "Silent" Installation and Configuration

You can perform a non-interactive or "silent" 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 (Solaris Intel only) non-interactively by using response files.

Preparing the Response File

There are fifteen response files included on the Oracle8i release 3 (8.1.7) CD-ROM; eleven for the Oracle Universal Installer (one for each product category and installation type) and four for the configuration tool response files. You must edit the response files 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 directory in your system. For example:

```
$ cd cdrom_mount_point_directory/response
```

```
$ cp svrtypical.rsp local_directory
```

Use any text editor to edit the response file including information specific to your system. Each file contains information on properly configuring the response file. [Table 3-7](#) lists the response files included on the Oracle8i CD-ROM.

Table 3-7 Response Files

File Name	Description
svrtypical.rsp	Oracle8i Enterprise Edition - Typical installation
svrminimal.rsp	Oracle8i Enterprise Edition - Minimal installation
svrcustom.rsp	Oracle8i Enterprise Edition - Custom installation
omioms.rsp	Oracle8i Management and Integration - Oracle Management Server installation
omioid.rsp	Oracle8i Management and Integration - Oracle Internet Directory installation (Solaris Intel only)
omicustom.rsp	Oracle8i Management Infrastructure - Custom installation
clientadmin.rsp	Oracle8i Client - Custom installation
clientprogmr.rsp	Oracle8i Client - Programmer installation
clientappuser.rsp	Oracle8i Client - Application User installation
clientcustom.rsp	Oracle8i Client - Custom installation
dbca.rsp	Oracle Database Configuration Assistant
net8ca.rsp	Net8 Configuration Assistant
emca.rsp	Oracle Enterprise Manager Configuration Assistant (Solaris Intel only)

Specifying a Response File Location

To run the Oracle Universal Installer or a configuration assistant in silent mode, you must specify the response file location:

- To use a response file with the Oracle Universal Installer, follow the steps described in "[Start Oracle Universal Installer](#)" on page 3-3, and specify the location of the response file that you want to use as a parameter:

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

- To use a configuration assistant in silent mode, do one of the following:
 - Configure an Oracle Universal Installer response file to spawn the silent configuration assistant.
 - Run the configuration assistant in stand alone mode. Enter the following:

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

In the preceding example, *assistant_name* is the configuration assistant that you want to run. *Filename* is the response file for that assistant.

To perform a completely silent installation or configuration, use the `-silent` parameter. In silent mode, the `DISPLAY` environment variable must still be set as described in "DISPLAY" on page 2-17.

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 `oraInventory` directory exists in 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 saved in the `oraInventory_location/logs/installActions.log` file.

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

See Also: For more information on silent installations and installations using response files, see the *Oracle Universal Installer Concepts Guide*.

First-time Installation in Silent Mode

If you have not previously installed Oracle products on a system, you must manually create a file called `oraInst.loc` before running the Installer in silent mode. This file specifies the directory where the installer creates the inventory of Oracle products installed on the system. Before creating this file, read and complete the tasks described in Chapter 1 and Chapter 2. To create the `oraInst.loc` file:

1. Log in as the `root` user.

```
$ su
```

2. If the `/var/opt/oracle` directory does not already exist in your system, enter the following to create it:

```
# mkdir /var/opt/oracle
```

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

```
# cd /var/opt/oracle
```

4. Using a text editor, create a file called `oraInst.loc` that includes the following two lines:

```
inventory_loc=inventory_directory.  
inst_group=
```

Set the `inventory_loc` parameter to `$ORACLE_BASE/oraInventory`. For example, if the value of `ORACLE_BASE` environment is `/u01/app/oracle`, then set `inventory_directory` to the value of `/u01/app/oracle/oraInventory`.

Include, but do not set the `inst_group` parameter on the second line.

Running Oracle Enterprise Manager Configuration Assistant in Silent Mode

The Enterprise Manager Configuration Assistant (EMCA) is available on Solaris Intel only. There are two ways to run EMCA in silent mode:

- In stand alone mode
- As part of a silent installation session

In either way, you can only create a new repository; you cannot delete, upgrade or edit a repository using EMCA in silent mode.

This section describes how to run EMCA in silent mode under these two ways.

Running Stand Alone EMCA in Silent Mode

To run stand alone EMCA in silent mode:

1. Complete the preinstallation steps listed in "[Setup Tasks to Perform as the oracle User](#)" on page 2-16.
2. Verify that the Oracle Management Server is installed on the node where you intend to run EMCA silently.
3. Copy the `emca.rsp` response file to a local directory.
4. Use a text editor to edit it according to the information in the response file.

Note: Ensure that the repository user's `USERNAME` variable that you specify in the `emca.rsp` file is unique across your network.

Note: The response files are located in the `cd_rom_mount_directory/response` directory of the Oracle8i CD-ROM.

5. Change directory to the `$ORACLE_HOME/bin` directory and enter:

```
$ emca -responseFile path/emca.rsp -silent
```

In the preceding example `path` is the path to the response file.

Running EMCA in Silent Mode as Part of a Silent Installation Session

To run EMCA in Silent Mode as part of a silent installation session:

1. Copy an installation response file from the Oracle8i CD ROM to a local directory.

The installation response file is one of the installation files listed in [Table 3-7](#). Choose the installation response file that corresponds to the type of installation you are performing. For example, choose the `svrtypical.rsp` file to perform an Oracle8i Enterprise Edition Typical installation.

2. Use a text editor to edit the installation response file according to the information in the response file.
3. Ensure that Oracle Management Server will be installed as part of the silent installation.

The Oracle Management Server is only available for installation in the following installation response files:

```
svrtypical.rsp
svrcustom.rsp
omions.rsp
omicustom.rsp.
```

4. Edit the following parameters in the `oracle.sysman.oms_2.2.0.0.0` section of the response file to ensure that EMCA is properly launched in silent mode:

```
emca
ServerRepository_index
EMCARspFileLocation
```

Refer to the installation response file for more detailed information on setting these variables.

5. Copy the `emca.rsp` response file to a local directory.
6. Use a text editor to edit it according to the information in the response file.

Note: Ensure that the repository user's `USERNAME` variable that you specify in the `emca.rsp` file is unique across your network.

7. Change directory to the directory where the Oracle Universal Installer is installed. The installation response file automatically spawns the EMCA response file when the silent installation is complete. Enter the following command:

```
$ setup -responseFile path\install response file name -silent
```

The following is an example of the `oracle.sysman.oms_2.2.0.0.0` in an installation response file:

```
#-----
# Name           : emca
# Datatype       : StringList
# Description     : List of Optional Config tools to launch.  Following are
# possible values
# emca.bat       : Enterprise Manager Configuration Assistant
# Example value  : {"emca.bat"}
# Default value  : {"emca.bat"}
#-----
```

```

OPTIONAL_CONFIG_TOOLS={"emca.bat"}

#-----
# Name           : EMCARspFileLocation
# Datatype      : String
# Description    : Path to a customized copy of a response file for EMCA
# based on # the emca.rsp provided with the release
# Valid values   : Full path to any valied EMCA response file
# Example value  : "/TEMP/EMCA.RSP"
# Default value  : None
# Mandatory     : Yes
#-----

EMCARspFileLocation="/TEMP/EMCA.RSP"

#-----
# Name           : ServerRepository_index
# Datatype      : Number
# Description    : Set to "1" to create a new repository
# Valid value    : "1"
# Example value  : "1"
# Default value  : "1"
# Mandatory     : Yes
#-----

ServerRepository_index=1

```

Error Handling

Values for parameters that are of the wrong context, format, or type are treated as if no value were specified. Variables that 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 the non-interactive installation is recorded in the installation session's log file.

See Also: See "[Reviewing a Log of an Installation Session](#)" on page 3-34 to view a log file summary of your installation session.

Validation of Values from Response File

The Installer or configuration assistant validates the response file at run time. If the validation fails, the installation or configuration ends.

Silent Installation and Net8 Configuration Assistant

If you perform a Minimal installation of Oracle8i Enterprise Edition in silent mode, Net8 Configuration Assistant does not configure the system at the end of the installation. After the installation, run the Net8 configuration assistant to configure Net8. To run the Net8 Configuration Assistant, enter the `netca` command in the Oracle home directory.

See Also: See the *Net8 Administrator's Guide* for more information on configuring Net8.

Post-Installation Tasks

After you complete the Oracle Universal Installer session, you must perform certain post-installation steps to configure Oracle8i. This chapter describes the required steps, as well as some optional ones. It contains the following sections:

- [User Passwords](#)
- [Configuration Tasks to Perform as the root User](#)
- [Configuration Tasks to Perform as the oracle User](#)
- [Post-Installation Tasks for Oracle Products](#)
- [Reviewing Installed Starter Database Contents](#)
- [De-Installing Oracle Software](#)

See Also: This chapter describes basic configuration. For information on more sophisticated configuration and tuning typically required for production systems, see the *Oracle8i Administrator's Reference Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)* and product administration and tuning guides.

User Passwords

Oracle Corporation recommends that you change the password for user names *immediately* after installation. To change a password:

1. Start SQL*Plus:

```
$ sqlplus
```

2. Connect with the user name and password that you want to change:

```
Enter user-name: username/password
```

3. Enter the following command to change the password:

```
SQL> ALTER USER USERNAME IDENTIFIED BY PASSWORD;
```

See Also: See the *Oracle Enterprise Manager Administrator's Guide* for information on using Oracle Security Manager or Oracle DBA Studio to change the password

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 \(Optional\)](#)
- [Change Group Membership of the Apache Account \(Solaris Intel Only\)](#)

Create Additional UNIX Accounts

If necessary, use a system administration tool to create additional UNIX accounts. Each DBA user on the system must be a member of the OSDBA group.

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 file privileges and recommended ownership are as follows:

- The `oracle` account should have read, write, and execute privileges for 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.
- Only the `oracle` account or the `oinstall` group members should have write access on any files or directories in an Oracle installation.
- To be installed properly, the Apache server is granted `oinstall` group privilege as a pre-installation step. Remove this privilege. See "[Change Group Membership of the Apache Account \(Solaris Intel Only\)](#)" on page 4-6.

Note: The Apache Server is supported on Solaris Intel only.

[Table 4-1](#) summarizes the directory and file permissions recommended for different types of files.

Note: Do not change these default permission values.

Table 4-1 Access Permissions on Oracle Directories and Files

Directories/Files	Permissions	Comments
All database, redo log, and control files (extensions for these files are typically <code>.dbf</code> , <code>.log</code> , and <code>.ctl</code>)	640 <code>rw-r----</code>	To maintain discretionary access to data, all database, redo log, and control files must be readable only by the <code>oracle</code> account and <code>oinstall</code> group.
<code>\$ORACLE_HOME/bin/</code>	751 <code>rwxr-x--x</code>	Must be writable by the <code>oracle</code> account, and executable by all users.
The <code>oracle</code> executable, and the following network executables: <code>\$ORACLE_HOME/bin/oracle</code> and <code>\$ORACLE_HOME/bin/dbsnmp</code>	6751 <code>rws-r-s--x</code>	The <code>6</code> sets the setuid bit and the setgid bit so the executables run as the <code>oracle</code> and <code>dba</code> group, regardless of who executes them.

Table 4–1 Access Permissions on Oracle Directories and Files (Cont.)

Directories/Files	Permissions	Comments
All other executables	751 rwxr-x--x	Must be writable by the <code>oracle</code> account and executable by all users.
<code>\$ORACLE_HOME/lib/</code>	755 rwxr-xr-x	The directory is readable, writable, and executable by the owner. It is readable and executable by all other users.
All files in <code>\$ORACLE_HOME/lib/</code>	644 rw-r--r--	The files are readable and writable by the owner. They are read-only for all other users.
<code>\$ORACLE_HOME/rdbms/log</code>	751 rwxr-x--x	Restricts access to files in the directory to the <code>oracle</code> account and <code>oinstall</code> group.
Product subdirectories such as <code>\$ORACLE_HOME/sqlplus</code> or <code>\$ORACLE_HOME/rdbms</code>	751 rwxr-x--x	Restricts access to log files to the <code>oracle</code> account and <code>oinstall</code> group.
Files in <code>\$ORACLE_HOME/sqlplus</code> or <code>\$ORACLE_HOME/rdbms</code>	644 rw-r--r--	The files are readable and writable by the owner. They are read-only for all other users.
<code>\$ORACLE_HOME/network/trace</code>	777 rwxrwxrwx or 730 rwx-wx---	The 777 permission allows broad access to view and create trace files during development. Use 730 in a production environment to ensure that only the <code>oracle</code> account and members of the <code>oinstall</code> group have access to trace files.
All files in product admin directories, such as <code>\$ORACLE_HOME/rdbms/admin</code> and <code>\$ORACLE_HOME/sqlplus/admin</code>	644 -rw-r--r--	SQL scripts should typically be run as the SYS 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.

You can use the `dbstart` and `dbshut` scripts located in the `$ORACLE_HOME/bin` directory 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 system shutdown file but omit the `dbstart` entry from the system startup files.

See Also: For a description of system startup and shutdown procedures, check the `init` command in your Intel UNIX documentation.

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:

1. Edit the `/var/opt/oracle/oratab` file on Solaris Intel and SCO UnixWare. On DG/UX Intel platforms, edit the `/etc/oratab` file.

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

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

Enter Y or N to specify 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). You must specify the full path of the `dbstart` and `dbshut` utilities.

```
#!/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/8.1.7
ORA_OWNER=oracle
```

```
if [! -f $ORA_HOME/bin/dbstart]
then
echo "Oracle startup: cannot start"
exit
fi
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 &
;;
esac
```

4. Link dbora by entering:

```
# ln -s /etc/init.d/dbora /etc/rc0.d/K10dbora
# ln -s /etc/init.d/dbora /etc/rc2.d/S99dbora
```

Change Group Membership of the Apache Account (Solaris Intel Only)

To maintain database security, you must change the Apache account to prevent it from accessing the `oraInventory` directory. Perform the following tasks:

1. Create a new group to which no other group or user has access.
2. Assign ownership of this group to Apache.
3. Change the Apache account primary GID group from the one that has ownership of `oraInventory` (typically `oinstall`) to the new group name.

Note: Apache is supported only on Solaris Intel.

Configuration Tasks to Perform as the oracle User

Perform the following tasks as the `oracle` user:

- ❑ [Update UNIX Account Startup Files](#)
- ❑ [Configure Environment Variables](#)
- ❑ [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.

Configure Environment Variables

Set the following environment variables in the `.profile` or `.login` file of the `oracle` account before using Oracle8i products. [Table 4-2](#) shows the recommended settings. The settings that you use should correspond to the settings that you used during installation as described in "[Set Environment Variables](#)" on page 2-16. 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
```

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 lists environment variables and their default settings. Examples assume the Bourne or Korn shell.

Table 4–2 Environment Variable Settings

Environment Variable	Recommended Setting
<code>LD_LIBRARY_PATH</code>	<p>Specifies a search path for shared libraries. Set it to include <code>\$ORACLE_HOME/lib</code>.</p> <p>Note: On SCO UnixWare, include <code>\$ORACLE_HOME/JRE/lib/x86at/native_threads</code>.</p> <p>Note: On DG/UX Intel, include <code>\$ORACLE_HOME/JRE/lib/PentiumPro/native_threads</code>.</p>
<code>ORACLE_BASE</code>	<code>software_mount_point/app/oracle</code>
<code>ORACLE_HOME</code>	<code>\$ORACLE_BASE/product/817</code>
<code>ORACLE_SID</code>	<p>If you do not remember the value that you entered when you were prompted by the Oracle Universal Installer, you can find it listed in the Installer log file located in the <code>oraInventory_location/logs/installActions.log</code> file.</p> <p>On Solaris Intel and SCO UnixWare, the <code>oraInventory_location</code> is defined in <code>/var/opt/oracle/oraInst.loc</code>. On DG/UX Intel, the <code>oraInventory_location</code> is defined in <code>/exc/oraInst.loc</code>.</p>
<code>PATH</code>	Make sure the new <code>\$ORACLE_HOME/bin</code> directory is included in the <code>PATH</code> setting. See Chapter 2 , for other <code>PATH</code> requirements.
<code>CLASSPATH</code>	<p>The <code>CLASSPATH</code> setting must include the following directories:</p> <p><code>JRE_Location</code>, <code>\$ORACLE_HOME/jlib</code>, <code>\$ORACLE_HOME/product/jlib</code></p> <p>Note: <code>JRE_Location</code> is defined as <code>\$ORACLE_HOME/JRE</code></p>
<code>TNS_ADMIN</code>	Set to the location of the Net8 configuration files. You must set this file only if Net8 configuration files are not located in one of the default locations.
<code>TWO_TASK</code>	Set to the Net8 connect string alias defined in <code>tnsnames.ora</code> which client software uses by default to connect to a server.

LD_LIBRARY_PATH

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

Note: On SCO UnixWare, include
`$ORACLE_HOME/JRE/lib/x86at/native_threads`.

On DG/UX Intel, include
`$ORACLE_HOME/JRE/lib/PentiumPro/native_threads`.

ORACLE_BASE

Specifies the directory at the top of the Oracle software and administrative file structure. The Optimal Flexible Architecture (OFA) -recommended value is:

software_mount_point/app/oracle.

For example:

/u01/app/oracle

ORACLE_HOME

Specifies the directory containing the Oracle software for a particular release. The OFA recommended value is:

\$ORACLE_BASE/product/release

For example:

/u01/app/oracle/product/817

ORACLE_SID

Specifies the Oracle System Identifier (SID), which is the name of the Oracle Server instance. Because the *SID* is incorporated into many file names, Oracle Corporation recommends restricting it to no more than four characters to avoid file name problems on different operating systems.

PATH

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

- `$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 the `/usr/ucb` directory in your search path, make sure it comes after the `/usr/ccs/bin` directory in the search order.

CLASSPATH

The CLASSPATH variable is used for Java applications. This variable differs with the Java application. Refer to your product documentation for more information. In addition to any pre-existing settings, CLASSPATH must include the following JRE locations:

```
$ORACLE_HOME/JRE/lib:$ORACLE_HOME/jlib:$ORACLE_HOME/product/jlib
```

In the preceding example, *product* indicates any product directory in the Oracle home directory, such as `rdbms` or `network`, where Java class libraries are located.

TNS_ADMIN

If the Net8 configuration files are not located in one of the default directories (`/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 the `tnsnames.ora` files are stored in the `/tns` directory, set TNS_ADMIN to `/tns`.

Oracle products look for network information in the following locations:

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

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 the TWO_TASK environment variable to the network service name of the database where you want the client software to connect by default. When TWO_TASK is set, you do not have to specify the network service name of the database when you want to connect to it using Oracle client software. See the *Net8 Administrator's Guide* and the *Oracle8i Administrator's Reference for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)* for more information on network service names.

Initialize the oraenv (coraenv) Script

The oraenv or coraenv scripts enable you to set a common environment for oracle users. The following sections describe a single-instance or multiple-instance configuration for the oraenv script, or the coraenv script if you are running the C shell.

Single-Instance Configuration

On a single-instance system, set the ORACLE_SID environment variable in the .profile or .login file of the oracle account, followed by commands that initialize the oraenv (coraenv) file at login.

For the Bourne or Korn shell, run the script:

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

For the C shell, run the script:

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

Multiple-Instance System

On a multiple-instance system, 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 on DG/UX Intel:

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

For the Bourne or Korn shell on Solaris Intel and SCO UnixWare:

```
#!/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 on DG/UX Intel:

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

For the C shell on Solaris Intel and SCO UnixWare:

```
#!/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` users, 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 "[Configure Environment Variables](#)" on page 4-7.

Apply Any Required Oracle Patches

The Oracle8i release, which this guide accompanies, includes patches (if any) that must be applied to Oracle8i or other products. You can find patches on the Oracle8i release 3 (8.1.7) CD-ROM in the `cd_rom_mount_point/patch` directory. Review the README file included with each patch for installation instructions.

Set Initialization Parameters

You can change initialization parameters to configure and tune your system for optimal performance. The default `initsid.ora` file shipped with the distribution is located in the `$ORACLE_BASE/admin/sid/pfile` directory. A template `init.ora` file is also located in the `$ORACLE_HOME/dbs` directory. The template file contains settings for small, medium, and large databases, with the settings for the 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 `initsid.ora` Parameters

When you create a typical startup database using Oracle Database Configuration Assistant, the `initsid.ora` parameters are automatically set. You can use a UNIX text editor to manually modify the initialization parameters in the `initsid.ora` file. Activate the modified `initsid.ora` file by shutting down and restarting the database.

Do not use symbolic character representations such as question marks (?) for the Oracle home directory in parameter files, as they may lead to startup errors.

To bring rollback segments online automatically when you start the database, you must uncomment the `rollback_segments` line in the `initsid.ora` file.

For example, remove the number sign (#) from the following line:

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

See Also: See the *Oracle8i Administrator's Reference Release 3 (8.1.7) for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)* for information on initialization parameters, and for more information on tuning and configuring these parameters.

Post-Installation Tasks for Oracle Products

Perform as many of the following tasks as required for your installation. Not all products require post-installation tasks.

To review online documentation before you configure Oracle products, see "[De-Installing Oracle Software](#)" on page 4-33. You do not need to read the product documentation before completing the configuration tasks in this guide. However, if you are performing more sophisticated tuning, you should read the product documentation.

The following products require post-installation tasks:

- [Multi-threaded Server](#)
- [Net8](#)
- [Oracle Assistants](#)
- [Oracle Internet Directory \(Solaris Intel Only\)](#)
- [Oracle Internet Directory \(Solaris Intel Only\)](#)
- [Oracle Parallel Server Management \(DG/UX Intel Only\)](#)
- [Oracle Precompilers](#)
- [Recovery Manager](#)
- [Secure Socket Layer](#)

Multi-threaded Server

Oracle servers configured with Multi-threaded Server require a higher setting for the SHARED_POOL_SIZE initialization parameter or a custom configuration that uses LARGE_POOL_SIZE. If you installed the server using Oracle Universal Installer, the value of SHARED_POOL_SIZE is set automatically by the Oracle Database Configuration Assistant. If you created a database manually, raise the SHARED_POOL_SIZE parameter value in the `init sid .ora` file. Typically, you should add 1 KB for each anticipated concurrent user.

See Also: See the *Oracle8i Designing and Tuning for Performance* for more information on configuring Multi-threaded Server.

Net8

For detailed information on configuring a complete Oracle network, see the *Net8 Administrator's Guide*.

Net8 Configuration Assistant performs a basic configuration of Net8 when you run Net8 Configuration Assistant from the Oracle Universal Installer. See "[Understanding Net8 Configuration](#)" on page 2-25 for an explanation of how Net8 Configuration Assistant configures your installation. See "[Net8 Assistant](#)" on page 4-16 for information on running Net8 Configuration Assistant as a stand alone tool.

To verify and complete your initial configuration:

1. Log in as root.
2. 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.

3. 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`.

4. If the listener is not running, enter the following command to start it:

```
$ lsnrctl start [listener_name]
```

5. Install and configure the 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 using SQL*Plus, you have established network connectivity over TCP/IP.

Oracle Assistants

The following Oracle assistants are described in this section:

- [Net8 Assistant](#)
- [Oracle Data Migration Assistant](#)
- [Oracle Database Configuration Assistant](#)

The Installer usually runs these assistants during an installation session. However, you can also run them in a stand alone mode. Like the Oracle Universal Installer, you can run each of these assistants non-interactively using a response file. See "[Non-Interactive “Silent” Installation and Configuration](#)" on page 3-35 for information on using response files with the assistants.

Net8 Assistant

When the Net8 Server or Net8 Client is installed, the Net8 Assistant is automatically launched by the Oracle Universal Installer.

If you create a database using the Oracle Database Configuration Assistant during or after installation, it automatically updates the Net8 configuration with any configuration information required by the new database. The Oracle Database Configuration Assistant either registers the database in a supported directory service so that clients can use the directory service to connect to the database, or it creates an entry in the local naming file (`tnsnames.ora`) that you can then distribute to client systems.

If you choose to install Oracle8i Client separately, the Net8 Assistant automatically creates a profile that is consistent with any selections you made during the installation. The Installer automatically runs the Net8 Assistant to set up a network service name in the local naming file found in the `$ORACLE_HOME/network/admin` directory of the client installation.

After installing the software, you can create a more detailed configuration using the Net8 Assistant using the following command:

```
$ netasst
```

See Also: See "[Understanding Net8 Configuration](#)" on page 2-25 for a description of how Net8 Assistant configures your installation. For information on the use and configuration of Net8, see the *Net8 Administrator's Guide*.

Oracle Data Migration Assistant

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

See Also: See *Oracle8i Migration* for more information on migrating a database.

Oracle Database Configuration Assistant

The Oracle Database Configuration Assistant can create a default or customized database or it can configure an existing database to use Oracle options, for example. The assistant can create the database or generate a collection of shell and SQL scripts that you can inspect, modify, and run at a later time. See "[Identifying Your Database Environment](#)" on page 2-30 for information on the types of databases that you can install using Oracle Database Configuration Assistant.

Enter the following command to start the Oracle Database Configuration Assistant:

```
$ dbassist
```

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

```
$ dbassist -help
```

Oracle Corporation recommends running the `utlrp.sql` script after creating, upgrading, or migrating a database. This script recompiles all PL/SQL modules that may be in an `INVALID` state, including packages, procedures, types, and so on. This step is optional, but recommended so that the cost of recompilation is incurred during the installation rather than in the future.

Note: There should be no other data definition language (DDL) statements running on the database while it is running, and packages `STANDARD` and `DBMS_STANDARD` must already be `VALID`.

1. Start SQL*Plus:

```
$ SQLPLUS
```

2. Connect to the database with the `SYS` account:

```
SQL> CONNECT SYS/PASSWORD AS SYSDBA
```

In the preceding example, `PASSWORD` is `CHANGE_ON_INSTALL` by default, unless it was changed after installation.

3. Start the database (if necessary):

```
SQL> STARTUP
```

4. Run the `utlrp.sql` script:

```
SQL> @ORACLE_BASE\ORACLE_HOME\RDBMS\ADMIN\UTLRP.SQL
```

Oracle Internet Directory (Solaris Intel Only)

If you installed OiD, run the `$ORACLE_HOME/ldap/bincryptupgrd.sh` script immediately after installation. The script is available in the `$ORACLE_HOME/ldap/bin` directory.

See Also: For more information, see the *Oracle Internet Directory Administrator's Reference*.

Oracle Options

The following sections describe post-installation tasks required for Oracle options.

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. Enter the following command to start the Oracle Database Configuration Assistant:

```
$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 want to enable from the list, then click the [Finish] button.

Execute privileges are granted to PUBLIC for all of the options and packages that you enable.

Oracle *interMedia*

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

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

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

Note: There is no upgrade from previous releases of ConText Cartridge to Oracle *interMedia* Text release 8.1. However, you can migrate ConText data manually. See the *Oracle8i ConText to interMedia Text Migration* guide for information on this process.

See Also: See the *Oracle8i SQL Reference* for information on creating tablespaces.

Oracle Parallel Server Management (DG/UX Intel Only)

To Configure Oracle Parallel Server (OPS):

1. To start the Oracle Parallel Server Communication daemon automatically when the system is rebooted, log in as the `root` user and add a line similar to the following in the `/etc/init.d/dbora` system startup file:

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

The preceding entry is optional. The default entry is:

```
/tmp/opcdlog
```

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.

See Also: See the *Oracle Parallel Server Setup and Configuration Guide* for more information on Oracle Parallel Server.

Oracle Precompilers

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

Precompiler Configuration File Location

All precompiler configuration files are located in the following location:

`$ORACLE_HOME/precomp/admin`

Pro*C/C++

The configuration file for Pro*C/C++ is

`$ORACLE_HOME/precomp/admin/pcscfg.cfg`. This file must be customized for your environment before using Pro*C/C++. This file is installed without content and can be configured with any text editor according to your site-specific requirements.

See Also: See the *Programmer's Guide to the Pro*C/C++ Precompiler* for more information on configuring the `pcscfg.cfg` file for your environment.

Pro*COBOL

The configuration file for Pro*COBOL 8.1.52 is

`$ORACLE_HOME/precomp/admin/pcccfg.cfg`.

The configuration file for Pro*COBOL 8.1.7 is

`$ORACLE_HOME/precomp/admin/pcbcfg.cfg`.

You must customize the configuration file for the version of Pro*COBOL that you are using. These file are installed without content. Use any text editor to customize them according to your site-specific requirements.

See Also: See the *Pro*COBOL Programmer's Guide* for information on configuring the `pcscfg.cfg` file for your environment.

Pro*FORTRAN (DG/UX Intel Only)

The configuration file for Pro*FORTRAN is `$ORACLE_HOME/precomp/admin/pccfor.cfg`. This file must be customized for your environment before using Pro*FORTRAN. This file is installed without content and may be configured with any test editor according to your site-specific requirements.

See Also: See the FORTRAN77 for information on configuring the `pccfor.cfg` file for your environment.

Oracle Supported Protocols

This section describes how to set up the `dbstart` and `dbshut` scripts so they are called at system startup. This process is common to all Intel UNIX platforms. Perform these steps for every new database that you want to have automated startup and shutdown.:

1. Edit the `/var/opt/oracle/oratab` file on the Solaris Intel and SCO UnixWare platforms. Edit the `/etc/oratab` file on the DG/UX Intel platform.

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

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

In the preceding example, Y or N specifies whether you want the `dbstart` and `dbshut` scripts to start up and shut down the database.

2. 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.
3. Create a file named `dbora` in the `/etc/init.d` directory (if it does not already exist).
4. 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.

```
#!/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/8.1.7
ORA_OWNER=oracle
if [! -f $ORA_HOME/bin/tnslsnr -o ! -f $ORA_HOME/bin/lsnrctl];
then
```

```
echo "Listener startup: cannot start"
exit
fi
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/lsnrctl start
;;
'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/lsnrctl stop
;;
esac
```

5. Link dbora by entering:

```
# ln -s /etc/init.d/dbora /etc/rc0.d/K10dbora
# ln -s /etc/init.d/dbora /etc/rc2.d/S99dbora
```

Note: This procedure fails if the `TNS_ADMIN` environment variable is not set in the `.profile` or `.login` file of the oracle account, or if the `listener.ora` file is not in one of the default locations (the `/var/opt/oracle` directory or the `$ORACLE_HOME/network/admin` directory).

- 6.** If you have a client/server configuration, set the `TWO_TASK` environment variable on the client systems to the service name for the server (available from the `tnsnames.ora` file). See "[Configure Environment Variables](#)" on page 4-7 for information on setting environment variables.

7. Start the listener on the server:

```
$ lsnrctl start
```

8. Check the listener process:

```
$ lsnrctl status
```

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

```
$ sqlplus username/password@service_name
```

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. Install this second Oracle8i database on a separate system to provide maximum fault resistance.

Note: If it is not practical to install and maintain a second Oracle8i database, you can use Recovery Manager in a restricted mode without a recovery catalog.

To create a recovery catalog, perform the following steps:

1. Install Oracle8i on a separate system from any other Oracle8i installation 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 using Oracle Database Configuration Assistant. The default database is adequate for the recovery catalog.

2. Create a user with the name in the recovery catalog database `RECOVERY_CATALOG_OWNER`.
3. As the `RECOVERY_CATALOG_OWNER`, run the `create Catalog` command at the Oracle Recovery Manager prompt.

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

Secure Socket Layer

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

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

Reviewing Installed Starter Database Contents

The following sections describe the installed starter database.

User Names and Passwords

This section describes the user names and passwords included in the starter database. The SYS, SYSTEM, and DBSNMP user names and INTERNAL alias passwords in the following table are automatically included in *all* databases created by Oracle Database Configuration Assistant.

User Name	Password	Description	See Also
CTXSYS	CTXSYS	CTXSYS is the Oracle <i>interMedia</i> Text user name. This user has CONNECT, DBA, and RESOURCE database roles.	<i>Oracle8i interMedia Text Reference</i>
DBSNMP	DBSNMP	DBSNMP is the Oracle Intelligent Agent user name. This user has CONNECT, RESOURCE, and SNMPAGENT database roles. Run <code>catnsnmp.sql</code> if you want to drop this user.	<i>Oracle Intelligent Agent User's Guide</i>
INTERNAL	ORACLE	INTERNAL is the administrator's user name. This user performs database administration tasks, including starting up and shutting down a database. Note: INTERNAL is <i>not</i> a true user name; it is an alias for the SYS user name (see the following paragraph) and SYSDBA role. The password is required only for users who did not install the Oracle8i database. The user who installed the Oracle8i database is not prompted to enter a password when connecting as INTERNAL.	<i>Oracle8i Administrator's Guide</i>

User Name	Password	Description	See Also
MDSYS	MDSYS	MDSYS is the Oracle Spatial and <i>interMedia</i> Audio, Video, Locator, and Image administrator user name.	<i>Oracle Spatial User's Guide and Reference</i> <i>Oracle8i interMedia Locator User's Guide and Reference</i>
MTSSYS	MTSSYS	MTSSYS is the Oracle Service for MTS user name.	<i>Using Microsoft Transaction Server With Oracle8</i>
ORDPLUGINS	ORDPLUGINS	ORDPLUGINS is the Oracle <i>interMedia</i> Audio and Video user name with the CONNECT and RESOURCE roles. ORDPLUGINS allows non-native plug-in formats for one session.	<i>Oracle8i interMedia Audio, Image, and Video User's Guide and Reference</i>
ORDSYS	ORDSYS	ORDSYS is the Oracle <i>interMedia</i> Audio, Video, Locator, and Image user name and the Oracle Time Series and Oracle Visual Information Retrieval administrator user name. This user has CONNECT, JAVAUSERPRIV, and RESOURCE database roles.	<i>Oracle8i Time Series User's Guide</i> <i>Oracle8i Visual Information Retrieval User's Guide and Reference</i> <i>Oracle8i interMedia Audio, Image, and Video User's Guide and Reference</i>
OUTLN	OUTLN	OUTLN includes the CONNECT and RESOURCE database roles, and supports plan stability. Plan stability allows you to maintain the same execution plans for the same SQL statements. OUTLN centrally manages metadata associated with stored outlines.	<i>Oracle8i Concepts</i> <i>Oracle8i Designing and Tuning for Performance</i>

User Name	Password	Description	See Also
SYS	CHANGE_ON _INSTALL	SYS is used for performing database administration tasks. SYS includes the following database roles: AQ_ADMINISTRATOR_ROLE AQ_USER_ROLE CONNECT CTXAPP DBA DELETE_CATALOG_ROLE EXECUTE_CATALOG_ROLE EXP_FULL_DATABASE HS_ADMIN_ROLE IMP_FULL_DATABASE JAVA_ADMIN JAVADEBUGPRIV JAVAIDPRIV JAVAUSERPRIV OEM_MONITOR RECOVERY_CATALOG_OWNER RESOURCE SELECT_CATALOG_ROLE SNMPAGENT TIMESERIES_DBA TIMESERIES_DEVELOPER	<i>Oracle8i Administrator's Guide</i>
SYSTEM	MANAGER	SYSTEM is used for performing database administration tasks. SYSTEM includes the AQ_ADMINISTRATOR_ROLE and DBA database roles.	<i>Oracle8i Administrator's Guide</i>
SCOTT	TIGER	SCOTT includes the CONNECT and RESOURCE database roles.	<i>Oracle8i Administrator's Guide</i>

Database Identification

The Oracle8i database is identified by its global database name, which consists of the database name and the network domain in which the database is located. The global database name uniquely distinguishes a database from any other database in the same network domain. You create a global database name when prompted in the *Database Identification* window during the installation of the Oracle8i database. The global database name takes the form:

database_name.database_domain

For example:

sales.us.acme.com

Where...	Is...
sales	The name you give your database. The database name portion is a string of no more than 8 characters that can contain alpha numeric and additional characters. The database name is also assigned to the DB_NAME parameter in the <i>init.ora</i> file.
us.acme.com	The network domain in which the database is located, making the global database name unique. The domain portion is a string of no more than 128 characters that can contain alpha numeric, period (.), and additional characters. The domain name is also assigned to the DB_DOMAIN parameter in the <i>init.ora</i> file.

The DB_NAME parameter (value *sales*) and DB_DOMAIN name parameter (value *us.acme.com*) combine to create the global database name value assigned to the SERVICE_NAMES parameter (value *sales.us.acme.com*) in the *init.ora* file.

The System Identifier (SID) identifies a specific Oracle8i instance that references the database. The SID uniquely distinguishes a database from any other database on the same computer. Multiple Oracle homes enable you to have multiple, active Oracle databases on a single computer. Each database requires a unique SID and database name.

The SID name is taken from the value you entered for the database name in the *Database Identification* window, although you had the opportunity to change it. The SID can be up to 64 alphanumeric characters in length.

If the SID and database name for an Oracle database are ORCL, each database file is located in the \$ORACLE_BASE/oradata/ORCL directory and the initialization parameter file is located in the \$ORACLE_BASE/admin/ORCL/pfile directory. The directory ORCL is named after the DB_NAME parameter value.

Tablespaces and Datafiles

An Oracle8i database is divided into smaller logical areas of space known as tablespaces. Each tablespace corresponds to one or more physical datafiles. Datafiles contain the contents of logical database structures such as tables and indexes. A datafile can be associated with only one tablespace and database.

Note: Unless you specified different names with Oracle Database Configuration Assistant, the tablespaces and datafiles described in the following table are also included automatically in the Custom database.

The tablespaces in the Oracle8i database contain the following types of datafiles located in the `$ORACLE_BASE/oradata/db_name` directory:

Tablespace	Datafile	Contents
SYSTEM	system01.dbf	The data dictionary, including definitions of tables, views, and stored procedures required by the Oracle database. Information in this tablespace is maintained automatically. The SYSTEM tablespace is present in all Oracle databases.
USERS	users01.dbf	Your application data. As you create and enter data into tables, you fill this tablespace with your data.
TEMP	temp01.dbf	Temporary tables or indexes created while processing your SQL statement. You may be required to expand this tablespace if you are executing a SQL statement that involves a lot of sorting, such as ANALYZE COMPUTE STATISTICS on a very large table, or the constructs GROUP BY, ORDER BY, or DISTINCT.
RBS	rbs01.dbf	Rolled back transactions that fail to complete normally. You be required to expand this tablespace if you have long-running or high-data-volume transactions.
INDX	indx01.dbf	Indexes associated with the data in the USERS tablespace.
DRSYS	dr01.dbf	Oracle <i>interMedia</i> text-related schema objects.
TOOLS	tools01.dbf	Nothing. This datafile is created by users who want to install any third-party or Oracle tools and products.

Note: If you choose to create a new repository and accept the default settings when running Oracle Enterprise Manager Configuration Assistant (Solaris Intel only), a tablespace named OEM_REPOSITORY in a datafile named `oem_repository.ora` are also created.

See Also: For more information on tablespaces, see the *Oracle8i Concepts* guide and the *Oracle8i Administrator's Guide*.

Initialization Parameter File

The starter database contains one database initialization parameter file located in the `$ORACLE_BASE/admin/db_name/pfile` directory. The `initsid.ora` parameter file must exist for an instance to start. A parameter file is a text file that contains a list of instance configuration parameters. The starter database `initsid.ora` file has preconfigured parameters. You do not need to edit this file to use the starter database.

See Also: For more information on Oracle8i database-specific initialization parameters and their default values see the *Oracle8i Administrator's Guide* and *Oracle8i Reference*.

Redo Log Files

The starter database contains three redo log files located in the `$ORACLE_BASE/oradata/db_name` directory:

Note: The redo log files `redo01.log`, `redo02.log`, and `redo03.log` are also automatically included in the Custom database.

Database Files	Disk Size	Description
redo01.log	1 MB	Redo log files hold a record of all changes made to data in the database buffer cache. If an instance failure occurs, the redo log files can recover the modified data that was in memory. Redo log files are used in a cyclical fashion. For example, if three files constitute the online redo log, the first file is filled, then the second file, and then the third file. The first file is then re-used and filled, the second file is re-used and filled, and so on.
redo02.log	1 MB	
redo03.log	1 MB	

See Also: For more information on backup and recovery issues, see the *Oracle8i Backup and Recovery Guide*

Control Files

The starter database contains three control files located in the `$ORACLE_BASE/oradata/<db_name>` directory:

Control Files	Description
control01.ct1	A control file is an administrative file required to start and run the database. The control file records the physical structure of the database. For example, a control file contains the database name, and the names and locations of the database's datafiles and redo log files.
control02.ct1	
control03.ct1	

Note: The `control01.ct1`, `control02.ct1`, and `control03.ct1` files are also automatically included in the Custom database. Oracle Corporation recommends that you keep at least three control files (on separate physical drives) for each database and set the `CONTROL_FILES` initialization parameter to list each control file.

See Also: See the *Oracle8i Administrator's Guide* for information on setting this initialization parameter value.

Rollback Segments

Rollback segments record the old values of data changed by each transaction (whether or not the transaction was committed). Every database contains one or more rollback segments which are portions of the database that record the actions of transactions in the event that a transaction is rolled back. Rollback segments are used to provide read consistency, to roll back transactions, and to recover the database.

The starter database contains the following rollback segments:

Rollback Segment	Tablespace	Used by
SYSTEM	SYSTEM	SYS
RB_TEMP	SYSTEM (private)	SYS
RB1 through RB16	RBS	PUBLIC (a pool of rollback segments that any instance requiring a rollback segment can use)

Data Dictionary

The data dictionary is a protected collection of tables and views containing reference information on the database, its structures, and its users. The data stored in the dictionary includes the following:

- Names of the Oracle database users
- Privileges and roles granted to each user
- Names and definitions of schema objects (including tables, views, snapshots, indexes, clusters, synonyms, sequences, procedures, functions, and packages)
- Integrity constraints
- Space allocation for database objects
- Auditing information, such as who accessed or updated various objects

See Also: For more information on the data dictionary, see *Oracle8i Concepts* and *Oracle8i Reference*.

De-Installing Oracle Software

If you are completely de-installing Oracle software from your system, you must de-configure Net8 using the Net8 Configuration Assistant and remove any installed databases using the Oracle Database Configuration Assistant. You must run both assistants before you use the Installer to completely de-install Oracle software. You must stop the Oracle Internet Directory Control Utility and Oracle Internet Directory Monitor before de-installation of Oracle Internet Directory (Solaris Intel only). In addition, before beginning de-installation, you must change the Apache account primary GID to the group that owns `oraInventory` (Solaris Intel only). A partial de-installation of Oracle software does not necessarily require you to run either Oracle Database Configuration Assistant or Net8 Configuration Assistant.

Changing the Apache Account GID for De-Installation (Solaris Intel Only)

To change the Apache account GID for de-installation:

1. Log on as the `root` user.
2. Change the Apache account primary GID group from the Apache account group to the group that has ownership of `oraInventory` (typically `oinstall`).
3. Log out of the account as the `root` user.

De-installing an Oracle Database Using Oracle Database Configuration Assistant

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

1. Start the Oracle Database Configuration Assistant by entering:

```
$ 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].
6. 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-installation mode by starting it at the command line with the `/deinst` parameter:

```
$ netca /deinst
```

De-installing Oracle Internet Directory (Solaris Intel Only)

To de-install Oracle Internet Directory Services:

1. Enter a command similar to the following to stop the Oracle Internet Directory Server:

```
$ oidctl connect=net_service_name server=oidldapd  
instance=server_instance_number stop
```

In the preceding example, *net_service_name* is the network connection to the Oracle Internet Directory Server and *server_instance_number* is the instance number; this number appears in the Server List tab of Oracle Directory Manager.

2. Enter the following command to stop the Oracle Internet Directory Monitor:

```
$ oidmon stop
```
3. Follow the procedures in ["De-installing an Oracle Database Using Oracle Database Configuration Assistant"](#) to remove the Oracle8i database configured with Oracle Internet Directory.

See Also: For more information on Oracle Internet Directory, see the *Oracle Internet Directory Administrator's Reference*.

De-installing Oracle Software Using Oracle Universal Installer

To de-install Oracle software using the 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 products that you want to de-install, then click the [Remove] button.

Oracle8i Products

This appendix lists the products included with Oracle8i release 3 (8.1.7):

- [Oracle8i Enterprise Edition or Oracle8i Components](#)
- [Oracle8i Client Components](#)
- [Oracle8i Management and Integration Components](#)
- [Product Descriptions](#)

Note: The Custom installation type is not listed for any of the three top-level components because it allows you to install all components in the current top-level component category. Some components can be installed *only* through a Custom installation. These components have an availability of "No" listed for other installation types in the tables in this appendix.

Oracle8i Enterprise Edition or Oracle8i Components

The following table alphabetically lists the components available with each installation type of the Oracle8i Enterprise Edition or Oracle8i top-level component:

Component	Oracle8i Enterprise Edition or Oracle8i	
	Typical	Minimal
Advanced Queueing	Yes	Yes
Advanced Replication	Yes	Yes
Apache Configuration for Oracle Java Server Pages (Solaris Intel only)	Yes	Yes
Apache JServ (Solaris Intel only)	Yes	Yes
Apache WebServer File (Solaris Intel only)	Yes	Yes
Net8 Client, includes:	Yes	Yes
<ul style="list-style-type: none"> ■ Net8 Assistant 	Yes	Yes
<ul style="list-style-type: none"> ■ Net8 Configuration Assistant 	Yes	Yes
<ul style="list-style-type: none"> ■ Oracle Protocol Support <p>Note: When Net8 Client is installed using the Typical or Minimal installation type, Oracle Protocol Support is automatically installed for the networking protocols detected. When Net8 Client is installed through the Custom installation type, you are prompted to select the additional networking protocols for which you want support cannot be de-installed.</p>	Yes	Yes
Net8 Server	Yes	Yes
Object Type Translator, includes:	Yes	Yes
<ul style="list-style-type: none"> ■ Oracle INTYPE File Assistant 	Yes	Yes
Oracle Advanced Security, includes: ¹	Yes	No
1. Encryption and Integrity Support, includes:	Yes	No
<ul style="list-style-type: none"> ■ DES40 Encryption 	Yes	No
<ul style="list-style-type: none"> ■ DES56 Encryption 	Yes	No
<ul style="list-style-type: none"> ■ 3DES_112 Encryption (2-key option) 	Yes	No
<ul style="list-style-type: none"> ■ 3DES_168 Integrity (3-key option) 	Yes	No
<ul style="list-style-type: none"> ■ RC4_40 Encryption 	Yes	No
<ul style="list-style-type: none"> ■ RC4_56 Encryption 	Yes	No
<ul style="list-style-type: none"> ■ RC4_128 Encryption 	Yes	No

Component	Oracle8i Enterprise Edition or Oracle8i	
	Typical	Minimal
<ul style="list-style-type: none"> ▪ RC4_256 Integrity 	Yes	No
<ul style="list-style-type: none"> ▪ SHA-1 Integrity 	Yes	No
<ul style="list-style-type: none"> ▪ MD5 Integrity 	Yes	No
2. Thin JDBC Java-based Encryption Support, includes:	Yes	No
<ul style="list-style-type: none"> ▪ DES40 Encryption 	Yes	No
<ul style="list-style-type: none"> ▪ DES56 Encryption 	Yes	No
<ul style="list-style-type: none"> ▪ RC4_40 Encryption 	Yes	No
<ul style="list-style-type: none"> ▪ RC4_56 Encryption 	Yes	No
<ul style="list-style-type: none"> ▪ RC4_128 Encryption 	Yes	No
<ul style="list-style-type: none"> ▪ RC4_256 Integrity 	Yes	No
<ul style="list-style-type: none"> ▪ SHA-1 Integrity 	Yes	No
<ul style="list-style-type: none"> ▪ MD5 Integrity 	Yes	No
3. Authentication Support, includes:	Yes	No
<ul style="list-style-type: none"> ▪ Identix (for Biometrics) 	Yes	No
<ul style="list-style-type: none"> ▪ Kerberos (with SSO support) 	Yes	No
<ul style="list-style-type: none"> ▪ RADIUS (for Smart Cards, Token Cards, and Biometrics) 	Yes	No
<ul style="list-style-type: none"> ▪ SecurID (for Token Cards) 	Yes	No
<ul style="list-style-type: none"> ▪ SSL (with X.509 version 3) (with SSO support) 	Yes	No
<p>Note: Kerberos, SecurID, and Radius can be installed using the Custom installation <i>Authentication Methods</i> window. Identix appears only for installation in this window if the appropriate third-party software is installed.</p>		
4. Enterprise User Security, includes:	Yes	Yes
<ul style="list-style-type: none"> ▪ Oracle Enterprise Login Assistant 	Yes	Yes
<ul style="list-style-type: none"> ▪ Oracle Wallet Manager 	Yes	Yes
<p>Note: Oracle Enterprise Login Assistant and Oracle Wallet Manager are features of Oracle Advanced Security and can be used only if you have purchased an Oracle Advanced Security license.</p>		
Oracle Call Interface	Yes	Yes
Oracle Connection Manager	No	No

Component	Oracle8i Enterprise Edition or Oracle8i	
	Typical	Minimal
Oracle Data Migration Assistant	Yes	Yes
Oracle Database Configuration Assistant	Yes	Yes
Oracle Enterprise Java Beans and CORBA Tools	Yes	Yes
Oracle Enterprise Manager (Solaris Intel only), includes:	Yes	Yes
1. Oracle Enterprise Manager Client (Solaris Intel only), includes:	Yes	Yes
■ Oracle Enterprise Manager Console	Yes	Yes
■ Oracle DBA Management Pack, includes:	Yes	Yes
Oracle DBA Studio	Yes	Yes
Oracle Instance Manager	Yes	Yes
Oracle Schema Manager	Yes	Yes
Oracle Security Manager	Yes	Yes
Oracle Storage Manager	Yes	Yes
SQL*Plus Worksheet	Yes	Yes
■ Oracle Enterprise Manager Quick Tours	Yes	No
■ Oracle Enterprise Manager Web Site	No	No
Note: Oracle Enterprise Manager Web Site uses the Oracle HTTP Server as a Web listener.		
2. Oracle Intelligent Agent, includes:	Yes	Yes
■ Data Collection Services	Yes	Yes
3. Oracle HTTP Server (Solaris Intel only), includes	Yes	Yes
■ Apache Configuration for Oracle Java Server Pages	Yes	Yes
■ Apache Configuration for XML Developer's Kit	Yes	Yes
■ Apache JServ	Yes	Yes
■ Apache WebServer Files	Yes	Yes
■ Business Components for Java	Yes	Yes
■ mod_perl	Yes	Yes
■ mod_plsql	Yes	Yes
■ Perl Interpreter	Yes	Yes
4. Oracle Management Server (Solaris Intel only), includes:	Yes	No

Component	Oracle8i Enterprise Edition or Oracle8i	
	Typical	Minimal
■ Oracle Enterprise Manager Configuration Assistant (Solaris Intel only)	Yes	No
■ Oracle Enterprise Manager Migration Assistant	Yes	No
Oracle <i>interMedia</i> , includes:	Yes	No
■ Oracle <i>interMedia</i> Audio	Yes	No
■ Oracle <i>interMedia</i> Client Option	Yes	No
■ Oracle <i>interMedia</i> Image	Yes	No
■ Oracle <i>interMedia</i> Locator	Yes	No
■ Oracle <i>interMedia</i> Text	Yes	No
■ Oracle <i>interMedia</i> Video	Yes	No
Oracle Internet Directory Client	Yes	Yes
Oracle JDBC Drivers, includes:	Yes	Yes
■ Oracle Thin JDBC Driver for JDK 1.2	Yes	Yes
■ Oracle Thin JDBC Driver for JDK 1.1	Yes	Yes
■ Oracle JDBC/OCI Driver for JDK 1.2	Yes	Yes
■ Oracle JDBC/OCI Driver for JDK 1.1	Yes	Yes
Oracle8i JVM, includes:	Yes	Yes
■ Java Virtual Machine	Yes	No
■ Oracle8i JVM Accelerator	Yes	No
■ Oracle Servlet Engine	Yes	No
Oracle Names	No	No
■ Oracle Parallel Server Management (DG/UX Intel only)	Yes	No
Note: Oracle Parallel Server is installed only if a cluster is detected. Note also, Oracle Parallel Server is supported only on DG/UX Intel.		
Oracle Partitioning ¹	Yes	Yes
Oracle SNMP Agent	No	No
Oracle Spatial ¹	Yes	No
Oracle SQLJ, includes:	Yes	Yes

Component	Oracle8i Enterprise Edition or Oracle8i	
	Typical	Minimal
■ SQLJ Runtime	Yes	Yes
■ SQLJ Translator	Yes	Yes
Oracle Trace	Yes	Yes
Oracle Time Series ¹	Yes	No
Oracle Universal Installer, includes:	Yes	Yes
■ Oracle release of Java Runtime Environment	Yes	Yes
Oracle Utilities, includes:	Yes	Yes
■ Database Verify Utility	Yes	Yes
■ Export	Yes	Yes
■ Import	Yes	Yes
■ Migration Utility	Yes	Yes
■ Recovery Manager	Yes	Yes
■ SQL*Loader	Yes	Yes
■ Server Manager	Yes	Yes
Note: Server Manager will no longer be available after release 8.1.7.		
Oracle Visual Information Retrieval ¹	Yes	No
Oracle Visual Information Retrieval Client ¹	Yes	No
Oracle XML Developer's Kit	Yes	Yes
Oracle XML SQL Utility	Yes	Yes
Oracle8i Server ² (the Oracle8i database), includes:	Yes	Yes
■ Oracle Database Demonstrations	Yes	Yes
■ PL/SQL	Yes	Yes
■ PL/SQL Embedded Gateway	Yes	Yes
SQL*Plus	Yes	Yes

¹ Oracle Advanced Security, Oracle Parallel Server, Oracle Partitioning, Oracle Spatial, Oracle Time Series, Oracle Visual Information Retrieval, and Oracle Visual Information Retrieval Client are available with Oracle8i Enterprise Edition only.

² The type of Oracle8i Server depends upon the database type you purchased: Oracle8i Enterprise Edition or Oracle8i.

Oracle8i Client Components

The following table alphabetically lists the components available with each installation type of the Oracle8i Client top-level component.

Component	Oracle8i Client		
	Administrator	Programmer	Application User
Advanced Queuing	Yes	Yes	Yes
On-line documentation for Intel UNIX (DG/UX Intel, SCO UnixWare, Solaris Intel)	Yes	Yes	Yes
Net8 Client, includes:	Yes	Yes	Yes
▪ Net8 Assistant	Yes	Yes	Yes
▪ Net8 Configuration Assistant	Yes	Yes	Yes
▪ Oracle Protocol Support	Yes	Yes	Yes
Note: When Net8 Client is installed using the Typical or Minimal installation type, Oracle Protocol Support is automatically installed for the networking protocols detected. When Net8 Client is installed through the Custom installation type, you are prompted to select the additional networking protocols for which you want support. TCP/IP protocol support is automatically installed and cannot be de-installed.			
Object Type Translator, includes:	Yes	Yes	No
▪ Oracle INTYPE File Assistant	Yes	Yes	No
Oracle Advanced Security, includes: ¹	Yes	Yes	Yes
1. Encryption and Integrity Support, includes:	Yes	Yes	Yes
▪ DES40 Encryption	Yes	Yes	Yes
▪ DES56 Encryption	Yes	Yes	Yes
▪ 3DES_112 Encryption (2-key option)	Yes	Yes	Yes
▪ 3DES_168 Integrity (3-key option)	Yes	Yes	Yes
▪ RC4_40 Encryption	Yes	Yes	Yes
▪ RC4_56 Encryption	Yes	Yes	Yes
▪ RC4_128 Encryption	Yes	Yes	Yes
▪ RC4_256 Integrity	Yes	Yes	Yes

Component	Oracle8i Client		
	Administrator	Programmer	Application User
■ SHA-1 Integrity	Yes	Yes	Yes
■ MD5 Integrity	Yes	Yes	Yes
2. Thin JDBC Java-based Encryption Support, includes:	Yes	Yes	Yes
■ DES40 Encryption	Yes	Yes	Yes
■ DES56 Encryption	Yes	Yes	Yes
■ RC4_40 Encryption	Yes	Yes	Yes
■ RC4_56 Encryption	Yes	Yes	Yes
■ RC4_128 Encryption	Yes	Yes	Yes
■ RC4_256 Integrity	Yes	Yes	Yes
■ SHA-1 Integrity	Yes	Yes	Yes
■ MD5 Integrity	Yes	Yes	Yes
3. Authentication Support, includes:	Yes	Yes	Yes
■ Identix (for Biometrics)	Yes	Yes	Yes
■ Kerberos (with SSO support)	Yes	Yes	Yes
■ RADIUS (for Smart Cards, Token Cards, and Biometrics)	Yes	Yes	Yes
■ SecurID (for Token Cards)	Yes	Yes	Yes
■ SSL (with X.509 version 3) (with SSO support)	Yes	Yes	Yes
Note: Kerberos, SecurID, and Radius can be installed using the Custom installation <i>Authentication Methods</i> window. Identix appears for installation in this window only if the appropriate third-party software is installed.			
4. Enterprise User Security, includes:			
■ Oracle Enterprise Login Assistant	Yes	No	No
■ Oracle Wallet Manager	Yes	Yes	Yes
Note: Oracle Enterprise Login Assistant and Oracle Wallet Manager are features of Oracle Advanced Security and can be used only if you have purchased an Oracle Advanced Security license.			
Oracle Call Interface	Yes	Yes	Yes
Oracle Java Tools and CORBA Tools, includes:	Yes	Yes	Yes

Component	Oracle8i Client		
	Administrator	Programmer	Application User
■ Enterprise Java Beans	Yes	Yes	Yes
Oracle Enterprise Manager (Solaris Intel only), includes:	Yes	No	No
1. Oracle Enterprise Manager Client (Solaris Intel only), includes:	Yes	No	No
■ Oracle Enterprise Manager Console	Yes	No	No
■ Oracle DBA Pack, includes:	Yes	No	No
Oracle DBA Studio	Yes	No	No
Oracle Instance Manager	Yes	No	No
Oracle Schema Manager	Yes	No	No
Oracle Security Manager	Yes	No	No
Oracle Storage Manager	Yes	No	No
SQL*Plus Worksheet	Yes	No	No
■ Oracle Enterprise Manager Quick Tours	Yes	No	No
Oracle <i>interMedia</i> Client Option	Yes	Yes	No
Oracle Internet Directory Client	Yes	Yes	Yes
Oracle JDBC Drivers, includes:	Yes	Yes	Yes
■ Oracle Thin JDBC Driver for JDK 1.2	Yes	Yes	Yes
■ Oracle Thin JDBC Driver for JDK 1.1	Yes	Yes	Yes
■ Oracle JDBC/OCI Driver for JDK 1.2	Yes	Yes	Yes
■ Oracle JDBC/OCI Driver for JDK 1.1	Yes	Yes	No
Oracle SQLJ	Yes	Yes	No
■ SQLJ Runtime	Yes	Yes	No
■ SQLJ Translator	Yes	Yes	No
Oracle Universal Installer, includes:	Yes	Yes	Yes
■ The Oracle version of Java Runtime Environment	Yes	Yes	Yes
Oracle Utilities, includes:	Yes	Yes	Yes
■ Export	Yes	Yes	Yes
■ Import	Yes	Yes	Yes
■ Recovery Manager	Yes	Yes	No
■ SQL*Loader	Yes	Yes	Yes

Component	Oracle8i Client		
	Administrator	Programmer	Application User
■ TKPROF	Yes	Yes	No
Oracle Visual Information Retrieval Client	Yes	Yes	Yes
Oracle XML Developer's Kit	Yes	Yes	Yes
Oracle XML SQL Utility	Yes	Yes	Yes
PL/SQL	Yes	Yes	No
Pro*C/C++	No	Yes	No
Pro*Cobol	No	No	No
Pro*FORTRAN (DG/UX Intel only)	No	No	No
SQLJ, includes	Yes	Yes	Yes
■ SQLJ Runtime	Yes	Yes	Yes
■ SQLJ Translator	Yes	Yes	Yes
SQL*Plus	Yes	Yes	Yes

¹ Oracle Advanced Security is available with Oracle8i Enterprise Edition, but is not available with Oracle8i.

Oracle8i Management and Integration Components

The following table alphabetically lists the components available with each installation type of the Oracle8i Management and Integration top-level component.

Note: This table lists all the components that are installed with the Oracle Internet Directory installation type if an Oracle8i database is not currently installed.

Component	Oracle8i Management and Integration	
	Oracle Management Server (Solaris Intel only)	Oracle Internet Directory
Advanced Queuing	Yes	Yes
Advanced Replication	No	Yes
Net8 Client, includes:	Yes	Yes
■ Net8 Assistant	Yes	Yes
■ Net8 Configuration Assistant	Yes	Yes
Net8 Server	Yes	Yes
Object Type Translator, includes:	No	Yes
■ Oracle INTYPE File Assistant	No	Yes
Oracle Advanced Security, includes: ¹	Yes	No
1. Authentication Support, includes:	Yes	No
■ SSL (with X.509 version 3) (with SSO support)	Yes	Yes
2. Oracle Wallet Manager	Yes	Yes
3. Oracle Enterprise Login Assistant	Yes	No
Note: Oracle Enterprise Login Assistant and Oracle Wallet Manager are features of Oracle Advanced Security and can be used only if you have purchased an Oracle Advanced Security license.		
Oracle Call Interface	No	Yes
Oracle Connection Manager	No	No
Oracle Data Migration Assistant	No	Yes
Oracle Database Configuration Assistant	No	Yes
Oracle Enterprise Java Beans and CORBA Tools	No	Yes

Component	Oracle8i Management and Integration	
	Oracle Management Server (Solaris Intel only)	Oracle Internet Directory
■ Oracle Enterprise Manager (Solaris Intel only), includes:	Yes	No
1. Oracle Enterprise Manager Client (Solaris Intel only), includes:	Yes	No
■ Oracle Enterprise Manager Console	Yes	No
■ Oracle Enterprise Manager DBA Management Pack (Solaris Intel only), includes:	Yes	Yes
Oracle DBA Studio	Yes	No
Oracle Instance Manager	Yes	No
Oracle Schema Manager	Yes	No
Oracle Security Manager	Yes	No
Oracle Storage Manager	Yes	No
SQL*Plus Worksheet	Yes	No
■ Oracle Enterprise Manager Quick Tours	Yes	No
Note: Oracle Enterprise Manager Web Site uses the Oracle HTTP Server as a Web listener.		
2. Oracle <i>interMedia</i> , includes:	Yes	No
<i>interMedia</i> Audio	No	No
<i>interMedia</i> Common Files	No	No
Note: Installed with all <i>interMedia</i> except <i>interMedia</i> text		
<i>interMedia</i> Image	No	No
<i>interMedia</i> Locator Service	No	No
<i>interMedia</i> Text	No	No
<i>interMedia</i> Video	No	No
3. Oracle Management Server (Solaris Intel only), includes:	Yes	No
Oracle Enterprise Manager Configuration Assistant	Yes	No
Oracle Enterprise Manager Migration Assistant	Yes	No
Oracle Internet Directory Client	No	Yes

Component	Oracle8i Management and Integration	
	Oracle Management Server (Solaris Intel only)	Oracle Internet Directory
Oracle Internet Directory Client Toolset	No	Yes
Oracle8i JVM (either Oracle8i JVM Enterprise Edition or Oracle8i JVM), includes:	No	Yes
▪ Enterprise Java Beans and CORBA Tools	No	Yes
▪ Java Virtual Machine	No	Yes
▪ Oracle8i JVM Accelerator	No	Yes
▪ Oracle Java Tools	No	Yes
▪ Oracle Servlet Engine	No	Yes
Oracle Intelligent Agent	No	Yes
Oracle JDBC Drivers, includes:	Yes	Yes
▪ Oracle Thin JDBC Driver for JDK 1.2 (Solaris Intel only)	Yes	Yes
▪ Oracle Thin JDBC Driver for JDK 1.1	Yes	Yes
▪ Oracle JDBC/OCI Driver for JDK 1.2 (Solaris Intel only)	Yes	Yes
▪ Oracle JDBC/OCI Driver for JDK 1.1	Yes	Yes
Oracle Names	No	No
Oracle Partitioning ¹	No	No
Oracle Trace	No	Yes
Oracle Universal Installer, includes:	Yes	Yes
▪ Oracle release of Java Runtime Environment	Yes	Yes
Oracle Utilities, includes:	Yes	Yes
▪ Database Verify Utility	No	Yes
▪ Export	Yes	Yes
▪ Import	Yes	Yes
▪ Migration Utility	No	Yes
▪ Recovery Manager	Yes	Yes
▪ SQL*Loader	Yes	Yes
▪ Server Manager	Yes	Yes

Component	Oracle8i Management and Integration	
	Oracle Management Server (Solaris Intel only)	Oracle Internet Directory
Oracle Visual Information Retrieval	No	No
Oracle XML Developer's Kit	Yes	Yes
Oracle XML SQL Utility	Yes	Yes
Oracle8i Server (the Oracle8i database), includes:	No	Yes
■ Oracle Database Demonstrations	No	Yes
■ PL/SQL	No	Yes
■ PL/SQL Embedded Gateway	No	Yes
SQLJ, including:	Yes	No
■ SQLJ Runtime	Yes	No
■ SQLJ Translator	No	No
SQL*Plus	Yes	Yes

¹ Oracle Advanced Security is available with Oracle8i Enterprise Edition only.

Product Descriptions

[Table A–1](#) provides descriptions and release numbers of the products available for installation. Some products listed are automatically installed with other products.

Table A–1 Product Descriptions

Product	Release	Description	Additional Information
Advanced Queueing	8.1.7	Provides support for the Advanced Queueing API.	<i>Oracle8i Application Developer's Guide - Advanced Queueing</i>
Advanced Replication	8.1.7	Provides support for the Advanced Replication API.	<i>Oracle8i Replication</i>
Assistant Common Files (installed with Oracle assistants, such as Oracle Database Configuration Assistant and Net8 Assistant)	8.1.7	A collection of automatically installed files required by Oracle assistants. These files include: <ul style="list-style-type: none"> ▪ BaliShare 1.0.8 (compressed) ▪ DBUI 1.1.2 ▪ EWT 3.3.6 (compressed) ▪ ICE Browser 4.06.6 (compressed) ▪ Java Swing Components 1.1.1 (compressed) ▪ Kodiak 1.1.2 ▪ Oracle Help for Java 3.1.3 (compressed) ▪ SMUI 1.0.7 	Not applicable
Data Collection Services (installed with Oracle Intelligent Agent)	2.2	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.	<i>Oracle Enterprise Manager Administrator's Guide</i> <i>Oracle Enterprise Manager Concepts Guide</i>
EnterpriseJavaBeans	8.1.7	An architecture used for developing transactional applications as distributed components in Java.	<i>Oracle8i Enterprise JavaBeans and CORBA Developer's Guide</i>
Java Runtime Environment	1.1.8	Required for running Java applications, such as Oracle Universal Installer. Intel UNIX JRE Version 1.1.8 (1.1.7B on SCO UnixWare, and 1.7.7.1with patches, JDK-117-po2 and JDK-117-po3, on DG/UX Intel) is the minimum standard Java platform for running Java programs.	Not applicable

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Net8 Assistant (Installed with Net8 Client)	8.1.7	Used by network administrators and DBAs to configure Net8.	<i>Net8 Administrator's Guide</i>
Net8 Client	8.1.7	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. Net8 Client (and not Oracle Universal Installer) installs TCP/IP and Named Pipes.	<i>Net8 Administrator's Guide</i>
Net8 Configuration Assistant (Installed with Net8 Client)	8.1.7	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 its installation.	<i>Net8 Administrator's Guide</i>
Net8 Server	8.1.7	Provides products that allow the listener, through a protocol, to accept connections from client applications on the network. Note: Net8 Server cannot be installed using any Oracle8i Client installation types. Net8 clients communicate with Oracle servers by using network service names. Net8 uses the following naming methods: <ul style="list-style-type: none"> ■ Host Names ■ Local Names ■ Oracle Names ■ Directory Names 	<i>Net8 Administrator's Guide</i>
Object Type Translator	8.1.7	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. A header file is generated that includes the C-structs.	<i>Oracle Call Interface Programmer's Guide</i>
Oracle Advanced Security	8.1.7	Oracle Advanced Security provides the following comprehensive suite of security services for Oracle8i: <i>This multicomponent product requires a separate license.</i>	<i>Oracle Advanced Security Administrator's Guide</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
■ Authentication support	8.1.7	Oracle Advanced Security provides strong authentication support through a variety of authentication modules.	<i>Oracle Advanced Security Administrator's Guide</i>
■ Authorization support	8.1.7	Authorization solutions are provided with the enterprise role management functionality in Oracle Advanced Security.	<i>Oracle Advanced Security Administrator's Guide</i>
Encryption and Integrity support	8.1.7	Oracle Advanced Security ensures data confidentiality during transmission using the encryption and data integrity types listed in the preceding installable products tables. It enables a variety of public-key solutions, including native encryption, Secure Sockets Layer (SSL), X.509 certificates, passwords, smartcards, and biometrics. Note: Recent changes in the United States Export Administration Regulations (EAR) have made it possible for Oracle Corporation to ship a single edition of Oracle Advanced Security worldwide. Oracle Advanced Security includes strong encryption for protocols into the Oracle database that were previously available only to the U.S. and Canadian markets.	<i>Oracle Advanced Security Administrator's Guide</i>
Enterprise User Security support	8.1.7	Oracle Advanced Security integrates with Lightweight Directory Access Protocol (LDAP) v3 directory services, such as Oracle Internet Directory, for centralized enterprise user management, enterprise role management, and single sign-on.	<i>Oracle Advanced Security Administrator's Guide</i>
Single Sign On support	8.1.7	Oracle Advanced Security provides single sign-on to multiple accounts and applications using a single password. Strong authentication occurs transparently in subsequent connections. Oracle Advanced Security supports Kerberos and SSL-based single sign-on.	<i>Oracle Advanced Security Administrator's Guide</i>
Oracle Call Interface	8.1.7	An interface for accessing an Oracle database from a C or C++ program.	<i>Oracle Call Interface Programmer's Guide</i>
Oracle Connection Manager	8.1.7	Acts like a router through which client connection requests can either be sent to the next hop or directly to a server. Clients can take advantage of the connection concentration, Net8 access control, or multi-protocol support features configured on the Connection Manager.	<i>Net8 Administrator's Guide</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Oracle Data Migration Assistant	8.1.7	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.	<i>Oracle8i Migration</i>
Oracle Database Configuration Assistant	8.1.7	Automates the process of creating, modifying, and deleting an Oracle database.	<i>Oracle8i Administrator's Guide</i>
Oracle DBA Management Pack (Solaris Intel Only)	2.2	A set of tools and utilities bundled with Oracle Enterprise Manager that can be used to perform most of your database administration tasks. They support all versions of Oracle databases.	<i>Oracle Enterprise Manager Administrator's Guide</i>
Oracle DBA Studio (Solaris Intel Only) (part of Oracle DBA Management Pack)	2.2	Integrates the management of schema, security, storage, and instance management into one management tool.	<i>Oracle Enterprise Manager Administrator's Guide</i>
Oracle Documentation	8.1.7	Online version of Oracle8i documentation available in HTML and PDF format.	" Accessing Installed Documentation " on page -xi
Oracle Enterprise Login Assistant	1.1	Enables single sign on, which implements a subset of Wallet Manager for opening a user wallet and enabling applications to use it.	<i>Oracle Advanced Security Administrator's Guide</i>
Oracle Enterprise Manager (Solaris Intel only)	2.2	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.	<i>Oracle Enterprise Manager Concepts Guide</i>
Oracle Enterprise Manager Configuration Assistant (Solaris Intel only) (part of Oracle Management Server)	2.2	Assists administrators in the creation, removal, upgrade, and configuration of Oracle Enterprise Manager repositories.	<i>Oracle Enterprise Manager Configuration Guide</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Oracle Enterprise Manager Console (Solaris Intel only)	2.2	<p>Client interface for the first tier of Oracle Enterprise Manager, which:</p> <ul style="list-style-type: none"> ▪ 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 	<i>Oracle Enterprise Manager Administrator's Guide</i>
Oracle Enterprise Manager Quick Tours (Solaris Intel only)	2.2	<p>HTML-based training tools for learning Oracle Enterprise Manager products without having to install them. Quick tours are provided for the following components:</p> <ul style="list-style-type: none"> ▪ Oracle Enterprise Manager Console ▪ Oracle DBA Management Pack 	<i>Oracle Enterprise Manager Administrator's Guide</i>
Oracle HTTP Server (Solaris Intel only)		<p>A component that provides a preconfigured, ready-to-use listener (for use with Oracle Enterprise Manager Web Site) to enable a browser-based Oracle Enterprise Manager Console. Oracle HTTP Server contains the following:</p> <ul style="list-style-type: none"> ▪ Apache Configuration for Oracle Java Server Pages (JSPs) ▪ Oracle8i JVM ▪ Apache Web Server Files (Apache 1.3.12) <p>Note: Oracle HTTP Server replaces Oracle Application Server Listener.</p>	Apache documentation
Oracle Instance Manager (part of Oracle DBA Studio)	2.2	Manages database instances and sessions in your Oracle environment.	<i>Oracle Enterprise Manager Administrator's Guide</i>
Oracle Intelligent Agent	8.1.7	Monitors services on the managed node for registered events and scheduled jobs sent by the console.	<i>Oracle Intelligent Agent User's Guide</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Oracle <i>interMedia</i>	8.1.7	Enables file management in a variety of media, including text, audio, and video through a specific component of <i>interMedia</i> . This multi-component product requires a separate license.	<i>Oracle8i interMedia Text Reference</i>
Oracle <i>interMedia</i> Audio (installed with Oracle <i>interMedia</i> , formerly called Oracle Audio Cartridge)	8.1.7	Enables the storage, retrieval and management of digitized audio data within an Oracle database.	<i>Oracle8i interMedia Audio, Image, and Video User's Guide and Reference</i>
Oracle <i>interMedia</i> Client (part of Oracle <i>interMedia</i>)	8.1.7	Enables a Java interface for Oracle8i <i>interMedia</i> Audio, Image, and Video that lets you use client-side applications to manipulate and/or modify multimedia data stored in a network accessible database on the server.	<i>Oracle8i interMedia Text Reference</i>
Oracle <i>interMedia</i> Common Files (installed with Oracle <i>interMedia</i>)	8.1.7	A set of files used by Oracle <i>interMedia</i> components.	Not applicable
Oracle <i>interMedia</i> Image (installed with Oracle <i>interMedia</i> , formerly called Oracle Image Cartridge)	8.1.7	Enables 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.	<i>Oracle8i interMedia Audio, Image, and Video User's Guide and Reference</i>
Oracle <i>interMedia</i> Locator Service (installed with Oracle <i>interMedia</i>)	8.1.7	Enables Oracle8i to support online internet-based geocoding facilities for locator applications and proximity queries.	<i>Oracle8i interMedia Locator User's Guide and Reference</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Oracle <i>interMedia</i> Text (installed with Oracle <i>interMedia</i> , formerly called Oracle ConText Cartridge)	8.1.7	Enables you to search for text in the database as quickly and easily as any other type of data. Oracle <i>interMedia</i> Text also supports basic full-text searches in most languages supported by the Oracle database.	<i>Oracle8i interMedia Text Reference</i>
Oracle <i>interMedia</i> Video (installed with Oracle <i>interMedia</i> , formerly called Oracle Video Cartridge)	8.1.7	Enables the storage, retrieval, and management of digitized video data within an Oracle database.	<i>Oracle8i interMedia Audio, Image, and Video User's Guide and Reference</i>
Oracle Internet Directory	2.1.1	An Oracle8i database-based LDAP V3 directory service for centralizing database user, Net8 network connector, and database listener parameters. You can configure Oracle Internet Directory before installing the Oracle8i server. Installing the Oracle8i database using the Custom installation options enables you to specify that the LDAP directory server be used for storing these "entry attributes". Typically, install the Oracle Internet Directory on a dedicated server (distinct from the target of a particular Oracle8i database installation).	<i>Oracle Internet Directory Administrator's Guide</i>
Oracle Internet Directory Client Toolset	2.1.1	Oracle Internet Directory Client is available on Windows platforms to access Oracle Internet Directory server components.	<i>Oracle Internet Directory Administrator's Guide</i>
Oracle Java Database Connectivity (JDBC) Drivers	8.1.7	A standard set of Java classes, specified by JavaSoft, that provides vendor-independent access to relational data using Java.	<i>Oracle8i JDBC Developer's Guide and Reference</i>
Oracle8i JVM Enterprise Edition	8.1.7	Provides the Oracle Java Virtual Machine, CORBA 2.0 Object Request Broker, embedded JDBC drivers, SQLJ translator, and an Enterprise JavaBeans transaction server.	<i>Oracle8i Java Developer's Guide</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Oracle8i JVM Accelerator	8.1.7	Eliminates interpreter overhead by translating standard Java class files into specialized C source files. A platform-dependent C compiler then processes the C source files into native libraries, which can be loaded dynamically. The Oracle8i JVM Accelerator is portable to all operating system and hardware platforms.	<i>Oracle8i Java Stored Procedures Development Guide; Oracle8i Java Developer's Guide</i>
Oracle8i JVM Servlet Container (JSC)	8.1.7	The Oracle8i JVM Servlet Container is a built-in web server running inside the database. It is a servlet runner that works with the Apache server and with Oracle8i JVM to enable distribution of Java Server Pages (JSPs) and to enable servlets to run directly on the database.	<i>Oracle8i JVM Servlet Container User's Guide; Oracle8i Java Developer's Guide</i>
Oracle Java Tools	8.1.7	Provides Java tools to build and deploy Java stored procedures, CORBA objects, and Enterprise JavaBeans with the Oracle Java Virtual Machine.	<i>Oracle8i SQLJ Developer's Guide and Reference</i>
Oracle Management Server (Solaris Intel only)	2.2	The middle tier of Oracle Enterprise Manager, which provides centralized intelligence and distribution control between console clients and managed nodes.	<i>Oracle Enterprise Manager Administrator's Guide</i>
Oracle Names	8.1.7	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.	<i>Net8 Administrator's Guide</i>
Oracle Objects Functionality	8.1.7	Lets you create and manipulate objects, and integrate objects with standard relational functionality.	
Oracle Parallel Server (DG/UX Intel only)	8.1.7	Enables multiple Oracle instances to share a single Oracle database. This product requires a separate license.	<i>Oracle8i Parallel Server Setup and Configuration</i>
Oracle Parallel Server Management (DG/UX Intel only, installed with Oracle Enterprise Manager)	8.1.7	Enables database administrators to start up, shut down, or check the status of Parallel Server databases from any mode.	<i>Oracle8i Parallel Server Setup and Configuration</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Oracle Partitioning	8.1.7	Provides more control in managing tables and indexes by directing all maintenance operations to individual partitions rather than to tables and index names. This product requires a separate license.	
Oracle PL/SQL Embedded Gateway	8.1.7	A Java module gateway that authenticates user roles and enables secured access to build and run PL/SQL procedures. These procedures can retrieve data from database tables and generate HTTP responses. Use the mod_plsql module to do this. This module runs as a servlet on the HTTP Server middle tier. It creates "stateless" sessions, meaning information on requests is not maintained between client sessions.	<i>Oracle Internet Application Server Release: Using mod_plsql</i> <i>Oracle8i Administrator's Reference Release 3 (8.1.7)</i>
Oracle Schema Manager (Solaris Intel only) (part of Oracle DBA Studio)	2.2	Enables you to create, alter, or drop schema objects such as clusters, indexes, snapshots, tables, and views.	<i>Oracle Enterprise Manager Administrator's Guide</i>
Oracle Security Manager (Solaris Intel only) (part of Oracle DBA Studio)	2.2	Manages database users and grants or revokes privileges, profiles, and roles to users.	<i>Oracle Enterprise Manager Administrator's Guide</i>
Oracle Servlet Engine	8.1.7	A Web server built directly into the Oracle8i database. Oracle Servlet Engine includes an HTTP listener and the ability to distribute Java Server Pages (JSP's) and run servlets directly on the database.	<i>Oracle8i JVM Servlet Container</i>
Oracle Spatial (formerly called Oracle Spatial Data Cartridge)	8.1.7	Oracle Spatial makes the storage, retrieval, and manipulation of spatial data easier and more intuitive to users. This product requires a separate license.	<i>Oracle8i Spatial User's Guide and Reference</i>
Oracle Storage Manager (Solaris Intel only) (part of Oracle DBA Studio)	2.2	Enables you to administer tablespaces, datafiles, redo logs, and rollback segments for optimum database storage.	<i>Oracle Enterprise Manager Administrator's Guide</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Oracle Time Series (formerly called Oracle8i Time Series Cartridge)	8.1.7	Stores and retrieves time-stamped data using object data types. This product requires a separate license.	<i>Oracle8i Time Series User's Guide</i>
Oracle Universal Installer	1.7.1.7.0	A Java-based application that lets you quickly install, update, and remove Oracle products.	<i>Oracle8i Installation Guide</i>
Oracle Utilities	8.1.7	A suite of products used for database administration, including: <ul style="list-style-type: none"> ▪ DBVERIFY ▪ Export Utility ▪ Import Utility ▪ Migration Utility ▪ Password Utility ▪ Recovery Manager ▪ Server Manager ▪ SQL*Loader ▪ TKPROF 	<i>Oracle8i Utilities</i>
Oracle Visual Information Retrieval (formerly called Oracle8i Visual Information Retrieval)	8.1.7	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.	<i>Oracle8i Visual Information Retrieval User's Guide and Reference</i>
Oracle Wallet Manager	2.2	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.	<i>Oracle Advanced Security Administrator's Guide</i>
Oracle8i Server	8.1.7	The database component of the Oracle8i Enterprise Edition or Oracle8i software	<i>Getting to Know Oracle8i</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Oracle XML Developer's Kit	8.1.7	<p>This kit consists of a set of APIs for parsing and generating XML data. These interfaces have been written for Java, C, C++, and PL/SQL. This kit consists of the following components:</p> <ul style="list-style-type: none"> ▪ XML Parser for Java ▪ XML Parser for C ▪ XML Parser for C++ ▪ XML Parser for PL/SQL ▪ XML Class Generator for Java ▪ XML Class Generator for C++ ▪ XML Transviewer Beans ▪ XSQL Servlet 	<p><i>Oracle8i Application Developer's Guide - XML</i></p> <p><i>Oracle8i XML Reference</i></p>
Oracle XML SQL Utility	2.0	<p>This utility is a set of Java classes and PL/SQL wrappers that permit queries to return result sets or objects wrapped in XML.</p>	<p><i>Oracle8i Application Developer's Guide - XML</i></p> <p><i>Oracle8i XML Reference</i></p>
PL/SQL Embedded Gateway	8.1.7	<p>Enables users to use their browsers to start PL/SQL procedures stored in an Oracle database. The stored procedures can retrieve data from tables in the database, and generate HTTP responses to return to client browsers. The PL/SQL Embedded Gateway also includes the PL/SQL Web Toolkit. This toolkit is a set of PL/SQL packages that enables users to retrieve information on the HTTP request, specify values for HTTP headers, set cookies, and generate HTML pages.</p>	<p><i>Oracle Internet Application Server Release: Using mod_plsql</i></p>
Pro*C/C++	8.1.7	<p>Takes SQL statements embedded in C and C++ programs 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.</p> <p>This product requires a separate license as a part of Oracle Programmer.</p>	<p><i>Pro*C/C++ Precompiler Programmer's Guide</i></p>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
Pro*COBOL	1.8.52 8.1.7	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.	<i>Pro*COBOL Precompiler Programmer's Guide</i>
Pro*FORTRAN	1.8.52	The Pro*FORTRAN precompiler (available only for DG/UX Intel) 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.	<i>Pro*Fortran Supplement to the Oracle Precompilers Guide</i>
SQL*Plus	8.1.7	Command line interface that allows SQL and PL/SQL database languages to be used with an Oracle database	<i>SQL*Plus User's Guide and Reference</i>
SQL*Plus Worksheet (Solaris Intel only)	2.2	Graphical user interface for manually entering SQL, PL/SQL, and DBA commands or running stored scripts	<i>Oracle Enterprise Manager Administrator's Guide</i>
SQLJ	8.1.7	A standard way to embed SQL statements in Java programs.	<i>Oracle8i SQLJ Developer's Guide and Reference</i>
SQLJ Runtime (installed with SQLJ)	8.1.7	A thin layer of pure Java code that runs above the JDBC driver. When Oracle SQLJ translates a SQLJ source code, embedded SQL commands in a Java application are replaced by calls to the SQLJ runtime.	<i>Oracle8i SQLJ Developer's Guide and Reference</i>

Table A-1 Product Descriptions (Cont.)

Product	Release	Description	Additional Information
SQLJ Translator (installed with SQLJ)	8.1.7	A preprocessor for Java programs that contain embedded SQL statements. Oracle SQLJ Translator converts the SQL statements to JDBC calls.	<i>Oracle8i SQLJ Developer's Guide and Reference</i>
TCP/IP Protocol Support	8.1.7	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.	<i>Net8 Administrator's Guide</i>
XML Development Kit (the Oracle version)	(8.1.7)	Required for integrating and running XML applications with the database.	Not applicable

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