Oracle® Business Intelligence

Installation Guide

10*g* Release 2 (10.1.2) for Linux on POWER

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Oracle Business Intelligence Installation Guide, 10*g* Release 2 (10.1.2) for Linux on POWER

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Preface

This guide explains how to install the components of Oracle Business Intelligence from the standalone Oracle Business Intelligence CD-ROM that ships with Oracle Application Server.

Intended Audience

This guide is intended for users who are responsible for installing Oracle Business Intelligence from the standalone Oracle Business Intelligence CD-ROM/DVD. Users are assumed to be comfortable running system administration operations.

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http://www.oracle.com/technology

Conventions

Conventions used in this manual are shown in the following table.

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.
< >	Angle brackets enclose user-supplied names or values.
[]	Square brackets enclose optional clauses from which you can choose one or none.
Menu name | Command	Text in this format conveys a sequence of menu choices, for example choose the menu, then the command under that menu.

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1

Before You Install

This chapter introduces Oracle Business Intelligence and provides the preinstallation tasks. It includes the following sections:

1.1 About Oracle Business Intelligence

Oracle Business Intelligence is an integrated business intelligence solution that comprises various components. This section discusses the following Oracle Business Intelligence components:

Oracle Application Server Control manages these components for Oracle Business Intelligence.

An Oracle Business Intelligence installation contains the following:

- Distributed Configuration Management
- Oracle Business Intelligence Discoverer
- Oracle Application Server Containers for J2EE
- Oracle Application Server Control
- Oracle Application Server Reports Services
- Oracle Application Server Web Cache
- Oracle HTTP Server
- Oracle Process and Management Notification

Complementary products for administering and developing business intelligence systems (collectively referred to as Oracle Business Intelligence Tools) are shipped with Oracle Developer Suite.

1.1.1 Oracle Business Intelligence Discoverer Plus

Discoverer Plus is Oracle's Web-based report authoring tool for business users. It is designed for report creators who need a productive, easy-to-use reporting tool.

In addition to efficient, interactive report layout and formatting capabilities, Discoverer Plus offers business insight through value-added analysis. Users can add totals and percentages to reports with a single mouse click or add data driven "stoplight" formatting to quickly spot trends. Users can even add sophisticated numerical and statistical analysis by leveraging the computational power already built into the Oracle database. Discoverer Plus makes it easy to do this with built-in calculation wizards.

Discoverer Plus OLAP and Discoverer Plus Relational offer users the same easy-to-use report-authoring environment against both OLAP and relational data sources respectively.

For more information about Discoverer Plus, see the *Oracle Business Intelligence Discoverer Plus User's Guide*.

1.1.2 Oracle Business Intelligence Discoverer Viewer

Discoverer Viewer is specifically designed with the business user in mind. Its easy-to-use, pure HTML user interface gives users convenient access to reports from a standard Web browser, without the need to install any additional software on the desktop.

Users can use Discoverer Viewer to analyze the data in worksheets created in Discoverer Plus and Discoverer Desktop. Users can personalize worksheets (for example, by repositioning items) and save their changes.

For more information about Discoverer Viewer, see the *Oracle Business Intelligence Discoverer Viewer User's Guide*.

1.1.3 Oracle Business Intelligence Discoverer Portlet Provider and Discoverer Portlets

Discoverer Portlet Provider enables users to publish any existing Discoverer report to OracleAS Portal, making it easy to create secure and personalized dashboards that track reports and business performance measures.

Discoverer Portlet Provider enables Portal users to publish the following Discoverer portlets:

- List of Worksheets portlets
- Worksheet portlets
- Gauges portlets

Portal users can personalize their Discoverer portlets (for example, by adding stoplight formatting) and save their changes.

Note: To use Discoverer Portlet Provider, the Discoverer system must be associated with an Oracle Application Server Metadata Repository (Version 10.1.2) after installation (for more information, see the *Oracle Business Intelligence Discoverer Configuration Guide*).

1.1.4 Reports Services

Oracle Application Server Reports Services provides an easy-to-use, scalable, and manageable solution for high-quality enterprise reporting and publishing. Using

Oracle Reports, you can publish data generated by multiple sources in various formats (paper layout, Web, or data interchange format). This provides flexibility in the presentation of data.

Note: Reports Services does not include Report Builder.

For information about detailed Reports Services requirements, refer to Chapter 3, "Detailed Reports Services Requirements").

1.2 Oracle Home Considerations

This section provides information about the coexistence of Oracle products in one Oracle home directory, and guidelines for installing multiple Oracle products on one computer. It includes the following topics:

- Section 1.2.1, "Oracle Home"
- Section 1.2.2, "Multiple Oracle Business Intelligence Installations"
- Section 1.2.3, "Oracle Business Intelligence Installation and Oracle Database"

1.2.1 Oracle Home

Oracle home is the top-level directory in which you install Oracle software. You can install Oracle Business Intelligence into:

- a new Oracle home
- an existing Oracle home created when Oracle Business Intelligence Tools was installed

Note that Oracle Business Intelligence 10g (10.1.2) cannot share the same Oracle home with:

- previous versions of any of its components or with Oracle Developer Suite
- any Oracle database installations
- Oracle Application Server Forms and Reports Services 10g standalone server instance

1.2.2 Multiple Oracle Business Intelligence Installations

The following guidelines apply to installing multiple instances of Oracle Business Intelligence 10g (10.1.2) on the same computer. The guidelines also apply to installing Oracle Business Intelligence 10g (10.1.2) on a computer that has existing installations of Oracle Application Server:

- Make sure you have sufficient disk space to handle all of your installations. See Section 2.1, "Hardware Requirements" to determine the disk space requirements.
- Install subsequent instances into a different Oracle home directory from the previous one.

1.2.3 Oracle Business Intelligence Installation and Oracle Database

You can install Oracle Business Intelligence on the same computer as an Oracle database (although this is not required). If you want to install Oracle Business

Intelligence on a computer on which you have already installed (or plan to install) an Oracle database, note the following:

- Make sure you have sufficient disk space to handle both installations. See the specific *Oracle database installation guide* and Section 2.1, "Hardware Requirements" in this guide to determine the total disk space requirements.
- Install Oracle Business Intelligence into a different Oracle home directory from the Oracle database.

Note: Oracle Business Intelligence cannot share an Oracle home with an Oracle database.

1.3 Preinstallation Tasks

Before installing Oracle Business Intelligence, review the *Oracle Business Intelligence Release Notes*.

The preinstallation tasks for Oracle Business Intelligence are divided into the following parts:

- Section 1.3.1, "General Checklist"
- Section 1.3.2, "Setting the Locale"
- Section 1.3.3, "Component-Specific Preinstallation Tasks"
- Section 1.3.4, "Information Required During Installation"

1.3.1 General Checklist

Ensure that you are logged on to your computer as a member of the local Administrators group.

Stop all Oracle services or Oracle processes, and close all other open applications.

1.3.2 Setting the Locale

The installer user interface language is based on settings in the Java Virtual Machine (JVM) locale, which is based on the operating environment locale. To run the installer with a particular locale, set your operating environment's locale before you start the installer.

Table 1–1 lists the locale languages that the installer supports.

Table 1–1 Locale Languages Supported by the installer

Language	ISO-639 Language Code
English	en
French	fr
German	de
Italian	it
Japanese	ja
Korean	ko
Brazilian Portuguese	pt_BR
Simplified Chinese	zh_CN

Table 1–1 (Cont.) Locale Languages Supported by the installer

Language	ISO-639 Language Code
Traditional Chinese	zh_TW

1.3.3 Component-Specific Preinstallation Tasks

Components that are not listed here have no component-specific preinstallation tasks.

- Section 1.3.3.1, "Preinstallation Tasks for Oracle Business Intelligence Discoverer Plus"
- Section 1.3.3.2, "Preinstallation Tasks for Oracle Business Intelligence Discoverer Viewer"
- Section 1.3.3.3, "Preinstallation Tasks for Oracle Business Intelligence Discoverer Portlet Provider and Discoverer Portlets"
- Section 1.3.3.4, "Preinstallation Tasks for Reports Services"

1.3.3.1 Preinstallation Tasks for Oracle Business Intelligence Discoverer Plus

None.

1.3.3.2 Preinstallation Tasks for Oracle Business Intelligence Discoverer Viewer

None.

1.3.3.3 Preinstallation Tasks for Oracle Business Intelligence Discoverer Portlet Provider and Discoverer Portlets

None.

1.3.3.4 Preinstallation Tasks for Reports Services

None.

1.3.4 Information Required During Installation

The installer guides you through the screens that comprise the installation process. Depending on your operating environment and the installation options you select, you need the information listed in Table 1–2.

Table 1–2 Installation Options

Item	Example
Name of Oracle Home	`BIHome1`
Path of Oracle Home	`/oracle/BIHome_1`
Instance Name	`BI_admin`
Instance Password	`admin1`

1.4 About the Installer

Oracle Business Intelligence uses Oracle Universal Installer (OUI) to install components and to configure environment variables. The installer guides you through each step of the installation process.

The installer automates the selection of installation options for different operating environments, sets new or detects pre-defined environment variables and configuration settings, and deinstalls existing products.

1.4.1 Directories Used by the Installer

The installer writes files to the directories described in the following table:

Table 1–3 Directory Location and Requirements

Directory description	Requirements
Oracle home directory	This directory contains Oracle Business Intelligence files. You specify this directory when you install Oracle Business Intelligence. For more information, see Section 1.2, "Oracle Home Considerations".
Inventory directory	The installer uses this directory to keep track of Oracle products that are installed on the computer. For more information, see Section 1.4.1.1, "The Installer Inventory Directory".

1.4.1.1 The Installer Inventory Directory

The installer creates the inventory directory the first time it runs on your computer. The inventory directory keeps a record of the products that the installer has installed, as well as other installation information. If you have previously installed Oracle products on your computer, then you may already have an inventory directory.

Please review the following information about the inventory directory:

- Do not delete or alter the inventory directory or its contents. Doing so can prevent the installer from locating products that you have installed on your computer.
- When you install the first Oracle product on your computer, the installer automatically creates the inventory directory in the `root` directory as `oraInventrory`.

The installer writes a log of every Oracle installation to a file in the /logs subdirectory of the inventory directory. The log filename has the format:

installActions year- date_ time.log.

1.4.2 Installer Prerequisite Checks

The installer performs an automatic prerequisite check on your computer before starting the installation. The following table lists the prerequisite checks that the installer performs.

Table 1–4 Prerequisite Checks

Prerequisite checks	See also
Verify the computer can display a minimum of 256 colors	Section 2.1, "Hardware Requirements"
Verify the minimum CPU speed	Section 2.1, "Hardware Requirements"
Verify the operating system requirements	Section 2.2, "Software Requirements"

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Oracle Business Intelligence Requirements

Before installing Oracle Business Intelligence, make sure that your computer meets the requirements described in the following sections:

- Section 2.1, "Hardware Requirements"
- Section 2.2, "Software Requirements"
- Section 2.3, "Kernel Parameter Settings for All OracleAS Installations"
- Section 2.4, "Database Requirements"
- Section 2.5, "Browser Requirements"
- Section 2.6, "Other Software Requirements"

For detailed installation information about Reports Services, refer to Chapter 3, "Detailed Reports Services Requirements".

2.1 Hardware Requirements

Oracle Business Intelligence has the following minimum hardware requirements.

For the most current list of hardware requirements, check the Oracle*MetaLink* site at

`http://metalink.oracle.com`

Table 2–1 lists the system requirements for the computer that hosts the middle tier.

Table 2–1 System Requirements

Item	Requirement
Network	Oracle Application Server can be only installed on a computer that is connected to a network. **Checked by Installer:** No
Hostname	Ensure that your hostnames are not longer than 255 characters.
Processor speed	900 MHz or faster You can check the processor speed by using the following command: `# grep "clock" /proc/cpuinfo`
Processor type	POWER 5 Processor You can check the processor type by using the following command: `# grep "cpu" /proc/cpuinfo` **Checked by Installer:** No

Table 2–1 (Cont.) System Requirements

Item	Requirement
Disk space	1.6 GB To determine the amount of free disk space, use the following command: `prompt> df- k dir` **Checked by Installer:** No
Operating System	Red Hat Enterprise Linux AS 4.0 (Update 1 or later) and SUSE Linux Enterprise Server 9.0 with SP2 or later
IP	IP address must be static. The installation is not supported on computers that obtain the IP addresses using DHCP. **Checked by Installer:** No
Memory	1 GB To determine the amount of memory, enter the following command: `# grep MemTotal /proc/meminfo` **Checked by Installer: Yes**

Available Memory	In addition to the total memory requirement (refer to previous row), you also need to check that your computer has enough available memory during installation.
	`# free`
	The output is as follows:
	`total used free shared buffers cached`
	`Mem: 3734420 3655240 79180 142584 217192 2153260`
	`-/+ buffers/cache: 1284788 2449632`
	`Swap: 4193608 872528 3321080`
	The available memory shows up under the free column on the first line.
	Checked by Installer: No

Space in `/tmp` directory	250 MB To determine the amount of free disk space in the `/tmp` directory, use the `df` command: `prompt> df -k /tmp` If the `/tmp` directory does not have enough free space, you can specify a different directory by setting the TMP environment variable. See Section 3.9.5, "TMP and TMPDIR" for details.
Swap space	1.5 GB of available swap space To determine the amount of available swap space, enter the following command: `# grep SwapTotal /proc/meminfo` If necessary, see your operating system documentation for information on how to configure additional swap space.

Table 2–1 (Cont.) System Requirements

Item	Requirement
Monitor	256 color display To determine your monitor's display capabilities, run the following command: `prompt> /usr/X11R6/bin/xdpyinfo` Look for the "depths" line. You need a depth of at least 8 (bits per pixel).

2.2 Software Requirements

You can install Oracle Business Intelligence on a computer, that is configured to use static IP address.

This section provides information about the operating system requirements and certification on Linux on POWER.

- Section 2.2.1, "Software Requirements for Linux on POWER"

See Also:

- *Oracle Application Server Installation Guide* for a complete list of operating system requirements
- Oracle*MetaLink* site (`http://metalink.oracle.com`) for the most current list of operating system requirements

2.2.1 Software Requirements for Linux on POWER

Refer to the following sections for information on checking the software requirements:

- Section 2.2.1.1, "Software Requirements for Red Hat Enterprise Linux AS 4.0 Systems"
- Section 2.2.1.2, "Software Requirements for SUSE Linux Enterprise Server 9 Systems"

Oracle does not support customized kernels or modules not supported by the Linux vendor.

2.2.1.1 Software Requirements for Red Hat Enterprise Linux AS 4.0 Systems

Table 2–2 lists the software requirements for Red Hat Enterprise Linux AS 4.0. The procedure that follows the table describes how to ensure that your system meets these requirements and any additional requirements for installing Oracle Application Server.

Note: Red Hat Enterprise Linux AS 4.0 and SUSE Linux Enterprise Server 9 are certified and supported. For the most current list of supported Linux Operating Systems, check Oracle*MetaLink* (`http://metalink.oracle.com`).

Table 2–2 Software Requirements for Red Hat Enterprise Linux AS 4.0 Systems

Item	Requirements
Operating System	Red Hat Enterprise Linux AS 4.0 For more information on Red Hat, see: http://www.redhat.com The minimum supported kernel versions are: ■ kernel-2.6.9-11.EL
Red Hat Update	Update 1 or later
Software packages (check that these versions or higher versions are installed)	make-3.80-5 binutils-2.15.92.0.2-13 compat-libstdc++-33-3.2.3-47.3 gcc-3.4.3-22.1 gcc-ppc32-3.4.3-22.1 gcc-c++-3.4.3-22.1 gcc-c++-ppc32-3.4.3-22.1 glibc-2.3.4-2.9 glibc-2.3.4-2.9 (64-Bit) libgcc-3.4.3-22.1 libgcc-3.4.3-22.1 (64-Bit) libstdc++-3.4.3-22.1 libstdc++-devel-3.4.3-22.1 libaio-0.3.103-3 libaio-0.3.103-3 (64-Bit) libaio-devel-0.3.103-3 (64-Bit) sysstat-5.0.5-1 pdksh-5.2.14-30 openmotif21-2.1.30-11.RHEL4.5 db4-4.2.52-7.1 compat-db-4.1.25-9 gdbm-1.8.0-24
C/C++ Runtime Environment	IBM XL C/C++ Advanced Edition V7.0.1 for Linux Runtime Environment Component and XL Optimization Libraries component. You can download these components at: http://www-1.ibm.com/support/docview.wss?uid=swg24007906 IBM XL C/C++ Advanced Edition V7.0.1 for Linux Runtime Environment Component is available free of cost and without any license requirements on this site.

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

1. Log in as the `root` user.
2. To determine which distribution and version of Linux is installed, enter the following command:

```
# cat /etc/issue
Red Hat Enterprise Linux AS release 4 (Nahant Update 1)
```

3. To check that Update 1 or later is installed:

```
# cat /etc/redhat-release
Red Hat Enterprise Linux AS release 4 (Nahant Update 1)
```

4. To determine whether any other package is installed, enter a command similar to the following:

```
# rpm -q package_name
```

If a package is missing, download it and install it using the following command:

```
# rpm -i package_name
```

When installing a package, make sure you are using the correct architecture and optimization rpm file. To check the architecture of an rpm file, run the following command:

```
# rpm -q package_name --queryformat "%{arch}\n"
```

In the following example, the `glibc` rpm file is suitable for an PPC architecture

```
# rpm -q glibc --queryformat "%{arch}\n"
ppc
```

2.2.1.2 Software Requirements for SUSE Linux Enterprise Server 9 Systems

Table 2–3 lists the software requirements for SUSE Linux Enterprise Server 9 systems and the procedure that follows the table describes how to ensure your system meets these requirements and any additional requirements for installing Oracle Business Intelligence.

> **Note:** Oracle Application Server 10*g* Release 2 (10.1.2) is certified with the following Operating System specific software. For the most current list of supported Operating System specific software, for example JDK version, Operating System version, check Oracle*MetaLink* (`http://metalink.oracle.com`).

Table 2–3 System Requirements for SUSE Linux Enyterpeise Sever 9

Item	Requirement
Operating System	SUSE Linux Enterprise Server 9 For more information on SUSE Linux Enterprise Server, see: `http://www.suse.com` For SUSE Linux Enterprise Server 9, the minimum supported kernel versions are: ■ 2.6.5-7.191-pseries64 Suse Update : SP 2 or later

Table 2–3 (Cont.) System Requirements for SUSE Linux Enyterpeise Sever 9

Item	Requirement
Software packages (check that these versions or higher versions are installed)	binutils-2.15.90.0.1.1-32.10 binutils-64bit-9-200505240008 gcc-3.3.3-43.34 gcc-64bit-9-200505240008 gcc-c++-3.3.3-43.34 glibc-2.3.3-98.47 glibc-64bit-9-200506062240 libgcc-3.3.3-43.34 libgcc-64bit-9-200505240008 libstdc++-3.3.3-43.34 libstdc++-devel-3.3.3-43.34 libaio-0.3.102-1.2 libaio-64bit-9-200502241152 libaio-devel-0.3.102-1.2 libaio-devel-64bit-9-200502241152 make-3.80-184.1 openmotif-2.1.30-4_MLI sysstat-5.0.1-35.4 pdksh-5.2.14-780.7 db-4.2.52-86.3 db1-1.85-85.1 gdbm-1.8.3-228.1
C/C++ Runtime Environment	IBM XL C/C++ Advanced Edition V7.0.1 for Linux Runtime Environment Component and XL Optimization Libraries component. You can download these components at: http://www-1.ibm.com/support/docview.wss?uid=swg24007906 IBM XL C/C++ Advanced Edition V7.0.1 for Linux Runtime Environment Component is available free of cost and without any license requirements on this site.

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

1. Log in as the `root` user.
2. To determine which distribution and version of Linux is installed, enter the following command:

```
# cat /etc/issue
Welcome to SUSE LINUX Enterprise Server 9 (ppc) - Kernel \r (\l)
```

> **Note:** Red Hat Enterprise Linux AS 4.0 and SUSE Linux Enterprise Server 9 are certified and supported. For the most current list of supported Linux Operating Systems, check Oracle*MetaLink* (http://metalink.oracle.com).

3. To determine the kernel version, enter the following command:

```
# uname -r
2.6.5-7.191-pseries64
```

4. To determine whether any other package is installed, enter a command similar to the following:

   ```
   # rpm -q package_name
   ```

   If a package is missing, download it and install it using the following command:

   ```
   # rpm -i package_name
   ```

   When installing a package, make sure you are using the correct architecture and optimization rpm file. To check the architecture of an rpm file, run the following command:

   ```
   # rpm -q package_name --queryformat "%{arch}\n"
   ```

   In the following example, the glibc rpm file is suitable for PPC architecture

   ```
   # rpm -q glibc --queryformat "%{arch}\n"
   ppc
   ```

5. Create the following symbolic link for the Perl executable if it does not already exist:

   ```
   # ln -sf /usr/bin/perl /usr/local/bin/perl
   ```

6. Create the following symbolic link for the `fuser` executable if it does not already exist:

   ```
   # ln -sf /bin/fuser /sbin/fuser
   ```

7. If the `orarun` package was installed on a SUSE Linux Enterprise Server system, complete the following steps as the `oracle` user to reset the environment:

   a. Enter the following commands:

      ```
      prompt> cd /etc/profile.d
      prompt> mv oracle.csh oracle.csh.bak
      prompt> mv oracle.sh oracle.sh.bak
      prompt> mv alljava.sh alljava.sh.bak
      prompt> mv alljava.csh alljava.csh.bak
      ```

   b. Use any text editor to comment out the following line from the `$HOME/.profile` file:

      ```
      . ./.oracle
      ```

   c. Log out of the `oracle` user account.

   d. Log into the `oracle` user account for the changes to take effect.

8. If any Java packages are installed on the system, unset the Java environment variables, for example JAVA_HOME.

   Note: Oracle recommends that you do not install any of the Java packages supplied with the SUSE Linux Enterprise Server distribution.

9. Check the `/etc/services` file to make sure that the following port ranges are available on the system:

   - ports 3060-3129 required for Oracle Internet Directory

- ports 3130-3199 required for Oracle Internet Directory (SSL)
- ports 1812-1829 required for Oracle Enterprise Manager (console)
- ports 1830-1849 required for Oracle Enterprise Manager (agent)
- ports 1850-1869 required for Oracle Enterprise Manager (RMI)

If necessary, remove entries from the `/etc/services` file and restart the system. To remove the entries, you can use the perl script included in the `utils/3167528/` directory of CD-ROM Disk 1 and in the `application_server/utils/3167528/` directory on the DVD-ROM. Run the script as the `root` user. This script is also available as patch 3167528. This patch is available from:

`http://metalink.oracle.com`

If these ports are not available, the associated configuration assistants will fail during the installation.

10. If you use Network Information Service (NIS):
    a. Make sure that the following line exists in the `/etc/yp.conf` file:

    ```
    hostname.domainname broadcast
    ```

    b. Make sure that the following line exists in the `/etc/nsswitch.conf` file:

    ```
    hosts: files nis dns
    ```

11. Make sure that the `localhost` entry in the `/etc/hosts` file is an IPv4 entry. If the IP entry for `localhost` is IPv6 format, installation cannot succeed. The following example shows an IPv6 entry:

```
# special IPv6 addresses
::1             localhost ipv6-localhost ipv6-loopback
::1             ipv6-localhost ipv6-loopback
```

To correct this example `/etc/hosts` file, comment the localhost entry as follows:

```
# special IPv6 addresses
# ::1             localhost ipv6-localhost ipv6-loopback
::1             ipv6-localhost ipv6-loopback
```

To comment the entries, you can use the perl script included in the `utils/4015045/` directory of CD-ROM Disk 1 and in the `application_server/utils/4015045/` directory on the DVD-ROM. Run the script as the `root` user. This script is also available as patch 4015045. This patch is available from:

`http://metalink.oracle.com`

2.3 Kernel Parameter Settings for All OracleAS Installations

As a pre-installation requirement, it is mandatory to set the `nofile` shell limit to 2048 for all Oracle Application Server installations on IBM Linux on POWER. Complete the following tasks to increase the `nofile` soft shell limit.

1. Log in as the root user and add the following line in the `/etc/security/limits.conf` file:

```
*       soft   nofile       2048
```

2. Restart the computer for the new value to take effect.
3. Run the following command to set the `nofile` soft shell limit to 2048:

```
prompt> ulimit -S -n 2048
```

2.4 Database Requirements

Oracle Business Intelligence 10*g* Release 2 (10.1.2) is supported with the following database versions:

- Oracle9i Release 2 Database (9.2.0.6 and higher)
- Oracle Database 10g Enterprise Edition Release 1 (10.1.0.4 and higher)
- Oracle Database 10g Enterprise Edition Release 2 (10.2.0.1 and higher); certification is planned

The latest information on supported versions is available on the Certify application on http://metalink.oracle.com.

2.4.1 Downloading the Most Recent OLAP Patch

When querying a multidimensional data source, only particular database releases and patches are supported. Use the following procedure to access the latest OLAP patches:

1. Log into Oracle*Metalink* at http://metalink.oracle.com.
2. Click **Patches**.
3. Click **Advanced Search**.
4. In the Advanced Search screen, fill in the fields as follows:
   - **Product or Product Family:** Click the Search icon, and from the Search In field, choose **Database & Tools**. Click **View All**. From the resulting list, click **Oracle OLAP**.
   - **Release:** Select the appropriate release number from the drop-down list.
   - **Patch Type**: Choose **Any**.
   - **Platform or Language:** Select the platform for your site.
   - Leave the remaining fields blank.

   Click **Go** to display a list of patches. You can identify the OLAP patches because they include "OLAP" in the patch name.

2.4.2 About Accepting the Default Setting for the OPTIMIZER_FEATURES_ENABLE Parameter

If you recently upgraded the Oracle database, then you might have set the OPTIMIZER_FEATURES_ENABLE initialization parameter to a value that enabled you to maintain the optimizer behavior of a previous release.

OracleBI Discoverer Plus OLAP takes advantage of the latest database features for optimal performance. OracleBI Discoverer Plus OLAP requires that the OPTIMIZER_FEATURES_ENABLE parameter be left at its default value for the respective database release (the default value is the database release number, such as 9.2.0.). Any other settings can lead to unexpected behavior.

Oracle does not recommend explicitly setting the OPTIMIZER_FEATURES_ENABLE parameter to an earlier release. Instead, resolve execution plan or query performance issues on a case-by-case basis.

2.5 Browser Requirements

Oracle Business Intelligence has the following browser requirements for client computers:

Table 2–4 Browser Requirements

Item	Requirements
Microsoft Internet Explorer	5.5, 6.0 with service pack 2 and higher
Netscape	7.1, 7.2
Mozilla	1.5 and higher
Safari	1.3 and higher

For the most current list of supported browsers, check the Oracle*MetaLink* site (`http://metalink.oracle.com`).

2.6 Other Software Requirements

Oracle Business Intelligence has the following software requirements not described previously:

Table 2–5 Additional Software Requirements

Item	Requirements
Discoverer Viewer	To run Discoverer Viewer on a client machine, JavaScript and cookies must be enabled in the browser.
Microsoft Excel	To export to Microsoft Excel using Discoverer Plus Relational, Excel 97 (or later) is required. Note that Excel 2000 (or later) is required when exporting worksheets to Microsoft Excel Web Query format. To export to Microsoft Excel using Discoverer Plus OLAP, Excel 2000 (or later) is required.
JRE	To run Discoverer Plus, one of the following JREs must be used: ■ Sun Java Plug-in 1.4.2_06 (recommended) ■ Oracle JInitiator 1.3.1.22

Check the `/etc/services` file to make sure that the following port ranges are available on the system:

- ports 3060-3129 required for Oracle Internet Directory
- ports 3130-3199 required for Oracle Internet Directory (SSL)
- ports 1812-1829 required for Oracle Enterprise Manager (console)
- ports 1830-1849 required for Oracle Enterprise Manager (agent)
- ports 1850-1869 required for Oracle Enterprise Manager (RMI)

If necessary, remove entries from the `/etc/services` file and reboot the system. To remove the entries, you can use the perl script included with the patch 3167528. This patch is available from:

`http://metalink.oracle.com`

If these ports are not available, the associated configuration assistants will fail during the installation.

3

Detailed Reports Services Requirements

Before installing Oracle Business Intelligence, ensure that your computer meets the requirements for Reports Services described in this chapter.

This chapter contains the following sections:

3.1 About Specifying an SMTP Server for Reports Services

During installation, the Provide Outgoing Mail Server Information screen appears. Enter the outgoing mail (SMTP) server to be used by Forms and Reports Services.

Example: `smtp.oracle.com`

> **Note:** This field is optional. However, you cannot distribute reports through e-mail until you have configured the mail server information. Refer to *Oracle Application Server Reports Services Publishing Reports to the Web* for more information on specifying the outgoing mail server information.

3.2 New Element for Specifying Port Numbers for CORBA Communication

Oracle Reports 10*g* Release 2 (10.1.2) introduces the `ORBPorts` element in the server configuration file to allow you to explicitly specify the port numbers used by Reports Server and engines for communication through CORBA. You can specify either a range of ports or individual ports separated by commas. For example:

`<ORBPorts value="15000-15010"/>` (Range of values)

`<ORBPorts value="15000,16000,17000,18000"/>` (Comma-separated values)

By default, the `ORBPorts` element is not present in the server configuration file. If this element is missing, Reports Server chooses a random port for CORBA communication. For more information about the `ORBPorts` element, see the chapter "Configuring OracleAS Reports Services" in the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

Note: The `ORBPorts` element should be defined only if your administrator has enabled TCP port filtering on your server where Reports Server is running. If port filtering is enabled, your administrator can open few ports for Reports Server, then use `ORBPorts` to specify them in the server configuration file for Reports Server and engine communication. If any of the ports are not available, Reports Server or engines may fail to start and an error displays.

3.3 Check Hardware Requirements

This section provides the system requirements for running Oracle Application Server 10*g* Forms and Reports Services. The installer checks many of these requirements at the start of the installation process and warns you if any of them is not met. To save time, you can manually check only the ones that are not checked by the installer. Refer to the appropriate table to see which requirements are not checked by the installer.

You can also run the system checks performed by the installer without doing an installation, by running the `runInstaller` command as shown. The `runInstaller` command is on the Oracle Application Server 10*g* Forms and Reports Services CD-ROM (Disk 1) or DVD-ROM (in the `application_server` directory).

CD-ROM:

```
prompt> mount_point/1012disk1/runInstaller -executeSysPrereqs
```

DVD-ROM:

```
prompt> mount_point/application_server/runInstaller -executeSysPrereqs
```

The results are displayed on the screen as well as written to a log file.

For more information on the types of checks performed, refer to Section 3.12, "Prerequisite Checks Performed by the Installer".

Table 3–1 Hardware Requirements

Item	Minimum Requirement	Checked by Installer
Processor type	POWER 5	No
Processor speed	900 MHz or faster You can check the processor speed by using the following command: `# grep "clock" /proc/cpuinfo`	Yes
Memory	512 MB **Note:** ■ The installer checks the amount of memory on your computer and will warn you if your computer does not meet the minimum memory requirements. ■ These values assume you are running only one Oracle Application Server instance per computer. To determine the amount of memory, run the following command: `prompt> grep MemTotal /proc/meminfo` **Checked by Installer:** Yes	Yes
Network	Oracle Application Server can be only installed on a computer that is connected to a network.	No
IP	IP address must be static. The installation is not supported on computers that obtain the IP addresses using DHCP.	No
Disk space	1.5 GB To determine the amount of free disk space, use the `df` command: `prompt> df -k dir` Replace *dir* with the Oracle home directory or with the parent directory if the Oracle home directory does not exist yet. For example, if you plan to install Oracle Application Server 10*g* Forms and Reports Services in `/opt/oracle/infra`, you can replace *dir* with `/opt/oracle` or `/opt/oracle/infra`.	No

Table 3–1 (Cont.) Hardware Requirements

Item	Minimum Requirement	Checked by Installer
Space in `/tmp` directory	400 MB To determine the amount of free disk space in the `/tmp` directory, use the `df` command: `prompt> **df -k /tmp**` If the `/tmp` directory does not have enough free space, you can specify a different directory by setting the TMP environment variable. See Section 3.9.5, "TMP and TMPDIR" for details.	Yes
Swap space	1.5 GB of available swap space To determine the amount of available swap space, enter the following command: `# grep SwapTotal /proc/meminfo` If necessary, see your operating system documentation for information on how to configure additional swap space.	Yes
Monitor	256 color display To determine your monitor's display capabilities, run the following command: `prompt> **/usr/X11R6/bin/xdpyinfo**` Look for the "depths" line. You need a depth of at least 8 (bits per pixel).	Yes

3.3.1 Memory Requirements for Running Multiple Instances on the Same Computer

If you plan to run OracleAS Infrastructure 10*g* and a middle tier on the same computer, ensure the computer meets the memory requirements listed in Section 3.3.

These values have been tested against a small number of users. If you have many users, you might have to increase the amount of memory.

3.3.2 Tips for Reducing Memory Usage

If you need to reduce memory consumption:

- After installation, start up only the components that you need. See the *Oracle Application Server Administrator's Guide* for details.
- Run Application Server Control only when you need to administer an instance. In most cases, you do not need Application Server Control running all the time.

  If you are running multiple Oracle Application Server 10*g* Forms and Reports Services instances on one computer, each Application Server Control can consume a lot of memory. Running Application Server Control only when you need it can free up memory for other components.

3.4 Check the Software Requirements

The following browsers are supported:

- Microsoft Internet Explorer 5.5, 6.0 with service pack 2 or later (supported on Microsoft Windows only)

- Netscape 7.1, 7.2
- Mozilla 1.5. You can download Mozilla from http://www.mozilla.org. Note that Firefox, the standalone Mozilla browser, is currently not certified. But check the Oracle*MetaLink* site (http://metalink.oracle.com) for the most current list of certified browsers.
- Safari 1.2 (on Apple Macintosh computers)

For the most current list of supported browsers, check the Oracle*MetaLink* site (http://metalink.oracle.com).

3.4.1 Checking the Software Requirements for Linux on POWER

Depending on your distribution of Linux on POWER, see one of the following sections for information on checking the software requirements:

- Section 3.4.1.1, "Software Requirements for Red Hat Enterprise Linux AS 4.0 Systems"
- Section 3.4.1.2, "Software Requirements for SUSE Linux Enterprise Server 9 Systems"

Oracle does not support customized kernels or modules not supported by the Linux vendor.

3.4.1.1 Software Requirements for Red Hat Enterprise Linux AS 4.0 Systems

Table 3–2 lists the software requirements for Red Hat Enterprise Linux AS 4.0. The procedure that follows the table describes how to ensure that your system meets these requirements and any additional requirements for installing Oracle Application Server.

> **Note:** Red Hat Enterprise Linux AS 4.0 and SUSE Linux Enterprise Server 9 are certified and supported. For the most current list of supported Linux Operating Systems, check Oracle*MetaLink* (http://metalink.oracle.com).

Table 3–2 Software Requirements for Red Hat Enterprise Linux AS 4.0 Systems

Item	Requirements
Operating System	Red Hat Enterprise Linux AS 4.0 For more information on Red Hat, see: http://www.redhat.com The minimum supported kernel versions are: ■ kernel-2.6.9-11.EL
Red Hat Update	Update 1 or later

Table 3–2 (Cont.) Software Requirements for Red Hat Enterprise Linux AS 4.0 Systems

Item	Requirements
Software packages (check that these versions or higher versions are installed)	make-3.80-5 binutils-2.15.92.0.2-13 compat-libstdc++-33-3.2.3-47.3 gcc-3.4.3-22.1 gcc-ppc32-3.4.3-22.1 gcc-c++-3.4.3-22.1 gcc-c++-ppc32-3.4.3-22.1 glibc-2.3.4-2.9 glibc-2.3.4-2.9 (64-Bit) libgcc-3.4.3-22.1 libgcc-3.4.3-22.1 (64-Bit) libstdc++-3.4.3-22.1 libstdc++-devel-3.4.3-22.1 libaio-0.3.103-3 libaio-0.3.103-3 (64-Bit) libaio-devel-0.3.103-3 (64-Bit) sysstat-5.0.5-1 pdksh-5.2.14-30 openmotif21-2.1.30-11.RHEL4.5 db4-4.2.52-7.1 compat-db-4.1.25-9 gdbm-1.8.0-24
C/C++ Runtime Environment	IBM XL C/C++ Advanced Edition V7.0.1 for Linux Runtime Environment Component and XL Optimization Libraries component. You can download these components at: http://www-1.ibm.com/support/docview.wss?uid=swg24007906 IBM XL C/C++ Advanced Edition V7.0.1 for Linux Runtime Environment Component is available free of cost and without any license requirements on this site.

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

1. Log in as the `root` user.
2. To determine which distribution and version of Linux is installed, enter the following command:

```
# cat /etc/issue
Red Hat Enterprise Linux AS release 4 (Nahant Update 1)
```

3. To check that Update 1 or later is installed:

```
# cat /etc/redhat-release
Red Hat Enterprise Linux AS release 4 (Nahant Update 1)
```

4. To determine whether any other package is installed, enter a command similar to the following:

```
# rpm -q package_name
```

If a package is missing, download it and install it using the following command:

```
# rpm -i package_name
```

When installing a package, make sure you are using the correct architecture and optimization rpm file. To check the architecture of an rpm file, run the following command:

```
# rpm -q package_name --queryformat "%{arch}\n"
```

In the following example, the `glibc` rpm file is suitable for a PPC architecture

```
# rpm -q glibc --queryformat "%{arch}\n"
ppc
```

3.4.1.2 Software Requirements for SUSE Linux Enterprise Server 9 Systems

Table 3–3 lists the software requirements for SUSE Linux Enterprise Server 9 systems and the procedure that follows the table describes how to ensure your system meets these requirements and any additional requirements for installing Oracle Application Server 10*g* Forms and Reports Services.

Note: Oracle Application Server 10*g* Release 2 (10.1.2) is certified with the following Operating System specific software. For the most current list of supported Operating System specific software, for example JDK version, Operating System version, check Oracle*MetaLink* (`http://metalink.oracle.com`).

Table 3–3 System Requiremts for SUSE Linux Enterprise Server 9

Item	Requirement
Operating System	SUSE Linux Enterprise Server 9 For more information on SUSE Linux Enterprise Server, see: `http://www.suse.com` For SUSE Linux Enterprise Server 9, the minimum supported kernel versions are: ■ 2.6.5-7.191-pseries64 Suse Update : SP 2 or later

Table 3–3 (Cont.) System Requiremts for SUSE Linux Enterprise Server 9

Item	Requirement
Software packages (check that these versions or higher versions are installed)	binutils-2.15.90.0.1.1-32.10 binutils-64bit-9-200505240008 gcc-3.3.3-43.34 gcc-64bit-9-200505240008 gcc-c++-3.3.3-43.34 glibc-2.3.3-98.47 glibc-64bit-9-200506062240 libgcc-3.3.3-43.34 libgcc-64bit-9-200505240008 libstdc++-3.3.3-43.34 libstdc++-devel-3.3.3-43.34 libaio-0.3.102-1.2 libaio-64bit-9-200502241152 libaio-devel-0.3.102-1.2 libaio-devel-64bit-9-200502241152 make-3.80-184.1 openmotif-2.1.30-4_MLI sysstat-5.0.1-35.4 pdksh-5.2.14-780.7 db-4.2.52-86.3 db1-1.85-85.1 gdbm-1.8.3-228.1
C/C++ Runtime Environment	IBM XL C/C++ Advanced Edition V7.0.1 for Linux Runtime Environment Component and XL Optimization Libraries component. You can download these components at: http://www-1.ibm.com/support/docview.wss?uid=swg24007906 IBM XL C/C++ Advanced Edition V7.0.1 for Linux Runtime Environment Component is available free of cost and without any license requirements on this site.

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

1. Log in as the `root` user.
2. To determine which distribution and version of Linux is installed, enter the following command:

```
# cat /etc/issue
Welcome to SUSE LINUX Enterprise Server 9 (ppc) - Kernel \r (\l)
```

> **Note:** Red Hat Enterprise Linux AS 4.0, and SUSE Linux Enterprise Server 9 are certified and supported. For the most current list of supported Linux Operating Systems, check Oracle*MetaLink* (http://metalink.oracle.com).

3. To determine the kernel version, enter the following command:

```
# uname -r
2.6.5-7.191-pseries64
```

4. To determine whether any other package is installed, enter a command similar to the following:

   ```
   # rpm -q package_name
   ```

   If a package is missing, download it and install it using the following command:

   ```
   # rpm -i package_name
   ```

   When installing a package, make sure you are using the correct architecture and optimization rpm file. To check the architecture of an rpm file, run the following command:

   ```
   # rpm -q package_name --queryformat "%{arch}\n"
   ```

   In the following example, the glibc rpm file is suitable for an PPC architecture

   ```
   # rpm -q glibc --queryformat "%{arch}\n"
   ppc
   ```

5. Create the following symbolic link for the Perl executable if it does not already exist:

   ```
   # ln -sf /usr/bin/perl /usr/local/bin/perl
   ```

6. Create the following symbolic link for the `fuser` executable if it does not already exist:

   ```
   # ln -sf /bin/fuser /sbin/fuser
   ```

7. If the `orarun` package was installed on a SUSE Linux Enterprise Server system, complete the following steps as the `oracle` user to reset the environment:

   a. Enter the following commands:

      ```
      prompt> cd /etc/profile.d
      prompt> mv oracle.csh oracle.csh.bak
      prompt> mv oracle.sh oracle.sh.bak
      prompt> mv alljava.sh alljava.sh.bak
      prompt> mv alljava.csh alljava.csh.bak
      ```

   b. Use any text editor to comment out the following line from the `$HOME/.profile` file:

      ```
      . ./.oracle
      ```

   c. Log out of the `oracle` user account.

   d. Log into the `oracle` user account for the changes to take effect.

8. If any Java packages are installed on the system, unset the Java environment variables, for example `JAVA_HOME`.

   Note: Oracle recommends that you do not install any of the Java packages supplied with the SUSE Linux Enterprise Server distribution.

9. Check the `/etc/services` file to make sure that the following port ranges are available on the system:

   - ports 3060-3129 required for Oracle Internet Directory

- ports 3130-3199 required for Oracle Internet Directory (SSL)
- ports 1812-1829 required for Oracle Enterprise Manager (console)
- ports 1830-1849 required for Oracle Enterprise Manager (agent)
- ports 1850-1869 required for Oracle Enterprise Manager (RMI)

If necessary, remove entries from the `/etc/services` file and restart the system. To remove the entries, you can use the perl script included in the `utils/3167528/` directory of CD-ROM Disk 1 and in the `application_server/utils/3167528/` directory on the DVD-ROM. Run the script as the `root` user. This script is also available as patch 3167528. This patch is available from:

`http://metalink.oracle.com`

If these ports are not available, the associated configuration assistants will fail during the installation.

10. If you use Network Information Service (NIS):
    a. Make sure that the following line exists in the `/etc/yp.conf` file:

    ```
    hostname.domainname broadcast
    ```

    b. Make sure that the following line exists in the `/etc/nsswitch.conf` file:

    ```
    hosts: files nis dns
    ```

11. Make sure that the `localhost` entry in the `/etc/hosts` file is an IPv4 entry. If the IP entry for `localhost` is IPv6 format, installation cannot succeed. The following example shows an IPv6 entry:

```
# special IPv6 addresses
::1             localhost ipv6-localhost ipv6-loopback
::1             ipv6-localhost ipv6-loopback
```

To correct this example `/etc/hosts` file, comment the localhost entry as follows:

```
# special IPv6 addresses
# ::1             localhost ipv6-localhost ipv6-loopback
::1             ipv6-localhost ipv6-loopback
```

To comment the entries, you can use the perl script included in the `utils/4015045/` directory of CD-ROM Disk 1 and in the `application_server/utils/4015045/` directory on the DVD-ROM. Run the script as the `root` user. This script is also available as patch 4015045. This patch is available from:

`http://metalink.oracle.com`

3.5 Kernel Parameters

The computers on which you plan to install Forms and Reports Services require their kernel parameters to be set to the minimum values shown in Table 3–4 and Table 3–5.

Kernel parameter values are stored in the `/etc/system` file. If your `/etc/system` file does not specify the parameters, you have to add lines to the file to specify them.

Notes:

- The values for kernel parameters are required only for computers that will be running the Oracle Application Server Metadata Repository or Oracle Application Server Web Cache. The installer checks the kernel parameter values only if you are installing these components.
- If any kernel parameter values do not meet the requirements, the installer displays an error message. You will not be able to continue the installation until you update the kernel parameters to the required values.
- If you update kernel parameter values, restart your computer for the new values to take effect.

Table 3–4 Kernel Parameters Required by OracleAS Web Cache

Parameter	Line in /etc/system Showing the Minimum Value	Description
`rlim_fd_max`	`set rlim_fd_max=65536`	Defines the hard limit on file descriptors that a single process can have open.

Table 3–5 Kernel Parameters Required by OracleAS Metadata Repository

Parameter	Line in /etc/system Showing the Minimum Value	Description
`semmni`	`set semsys:seminfo_ semmni=100`	Defines the maximum number of semaphore sets in the entire system.
`semmns`	`set semsys:seminfo_ semmns=1024`	Defines the maximum semaphores on the system. The 256 is only a minimum value for computers that will be running a single database (the OracleAS Metadata Repository that you are installing). If you are already running a database on the computer, see the "To determine the minimum value for the semmns parameter" section.
`semmsl`	`set semsys:seminfo_ semmsl=256`	Defines the minimum recommended value, for initial installation only.
`shmmax`	`set shmsys:shminfo_ shmmax=4294967295`	Defines the maximum allowable size of one shared memory segment (4 GB = 4294967295).
`shmmin`	`set shmsys:shminfo_ shmmin=1`	Defines the minimum allowable size of a single shared memory segment. **Note**: This parameter is not used in Solaris 9.
`shmmni`	`set shmsys:shminfo_ shmmni=100`	Defines the maximum number of shared memory segments in the entire system.
`shmseg`	`set shmsys:shminfo_ shmseg=10`	Defines the maximum number of shared memory segments one process can attach. **Note**: This parameter is not used in Solaris 9.

To determine the minimum value for the semmns parameter

If you are installing the OracleAS Metadata Repository on a computer that is not already running an Oracle database (that is, the OracleAS Metadata Repository will be the only Oracle database running on the computer), set the `semmns` parameter to a minimum of 256.

If you are installing the OracleAS Metadata Repository on a computer that is already running an Oracle database, set the `semmns` parameter to the sum of the `processes` initialization parameter for each Oracle database (including the OracleAS Metadata Repository), adding the largest one twice, and then adding an additional 10 for each database.

The default value of the `processes` parameter for the OracleAS Metadata Repository database is 150.

Example: The computer is already running an Oracle database, and its `processes` parameter is set at 200. In this case, you must set the `semmns` parameter to at least 770:

- Sum of the `processes` parameter for all Oracle database: 200 for the existing database + 150 for the OracleAS Metadata Repository that you are installing = 350
- Add the largest one twice: 200 + 200 = 400
- Add 10 for each database: 10 + 10 = 20
- Total: 350 + 400 + 20 = 770

To determine the value of the `processes` parameter for an Oracle database, run the following command in SQL*Plus:

```
prompt> sqlplus "sys/password as sysdba"
SQL> show parameters processes
```

To add or update kernel parameter values

1. Log on as the root user on the computer where you need to change the values.
2. Make a backup copy of the `/etc/system` file. For example, the following command makes a backup copy called `system.back`.

   ```
   # cp /etc/system /etc/system.back
   ```

3. Using a text editor such as vi or emacs, update the values or add new lines in the `/etc/system` file as necessary. For example, the following lines show sample values for the parameters:

   ```
   set semsys:seminfo_semmni=300
   set semsys:seminfo_semmns=1024
   set semsys:seminfo_semmsl=256
   set shmsys:shminfo_shmmax=4294967295
   set shmsys:shminfo_shmmin=1
   set shmsys:shminfo_shmmni=512
   set shmsys:shminfo_shmseg=150
   ```

   Tip: The comment character for the `/etc/system` file is the asterisk (`*`), not `#`.

4. Restart the computer for the new values to take effect.

3.5.1 Configuring the Kernel Parameters on Linux

The computers on which you plan to install Oracle Application Server Metadata Repository or Oracle Application Server Web Cache require their kernel parameters to be set to the minimum values listed in the following sections:

Kernel Parameter Settings for All OracleAS Installations

As a pre-installation requirement, it is mandatory to set the `nofile` shell limit to 2048 for all Oracle Application Server installations on IBM Linux on POWER. Complete the following tasks to increase the `nofile` soft shell limit.

1. Log in as the root user and add the following line in the `/etc/security/limits.conf` file:

   ```
   *       soft   nofile       2048
   ```

2. Restart the computer for the new value to take effect.
3. Run the following command to set the `nofile` soft shell limit to 2048:

   ```
   prompt> ulimit -S -n 2048
   ```

Kernel Parameter Settings for OracleAS Web Cache

This section applies if you are installing OracleAS Web Cache:

- If you are installing the J2EE and Web Cache middle tier, the OracleAS Web Cache component is optional.
- If you are installing the Portal and Wireless middle tier, the OracleAS Web Cache component is always installed.

1. Run the following command to check that the `nofile` kernel parameter is set to at least 65536:

   ```
   prompt> ulimit -Hn
   ```

2. If the command returns a value less than 65536, add this line to the `/etc/security/limits.conf` file (use a text editor to edit the file):

   ```
   *       hard    nofile  65536
   ```

   You need to be the root user to edit the `/etc/security/limits.conf` file.
3. Restart the computer for the new value to take effect.

Kernel Parameter Settings for OracleAS Metadata Repository

Verify that the kernel parameters shown in the following table are set either to the formula shown, or to values greater than or equal to the recommended value shown. The procedures following the table describe how to verify and set the values.

> **Note:** The Linux threads model creates a process for each thread. Oracle Application Server 10*g* Forms and Reports Services is highly multi-threaded to improve performance. On Linux, this requires that the kernel can handle many hundreds of processes.

Parameter	Value	File
semmsl semmns semopm semmni	250 32000 100 128	/proc/sys/kernel/sem
shmall	2097152	/proc/sys/kernel/shmall
shmmax	2147483648	/proc/sys/kernel/shmmax
shmmni	4096	/proc/sys/kernel/shmmni
msgmax	8192	/proc/sys/kernel/msgmax
msgmnb	65535	/proc/sys/kernel/msgmnb
msgmni	2878	/proc/sys/kernel/msgmni
file-max	131072	/proc/sys/fs/file-max
ip_local_port_range	1024 65000	/proc/sys/net/ipv4/ip_local_port_range

Note:

- If the current value for any parameter is higher than the value listed in this table, do not change the value of that parameter.
- The `semmns` parameter should be set to the sum of the PROCESSES initialization parameter for each Oracle database, adding the largest one twice, and then adding an additional 10 for each database.

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

1. Enter commands similar to the following to view the current values of the kernel parameters:

Note: Make a note of the current values and identify any values that you must change.

Parameter	Command
semmsl, semmns, semopm, and semmni	`# /sbin/sysctl -a | grep sem` This command displays the value of the semaphore parameters in the order listed.
shmall, shmmax, and semmni	`# /sbin/sysctl -a | grep shm`
msgmax, msgmnb, and msgmni	# /sbin/sysctl -a | grep msg
file-max	`# /sbin/sysctl -a | grep file-max`
ip_local_port_range	`# /sbin/sysctl -a | grep ip_local_port_range` This command displays a range of port numbers.

2. If the value of any kernel parameter is different from the recommended value, complete the following steps:

   a. Using any text editor, create or edit the `/etc/sysctl.conf` file and add or edit lines similar to the following:

   Note: Include lines only for the kernel parameter values that you want to change. For the semaphore parameters (`kernel.sem`), you must specify all four values. However, if any of the current values are larger than the recommended value, specify the larger value.

   ```
   kernel.shmall = 2097152
   kernel.shmmax = 2147483648
   kernel.shmmni = 4096
   kernel.sem = 250 32000 100 128
   fs.file-max = 65536
   net.ipv4.ip_local_port_range = 1024 65000
   kernel.msgmni = 2878
   kernel.msgmax = 8192
   kernel.msgmnb = 65535
   ```

   By specifying the values in the `/etc/sysctl.conf` file, they persist when you restart the system.

   b. Enter the following command to change the current values of the kernel parameters.

   ```
   # /sbin/sysctl -p
   ```

   Review the output from this command to verify that the values are correct. If the values are incorrect, edit the `/etc/sysctl.conf` file, then enter this command again.

   c. On SUSE Linux Enterprise Server only, enter the following command to cause the system to read the `/etc/sysctl.conf` file when it restarts:

   ```
   # chkconfig boot.sysctl on
   ```

Set Shell Limits for the oracle User

To improve the performance of the software on Linux systems, you must increase the following shell limits for the `oracle` user, depending on the user's default shell:

Bourne or Bash Shell Limit	Korn Shell Limit	C or tcsh Shell Limit	Hard Limit
nofile	nofile	descriptors	65536
noproc	processes	maxproc	16384

To increase the shell limits:

1. Add the following lines to `/etc/security/limits.conf` file:

```
*        soft   nproc         2047
*        hard   nproc         16384
*        soft   nofile        2048
*        hard   nofile        65536
```

2. Add the following line to the `/etc/pam.d/login` file, if it does not already exist:

```
session    required     /lib/security/pam_limits.so
```

3. Depending on the `oracle` user's default shell, make the following changes to the default shell start-up file:

   - For the Bourne, Bash, or Korn shell, add the following lines to the `/etc/profile` file:

```
if [ $USER = "oracle" ]; then
        if [ $SHELL = "/bin/ksh" ]; then
              ulimit -p 16384
              ulimit -n 65536
        else
              ulimit -u 16384 -n 65536
        fi
fi
```

   - For the C or tcsh shell, add the following lines to the `/etc/csh.login` file:

```
if ( $USER == "oracle" ) then
        limit maxproc 16384
        limit descriptors 65536
endif
```

3.6 Ports

Many Oracle Business Intelligence components, such as Oracle HTTP Server, OracleAS Web Cache, and Oracle Enterprise Manager 10*g*, use ports. You can have the installer assign default port numbers, or use port numbers that you specify.

- Section 3.6.1, "Checking If a Port Is in Use"
- Section 3.6.2, "Using Default Port Numbers"
- Section 3.6.3, "Using Custom Port Numbers (the Static Ports Feature)"

Why the Default Port for Oracle HTTP Server Is Port 7777 and Not Port 80?

By default, the installer configures Oracle HTTP Server to use port 7777, not port 80. Port 7777 is the default port because on UNIX, components that use port numbers lower than 1024 require additional steps to be done as the root user before the components can run. Because the installer does not have root access, it has to use a port greater than 1024.

If you want Oracle HTTP Server to use a different port, such as port 80, use the static ports feature, which enables you to specify port numbers for components. Although you can change the port number after installation, it is easier to set the port number during installation.

3.6.1 Checking If a Port Is in Use

To check if a port is being used, run the `netstat` command as follows:

```
prompt> netstat -an | grep portnum
```

3.6.2 Using Default Port Numbers

If you want to use the default port numbers for components, you do not have to do anything. Refer to Appendix C, "Default Port Numbers" for a list of the default port numbers and ranges. Make sure that at least one port is available in the port range for each component. If the installer is unable to find a free port in the range, then the installation fails.

3.6.3 Using Custom Port Numbers (the Static Ports Feature)

To instruct the installer to assign custom port numbers for components:

1. Create a file containing the component names and port numbers. Section 3.6.3.1, "Format of the staticports.ini File" describes the file format. This file is typically called `staticports.ini`, but you can name it anything you want.
2. In the installer, on the Specify Port Configuration Options screen, select **Manual** and enter the *complete path* to the `staticports.ini` file.

   If you do not specify the complete path to the file, the installer will not be able to find the file. The installer then assigns default ports for all the components, and it does this without displaying any warning.

Difference from Previous Release: In 10*g* (9.0.4), you used command-line options to specify the `staticports.ini` file. In this release, you specify the file in the new Specify Port Configuration Options screen.

3.6.3.1 Format of the staticports.ini File

The `staticports.ini` file has the following format. Replace *port_num* with the port number that you want to use for the component.

```
# J2EE and Web Cache
Oracle HTTP Server port = port_num
Oracle HTTP Server Listen port = port_num
Oracle HTTP Server SSL port = port_num
Oracle HTTP Server Listen (SSL) port = port_num
Oracle HTTP Server Diagnostic port = port_num
Java Object Cache port = port_num
DCM Java Object Cache port = port_num
DCM Discovery port = port_num
Oracle Notification Server Request port = port_num
Oracle Notification Server Local port = port_num
Oracle Notification Server Remote port = port_num
Application Server Control port = port_num
Application Server Control RMI port = port_num
Oracle Management Agent port = port_num
Web Cache HTTP Listen port = port_num
Web Cache HTTP Listen (SSL) port = port_num
Web Cache Administration port = port_num
Web Cache Invalidation port = port_num
Web Cache Statistics port = port_num
Log Loader port = port_num
ASG port = port_num

# Business Intelligence and Forms
Reports Services SQL*Net port = port_num
Reports Services discoveryService port = port_num
```

```
Reports Services bridge port = port_num

# Infrastructure
Oracle Internet Directory port = port_num
Oracle Internet Directory (SSL) port = port_num
Oracle Certificate Authority SSL Server Authentication port = port_num
Oracle Certificate Authority SSL Mutual Authentication port = port_num
Ultra Search HTTP port number = port_num
```

The easiest way to create the file is to use the `staticports.ini` file on the CD-ROM (Disk 1) or DVD-ROM as a template:

1. Copy the `staticports.ini` file from the CD-ROM or DVD-ROM to your hard disk.

Table 3–6 Location of the staticports.ini File on CD-ROM and DVD-ROM

Media	Location of staticports.ini File
CD-ROM	*mount_point*: Disk 1`/1012disk1/stage/Response/staticports.ini`
DVD-ROM	*mount_point*`/application_server/stage/Response/staticports.ini`

2. Edit the local copy (the file on the hard disk) to include the required port numbers.

   You do not need to specify port numbers for all components in the `staticports.ini` file. If a component is not listed in the file, the installer uses the default port number for that component.

   The following example sets the Application Server Control port and some OracleAS Web Cache ports. For components not specified, the installer assigns the default port numbers.

   ```
   Application Server Control port = 2000
   Web Cache Administration port = 2001
   Web Cache Invalidation port = 2002
   Web Cache Statistics port = 2003
   ```

   When installation is complete, you can check the `ORACLE_HOME/install/portlist.ini` file to see the assigned ports.

The installer verifies that the ports specified in the file are available by checking the memory. This means that it can only detect ports that are being used by running processes. It does not look in configuration files to determine which ports an application is using.

If the installer detects that a specified port is not available, it displays an alert. The installer does not assign a port that is not available. To fix this:

1. Edit the `staticports.ini` file to specify a different port, or shut down the application using the port.
2. Click **Retry**. The installer re-reads the `staticports.ini` file and verifies the entries in the file again.

Using portlist.ini as the staticports.ini File

The `staticports.ini` file uses the same format as the `ORACLE_HOME/install/portlist.ini` file, which is created *after* a Oracle Business Intelligence installation. If you have installed Oracle Business Intelligence and want to use the same port numbers in another installation, use the `portlist.ini` file from the first installation as the `staticports.ini` file for subsequent installations.

The `portlist.ini` file is located in the `ORACLE_HOME\install\` directory.

However, note this difference: in `staticports.ini`, the `Oracle Management Agent port` line corresponds to the `Enterprise Manager Agent port` line in `portlist.ini`.

3.6.3.2 Error Conditions that Cause the Installer to Use Default Ports Instead of Specified Ports

Check the `staticports.ini` file carefully because a mistake can cause the installer to use default ports without displaying any warning. Here are some things that you should check:

- If you specify the same port for more than one component, the installer uses the specified port for the first component, but for the other components, it uses the components' default ports. The installer does not warn you if you have specified the same port for multiple components.
- If you have syntax errors in the `staticports.ini` file (for example, if you omitted the = character for a line), the installer ignores the line. For the components specified on such lines, the installer assigns the default ports. The installer does not display a warning for lines with syntax errors.
- If you misspell a component name, the installer assigns the default port for the component. Names of components in the file are case-sensitive. The installer does not display a warning for lines with unrecognized names.
- If you specify a non-numeric value for the port number, the installer ignores the line and assigns the default port number for the component. It does this without displaying any warning.
- If you specify a relative path to the staticports.ini file (for example, `./staticports.ini` or just `staticports.ini`), the installer will not find the file. The installer continues without displaying a warning and assigns default ports to all components. You must specify a complete path to the `staticports.ini` file.

3.6.3.3 Ports for Oracle HTTP Server and OracleAS Web Cache

Ensure that you understand the following when setting ports for these components.

In the `httpd.conf` file for Oracle HTTP Server, the `Port` and the `Listen` directives specify the ports used by OracleAS Web Cache and Oracle HTTP Server. The correct lines in the `staticports.ini` file for setting these ports depend on the components that you are configuring.

If You Are Configuring OracleAS Web Cache and Oracle HTTP Server

1. Set the port for OracleAS Web Cache.

   OracleAS Web Cache uses the port specified by the `Port` directive (Figure 3–1). To set this port, use this line in the `staticports.ini` file:

   ```
   Web Cache HTTP Listen port = port_number
   ```

   To configure the SSL port for OracleAS Web Cache, use the following line:

   ```
   Web Cache HTTP Listen (SSL) port = port_number
   ```

   You cannot set the port number using the `Oracle HTTP Server port` line in this case. If the `staticports.ini` file contains both the `Oracle HTTP Server port` and the `Web Cache HTTP Listen port` lines, the `Oracle HTTP`

`Server port` line is ignored. For example, if you have these lines in `staticports.ini`:

```
Web Cache HTTP Listen port = 7979
Oracle HTTP Server port = 8080
```

the `Port` directive is set to 7979.

2. Set the port for Oracle HTTP Server.

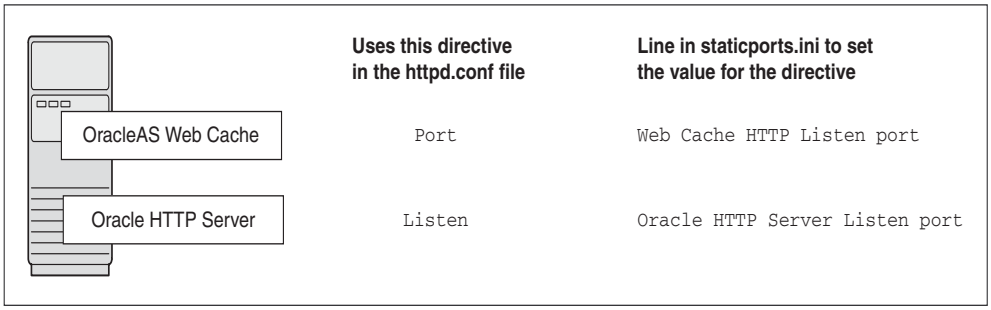
   Oracle HTTP Server uses the port specified by the `Listen` directive. To set this port, use this line in the `staticports.ini` file:

   ```
   Oracle HTTP Server Listen port = port_number
   ```

   To configure the SSL Listen port, use the following line:

   ```
   Oracle HTTP Server Listen (SSL) port = port_number
   ```

Figure 3–1 Configuring Both OracleAS Web Cache and Oracle HTTP Server



If You Are Configuring Oracle HTTP Server Only (no OracleAS Web Cache)

If you are configuring Oracle HTTP Server only, then Oracle HTTP Server uses both `Port` and `Listen` directives (Figure 3–2). In this case, you must set both directives to use the same port number.

To set these ports, use the `Oracle HTTP Server port` and `Oracle HTTP Server Listen port` lines in the `staticports.ini` file. For example:

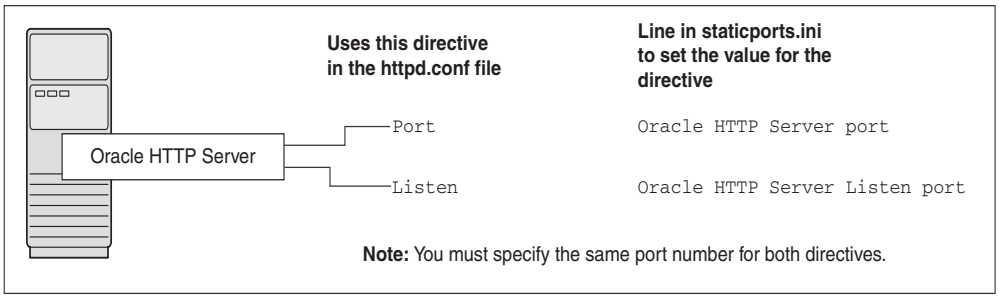
```
Oracle HTTP Server port = 8080
Oracle HTTP Server Listen port = 8080
```

To set the SSL version of these ports, use the following lines. As in the non-SSL version, the port numbers must be the same.

```
Oracle HTTP Server SSL port = 443
Oracle HTTP Server Listen (SSL) port = 443
```

If you also specify the Web Cache lines in `staticports.ini`, they are ignored because you are not configuring OracleAS Web Cache.

Figure 3–2 Configuring Only Oracle HTTP Server



3.6.3.4 Examples

This section describes some common scenarios for using `staticports.ini`.

- Section 3.6.3.4.1, "Configuring Oracle HTTP Server to Use Ports 80 and 443 With OracleAS Web Cache as the Front-End"
- Section 3.6.3.4.2, "Configuring Oracle HTTP Server to Use Ports 80 and 443 Without OracleAS Web Cache"

3.6.3.4.1 Configuring Oracle HTTP Server to Use Ports 80 and 443 With OracleAS Web Cache as the Front-End In this scenario, create a `staticports.ini` file that includes the following lines:

```
Web Cache HTTP Listen port = 80
Oracle HTTP Server Listen port = 81
Web Cache HTTP Listen (SSL) port = 443
Oracle HTTP Server Listen (SSL) port = 444
```

The ports for Oracle HTTP Server Listen and SSL Listen can be any available port. The example uses ports 81 and 444. These port numbers do not have to be less than 1024. If you select port numbers less than 1024, start Oracle HTTP Server and OracleAS Web Cache as the root user.

Note: Because you are using ports less than 1024, you have to configure Oracle HTTP Server and OracleAS Web Cache to run as the root user. You can perform the configuration during installation or after installation.

If you perform the configuration after installation, then the installer does not start the components (because they are not yet configured).

For details, see these guides: *Oracle HTTP Server Administrator's Guide* and *Oracle Application Server Web Cache Administrator's Guide*.

3.6.3.4.2 Configuring Oracle HTTP Server to Use Ports 80 and 443 Without OracleAS Web Cache In this scenario, create a `staticports.ini` file that includes the following lines:

```
Oracle HTTP Server port = 80
Oracle HTTP Server Listen port = 80
Oracle HTTP Server SSL port = 443
Oracle HTTP Server Listen (SSL) port = 443
```

Note: Because you are using ports less than 1024, you have to configure Oracle HTTP Server to run as the root user. Refer to the note above for details.

3.7 Operating System Groups

You need to create operating system groups in these situations:

- If you plan to install Oracle Application Server 10*g* Forms and Reports Services on a computer that does not have Oracle products, create a group to own the "inventory" directory. See Section 3.7.1, "Create a Group for the Inventory Directory".
- If you plan to install the OracleAS Metadata Repository in a new database (that is, one created by the installer), create groups for database administrators. See Section 3.7.2, "Create Groups for Database Administrators".

To create a local operating system group:

Enter the following command to create the `oinstall` group:

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

For more information about operating system users and groups, see your operating system documentation or contact your system administrator.

3.7.1 Create a Group for the Inventory Directory

If you plan to install Oracle Application Server 10*g* Forms and Reports Services on a computer that does not have Oracle products, create a group to own the inventory directory. The installer writes its files in the inventory directory to keep track of the Oracle products installed on the computer.

This guide uses the name `oinstall` for this operating system group.

By having a separate group for the inventory directory, you allow different users to install Oracle products on the computer. Users need write permission for the inventory directory. They can achieve this by belonging to the `oinstall` group.

For the first time installation of any Oracle product on a computer, the installer displays a screen where you enter a group name for the inventory directory, and a screen where you enter the location of the inventory directory.

The default name of the inventory directory is `oraInventory`.

If you are unsure if there is already an inventory directory on the computer, look in the `/etc/oraInst.loc` file on Linux systems. This file lists the location of the inventory directory and the group who owns it. If the file does not exist, the computer does not have Oracle products installed on it.

3.7.2 Create Groups for Database Administrators

This section applies only if you plan to install the OracleAS Metadata Repository in a new database created by the installer.

When the database is not mounted and database authentication is unavailable, the database uses operating system groups to determine user privileges. The database recognizes these groups and privileges:

Table 3–7 Privileges for the OSDBA and OSOPER Groups

Group	Description
OSDBA	This is the database administrator group. Users in this group are granted SYSDBA privileges.
OSOPER	Users in this group are granted SYSOPER privileges, which comprise privileges required for basic maintenance. These include database startup and shutdown, and other privileges required for database operation. SYSOPER privileges are a subset of SYSDBA privileges.

You need to create operating system groups for these groups.

If you want an operating system group called `dba` to have SYSDBA privileges:

1. Create the `dba` group.
2. Ensure that the user running the installer is a member of the `dba` group.

If you want a different operating system group to have SYSDBA privileges, or if you want to associate SYSDBA and SYSOPER privileges with different groups, ensure the user running the installer does not belong to the `dba` group.

If the user running the installer does not belong to the `dba` group, the installer displays a screen where you can enter the names of groups to have the database administrator privileges. The screen has two fields: one for the OSDBA group and one for the OSOPER group (see Table 3–7). You can enter the same operating system group for both fields.

3.8 Operating System User

Create an operating system user to install and upgrade Oracle products. This guide refers to this user as the `oracle` user. The `oracle` user running the installer must have write permission for these directories:

- the Oracle home directory, which contains files for the product you are installing
- the inventory directory, which is used by the installer for all Oracle products

If the computer contains other Oracle products, you might already have a user for this purpose. Look in the `/etc/oraInst.loc` file on Linux systems. This file lists the location of the inventory directory and the group who owns it. If the file does not exist, the computer does not have Oracle products installed on it.

If you do not already have a user for installing Oracle products, create a user with the following properties:

Table 3–8 Properties of the Operating System User Who Runs the Installer

Item	Description
Login name	You can use any name for the user. This guide refers to the user as the `oracle` user.
Group identifier	The primary group of the `oracle` user must have write permission for the `oraInventory` directory. See Section 3.7.1, "Create a Group for the Inventory Directory" for more information about this group. You can use any name for the group. This guide uses the name `oinstall`.
Home directory	The home directory for the `oracle` user can be consistent with the home directories of other users.

Table 3–8 (Cont.) Properties of the Operating System User Who Runs the Installer

Item	Description
Login shell	The default login shell can be the C, Bourne, or Korn shell.

To create a local operating system user:

1. To create the `oracle` user, enter a command similar to the following:

   ```
   # /usr/sbin/useradd -g oinstall -G dba[,oper] oracle
   ```

   In this command:

   - The `-g` option specifies the primary group, which must be the Oracle Inventory group, for example `oinstall`
   - The `-G` option specifies the secondary groups, which must include the OSDBA group and if required, the OSOPER group, for example `dba` or `dba,oper`

2. Set the password of the `oracle` user:

   ```
   # passwd oracle
   ```

To check which groups an operating system user belongs to, run the `groups` command with the name of the user. For example:

```
prompt> groups oracle
```

For more information about operating system users and groups, see your operating system documentation or contact your system administrator.

3.9 Environment Variables

The operating system user who will be installing Oracle Business Intelligence needs to set (or unset) the environment variables listed in Table 3–9.

Table 3–9 Summary of Environment Variables

Environment Variable	Set or Unset
Section 3.9.2, "ORACLE_HOME and ORACLE_SID"	Does not matter (the installer unsets these two environment variables).
Section 3.9.3, "PATH, CLASSPATH, and LD_LIBRARY_PATH"	Must not contain references to directories in any Oracle home directories
Section 3.9.4, "DISPLAY"	Set it to the monitor on which you want to the installer window to appear.
Section 3.9.5, "TMP and TMPDIR"	Optional. If unset, defaults to `/tmp`.
Section 3.9.6, "TNS_ADMIN"	Must not be set.
Section 3.9.7, "REPORTS_DEFAULT_DISPLAY"	Default set to YES. If set to NO, ensure that you specify the appropriate display.
Section 3.9.8, "ORA_NLS"	Unset this variable to perform a successful Oracle Application Server 10*g* Forms and Reports Services installation

Table 3–9 (Cont.) Summary of Environment Variables

Environment Variable	Set or Unset
Section 3.9.9, "LD_BIND_NOW (Linux Only)"	Unset this variable to perform a successful Oracle Application Server 10*g* Forms and Reports Services installation

3.9.1 Tips on Environment Variables

Here are some tips when working with environment variables:

- If you set environment variables in the file, they may not be read. To ensure environment variables are set to the correct values, check their values in the shell where you run the installer.
- To check the value of environment variables, use the `env` command. This command displays all the currently defined environment variables and their values.

```
% env
```

- If you use the `su` command to switch users (for example, switching from the root user to the `oracle` user), check the environment variables when you are the new user because the environment variables may not be passed to the new user. This can happen even if you run `su` with the - parameter (`su - user`).

```
# /* root user */
# su - oracle
% env
```

3.9.2 ORACLE_HOME and ORACLE_SID

It does not matter if these environment variables are set or unset when you start the installer because the installer unsets these environment variables.

3.9.3 PATH, CLASSPATH, and LD_LIBRARY_PATH

Edit the `PATH`, `CLASSPATH`, and `LD_LIBRARY_PATH` environment variables so that they do not reference any Oracle home directories.

The shared library path environment variable is `LD_LIBRARY_PATH`.

3.9.4 DISPLAY

Set the `DISPLAY` environment variable to point to the X server that displays the installer. The format of the `DISPLAY` environment variable is:

hostname:*display_number*.*screen_number*

Example (C shell):

```
% setenv DISPLAY test.mydomain.com:0.0
```

Example (Bourne or Korn shell):

```
$ DISPLAY=test.mydomain.com:0.0; export DISPLAY
```

Oracle Business Intelligence requires a running X server during installation only. The frame buffer X server installed with your operating system requires that you remain logged in and have the frame buffer running during installation. If you do not want to

do this, then use a virtual frame buffer, such as X Virtual Frame Buffer (XVFB) or Virtual Network Computing (VNC).

Visit Oracle Technology Network at http://www.oracle.com/technology/products/ for information about obtaining and installing XVFB or other virtual frame buffer solutions. Search OTN for "frame buffer".

3.9.5 TMP and TMPDIR

During installation, the installer needs to write temporary files to a temporary directory. By default, the temporary directory is `/tmp`.

If you want the installer to use a directory other than `/tmp`, set the `TMP` environment variable to the full path of the alternate directory.

Example (C shell):

```
% setenv TMP /tmp2
% setenv TMPDIR /tmp2
```

Example (Bourne or Korn shell):

```
$ TMP=/tmp2; export TMP
$ TMPDIR=/tmp2; export TMPDIR
```

If you do not set this environment variable, and the default directory does not have enough space, then the installer displays an error message that says the environment variable is not set. You can either set the environment variable to point to a different directory or free up enough space in the default directory. In either case, you have to restart the installation.

3.9.6 TNS_ADMIN

This section describes two requirements:

- The `TNS_ADMIN` environment variable must not be set.
- The `/etc` and the directory must not contain a `tnsnames.ora` file.

These requirements are necessary to prevent conflicts between the Net configuration files for different Oracle products.

If you need to set `TNS_ADMIN` or have the `tnsnames.ora` file in `/etc` or , perform the following steps before installing Oracle Business Intelligence.

1. If you have the `tnsnames.ora` file in `/etc` or , move the file from these directories to a different directory. Alternatively, you can rename the file.
2. Make sure the `TNS_ADMIN` environment variable is not set.

   Example (C shell):

   ```
   % unsetenv TNS_ADMIN
   ```

   Example (Bourne or Korn shell):

   ```
   $ unset TNS_ADMIN
   ```

After installation, you can merge the contents of the newly created `tnsnames.ora` file with the existing `tnsnames.ora` file.

3.9.7 REPORTS_DEFAULT_DISPLAY

The REPORTS_DEFAULT_DISPLAY environment variable specifies whether to implement the following for Oracle Reports:

- Elimination of dependency on DISPLAY
- Elimination of dependency on having a valid printer defined for font information
- ScreenPrinter (screenprinter.ppd) for surface resolution for images and font information
- Advanced Imaging Support

For Oracle Reports, if REPORTS_DEFAULT_DISPLAY=YES, it overrides any value set for the DISPLAY environment variable. For more information about REPORTS_DEFAULT_DISPLAY, see the *Oracle Application Server Reports Services Publishing Reports to the Web* manual.

> **Note:** REPORTS_DEFAULT_DISPLAY is used for Oracle Reports only and is not applicable to the Oracle Application Server installer. The installer continues to use the DISPLAY environment variable even if REPORTS_DEFAULT_DISPLAY is set to YES.

3.9.8 ORA_NLS

To make sure that the Oracle Application Server Forms Services installation completes successfully, unset this environment variable.

Example:

```
$ unset ORA_NLS
```

3.9.9 LD_BIND_NOW (Linux Only)

To make sure that the Oracle Application Server Forms Services installation completes successfully on Linux systems, unset this environment variable.

Example:

```
$ unset LD_BIND_NOW
```

3.10 The /etc/hosts File

The contents of the /etc/hosts file affect the location of the default Oracle Identity Management realm and the hostname for Oracle Application Server Single Sign-On.

The installer provides alternative methods for you to enter the values that you want without editing the hosts file. For more information, refer to *Oracle Application Server Installation Guide*.

3.11 Network Topics

Typically, the computer on which you want to install Oracle Business Intelligence is connected to the network, has local storage to contain the Oracle Business Intelligence installation, has a display monitor, and has a CD-ROM or DVD-ROM drive.

This section describes the procedure to install Oracle Business Intelligence on computers that do not meet the typical scenario. It covers the following cases:

3.11.1 Installing on Multihomed (Multi-IP) Computers

A multihomed computer is associated with multiple IP addresses. This is achieved by having multiple network cards on the computer. Each IP address is associated with a hostname; additionally, you can set up aliases for the hostname. By default, Oracle Universal Installer uses the `ORACLE_HOSTNAME` environment variable setting to find the hostname. If `ORACLE_HOSTNAME` is not set and you are installing Oracle Business Intelligence on a computer that has multiple network cards, Oracle Universal Installer determines the hostname by using the first name in the `/etc/hosts` file.

Clients must be able to access the computer using this hostname (or using aliases for this hostname). To check, ping the hostname from the client computers using the short name (hostname only) and the full name (hostname and domain name). Both must work.

3.11.2 Copying CD-ROMs or DVD-ROM to Hard Drive, and Installing from the Hard Drive

Instead of installing from the Oracle Business Intelligence CD-ROMs or DVD-ROM, you can copy the contents of the CD-ROMs or DVD-ROM to a hard drive and install from the hard drive. This might be easier if you plan to install many instances of Oracle Business Intelligence on your network, or if the computers on which you want to install Oracle Business Intelligence do not have CD-ROM or DVD-ROM drives.

You can also install from remote CD-ROM or DVD-ROM drives. See Section 3.11.3, "Installing from a Remote CD-ROM or DVD Drive".)

When you install from the hard drive, the installer does not prompt you to swap CD-ROMs. It can find all the files if they are in the proper locations.

To Copy the CD-ROMs:

1. Create a parent directory (for example, `orafrs`) and, under the parent directory, create subdirectories called `Disk1`, `Disk2`, and so on. The names of the subdirectories must be `Disk`*`N`*, where *`N`* is the CD-ROM number.
2. Copy the contents of each CD-ROM into the corresponding directory.

To run the installer from the copied files, invoke the `runInstaller` executable from the `Disk1` directory. Run it from the computer that will be running Oracle Business Intelligence.

```
prompt> /path/to/hard/drive/Disk1/runInstaller
```

To Copy the orafrs Directory from the DVD-ROM

Copy the `orafrs` directory from the DVD-ROM to your hard disk.

```
prompt> cp -pr /dvd_mount_point/orasolfrs /path/to/hard/drive
```

To run the installer from the copied files, invoke the `runInstallersetup.exe` executable from the computer that will be running Oracle Business Intelligence:

```
prompt> /path/to/hard/drive/orafrs/runInstaller
```

3.11.3 Installing from a Remote CD-ROM or DVD Drive

If the computer on which you want to install Oracle Business Intelligence does not have a CD-ROM or DVD drive, you can perform the installation from a remote CD-ROM or DVD drive. Check that you have performed these steps:

- You need to share the remote CD-ROM or DVD-ROM drive through NFS.

  On the remote computer that has the CD-ROM or DVD-ROM drive:

  1. CD-ROM: Insert Oracle Business Intelligence Disk 1 into the CD-ROM drive.

     DVD-ROM: Insert the Oracle Business Intelligence DVD-ROM into the DVD-ROM drive.

  2. Share the CD-ROM or DVD-ROM drive.

     CD-ROM:

     ```
     prompt> su
     Password: root_password
     # share -F nfs -o ro /cdrom/disk1
     ```

     The path `/cdrom/disk1` specifies the path to the CD-ROM in the CD-ROM drive. You can use any path you like.

     DVD-ROM:

     ```
     prompt> su
     Password: root_password
     # share -F nfs -o ro /cdrom
     ```

     The path `/cdrom` specifies the path to the DVD-ROM in the DVD-ROM drive. You can use any path you like.

  On the local computer, access the CD-ROM or DVD-ROM and run the installer as follows:

  CD-ROM:

  ```
  prompt> /net/remote_computer_hostname/cdrom/disk1/runInstaller
  ```

  DVD-ROM:

  ```
  prompt> /net/remote_computer_hostname/cdrom/orasolfrs/runInstaller
  ```

  Replace *remote_computer_hostname* with the name of the remote computer.

- This bullet point, switching CD-ROMs, does not apply to DVDs.

  When the installer prompts you to switch CD-ROMs, you need to unshare the CD-ROM drive, eject the CD-ROM, insert the requested CD-ROM, and share the CD-ROM drive again. If you do not unshare, you will not be able to eject the CD-ROM.

> **Note:** The installer must be running when you are switching CD-ROMs. Do *not* exit the installer when switching CD-ROMs. If you exit the installer, it is unable to continue from where it left off. In addition, the partial installation that it created is not usable, and may need to be removed manually.

On the remote computer (which has the CD-ROM drive):

```
prompt> su
Password: root_password
# unshare /cdrom/disk1
# eject cdrom
... Remove the CD-ROM, and insert the CD-ROM requested by the installer (for
... example, Disk 2).
... Share the CD-ROM.
# share -F nfs -o ro /cdrom/disk2
```

3.11.4 Installing on Remote Computers

You can run the installer on a remote computer (*remote_computer*), but have the installer screens display on your local computer (*local_computer*). The installer installs Forms and Reports Services on the remote computer.

1. Allow remote_computer to display on local_computer. Run this command on the local computer's console.

   ```
   local_computer> xhost +remote_computer
   ```

   If you do not run `xhost`, you may get an Xlib error similar to "Failed to connect to server", "Connection refused by server," or "Can't open display" when starting the installer.

2. On local_computer, perform a remote login (using telnet or rlogin) to remote_computer. Log on as the `oracle` user, as described in Section 3.8, "Operating System User". Ensure that the user has set the environment variables correctly, as described in Section 3.9, "Environment Variables".

   ```
   local_computer> rlogin -l oracle remote_computer.mydomain.com
   - OR -
   local_computer> telnet remote_computer.mydomain.com
   ```

3. Set the `DISPLAY` environment variable on remote_computer to point to local_computer.

   Example (C shell):

   ```
   remote_computer> setenv DISPLAY local_computer.mydomain.com:0.0
   ```

   Example (Bourne or Korn shell):

   ```
   remote_computer> DISPLAY=local_computer.mydomain.com:0.0; export DISPLAY
   ```

4. Run the installer. For information on running the installer, see Section 4.1, "Starting the Installer".

Note: You can use a PC X emulator to run the installer if it supports a PseudoColor color model or PseudoColor visual. Set the PC X emulator to use a PseudoColor visual, and then start the installer. Refer to the X emulator documentation for instructions on changing the color model or visual settings.

If you want to install and run Forms and Reports Services on a remote computer (that is, the remote computer has the hard drive and will run Forms and Reports Services components), but you do not have physical access to the computer, you can still perform the installation on the remote computer if it is running remote control software such as VNC or Symantec pcAnywhere. You also need the remote control software running on your local computer.

You can install Forms and Reports Services on the remote computer in one of these two ways:

- If you have copied the contents of the Forms and Reports Services CD-ROM or DVD to a hard drive, then you can install from the hard drive.
- You can insert the CD-ROM or DVD into a drive on your local computer, and install from the CD-ROM or DVD.

Installing from a Hard Drive

If you have copied the contents of the Forms and Reports Services CD-ROM or DVD to a hard drive, then you can install from the hard drive. To install from the hard drive:

1. Ensure that the remote control software is installed and running on the remote and local computers.
2. Share the hard drive that contains the Forms and Reports Services CD-ROM or DVD.
3. On the remote computer, map a drive letter to the shared hard drive. Use the remote control software to do this on the remote computer.
4. Using the remote control software, run the installer on the remote computer. You can access the installer from the shared hard drive.

Installing from a Remote CD-ROM or DVD Drive

You can insert the CD-ROM or DVD into a drive on your local computer, and install from the CD-ROM or DVD. This is similar to the scenario described in Section 3.11.3, "Installing from a Remote CD-ROM or DVD Drive". To install from a remote CD-ROM or DVD:

1. Ensure that the remote control software is installed and running on the remote and local computers.
2. On the local computer, share the CD-ROM or DVD drive.

   On the remote computer, map a drive letter to the shared CD-ROM or DVD drive. Use the remote control software to do this on the remote computer.

   These steps are described in Section 3.11.3, "Installing from a Remote CD-ROM or DVD Drive".
3. Using the remote control software, run the installer on the remote computer. You can access the installer from the shared CD-ROM or DVD drive.

3.11.5 Installing on NFS-Mounted Storage

You cannot install and run Oracle Business Intelligence on Sun computers with standard NFS. You must use a certified NFS-mounted storage system, such as Network Appliance (NetApp) Filers. Oracle Business Intelligence is certified to run on NFS-mounted storage systems.

The NetApp system must be exported to at least the remote install user and remote root user. You can do this using `exportfs` command:

```
prompt> exportfs -i /vol/vol1
```

To check the latest certification list for any updates, visit Oracle Technology Network (`http://www.oracle.com/technology`).

3.11.6 Running Multiple Instances from One Installation

Oracle Business Intelligence components are intended to be run only on the computer on which they are installed. You cannot run the components on remote computers even though the computers can access the files through NFS.

3.11.7 Support for NIS and NIS+

You can install and run Oracle Business Intelligence in NIS and NIS+ environments. See the *Oracle Application Server Installation Guide* for more information on these environments.

3.11.8 Installing on Computers With Multiple Network Cards

If you are installing Oracle Business Intelligence on a computer with multiple network cards, the installer uses the first name in the `/etc/hosts` file. You may need to re-order the lines in this file so the required hostname appears first. You can change the file back to its original state after installation.

3.12 Prerequisite Checks Performed by the Installer

Table 3–10 lists the checks performed by the installer:

Table 3–10 Prerequisite Checks Performed by the Installer

Item	Description
CPU	Checks that the CPU meets the minimum speed requirement.
Operating system kernel parameters	See Section 3.5, "Kernel Parameters" for a list of required kernel parameters.
Memory	See Table 3–1 for recommended values.
Swap space	See Table 3–1 for recommended values.
TMP space	See Table 3–1 for recommended values.
Instance name	The installer checks that the computer on which you are installing Forms and Reports Services does not already have an instance of the same name.
Oracle home directory name	The installer checks that the Oracle home directory name does not contain any spaces.
Path to Oracle home directory	The installer checks that the path to the Oracle home directory is not longer than 127 characters.

Table 3–10 (Cont.) Prerequisite Checks Performed by the Installer

Item	Description
Oracle home directory contents	The installer checks that the Oracle home directory does not contain any files that may interfere with the installation.
Oracle home directory	You should install Forms and Reports Services in a new directory, unless you are expanding middle tier or installing middle tier in an Oracle home that contains Oracle Developer Suite. Here are some examples of installations that are *not allowed*: ■ Any type of Oracle Application Server 10*g* into an 8.0, 8*i*, 9.0.1, or 9.2 database Oracle home ■ Any type of Oracle Application Server 10*g* into an Oracle Management Service Oracle home ■ Any type of Oracle Application Server 10*g* into an Oracle Collaboration Suite Oracle home ■ Any type of Oracle Application Server 10*g* into an Oracle HTTP Server standalone Oracle home ■ Any type of Oracle Application Server 10*g* into an OracleAS Web Cache standalone Oracle home ■ Any type of Oracle Application Server 10*g* into an Oracle9*i* Developer Suite 9.0.2 Oracle home ■ Any type of Oracle Application Server 10*g* into an Oracle Application Server Containers for J2EE standalone Oracle home ■ Any type of Oracle Application Server 10*g* into an Oracle9*i*AS 1.0.2.2 Oracle home ■ Oracle Application Server 10*g* Forms and Reports Services middle tier into an Oracle9*i*AS9.0.2 or 9.0.3 middle tier Oracle home ■ OracleAS Developer Kits 10*g* into an OracleAS Infrastructure 9.0.2 or Release 10*g* Oracle home ■ OracleAS Developer Kits 10*g* into an Oracle9*i*AS middle tier 9.0.2 or 9.0.3 Oracle home ■ OracleAS Developer Kits 10*g* into an Oracle Developer Suite 9.0.2 or Release 10*g* Oracle home ■ OracleAS Infrastructure 10*g* into any Oracle9*i*AS 9.0.2 Oracle home ■ OracleAS Infrastructure 10*g* into an Oracle Application Server 10*g* Forms and Reports Services middle tier or OracleAS Developer Kits 10*g* Oracle home ■ OracleAS Infrastructure 10*g* into an Oracle Developer Suite 9.0.2 or Release 10*g* Oracle home
Port 1521	The installer displays a warning if port 1521 is in use by any application, including database listeners of any version. You must stop the application using port 1521, then click **Retry** in the warning dialog box. If a database listener is using port 1521, you may be able to use it for the metadata repository database. If another application is using port 1521, stop it or configure it to use a different port. Alternatively, you can change the database listener to use a port other than 1521, but you can do this only after installation. See the *Oracle Application Server Administrator's Guide* for details.

Table 3–10 (Cont.) Prerequisite Checks Performed by the Installer

Item	Description
Static port conflicts	The installer checks the ports listed in the `staticports.ini` file, if specified. See Section 3.6, "Ports".
Monitor	The installer checks that the monitor is configured to display at least 256 colors.
Display permission	The installer checks that the user has permissions to display on the monitor specified by the `DISPLAY` environment variable.
`DISPLAY` environment variable	The installer checks that the `DISPLAY` environment variable is set.
`TNS_ADMIN` environment variable	The `TNS_ADMIN` environment variable must not be set. There must not be a `tnsnames.ora` file in the `/etc` directories.
DBCA_RAW_CONFIG environment variable	If you are installing the OracleAS Infrastructure 10*g* in a Real Application Clusters or OracleAS Active Failover Cluster environment, you need to set this environment variable to point to a file that describes the locations of your raw partitions.
Cluster file system	The installer checks that you are not installing Oracle Application Server 10*g* Forms and Reports Services in a cluster file system (CFS).
Oracle Enterprise Manager directories are writable	The installer runs this check only if you are expanding a middle tier or reinstalling Forms and Reports Services in the same Oracle home. The installer checks that these directories are writable by the operating system user running the installer: ■ `ORACLE_HOME/sysman/emd` ■ `ORACLE_HOME/sysman/config` ■ `ORACLE_HOME/sysman/webapps/emd/WEB-INF/config`
Oracle Enterprise Manager files exist	The installer runs this check only if you are expanding a middle tier or if you are reinstalling Forms and Reports Services in the same Oracle home. The installer checks that these files exist: ■ `ORACLE_HOME/sysman/config/iasadmin.properties` ■ `ORACLE_HOME/sysman/webapps/emd/WEB-INF/config/consoleConfig.xml`
Kernel check on Linux systems	The installer runs this check only if you are installing on Linux. The installer makes sure that the kernel version contains the the string `2.6.9-11.EL` for Red Hat Enterprise Linux AS 4.0, and the string 2.6.5-7.191-pseries64 for SUSE Linux Enterprise Server 9.
glibc version check on Linux	The installer runs this check only if you are installing on Linux. The installer makes sure that the glib version is glibc-2.3.4-2.9 on Red Hat Enterprise AS 4.0 and glibc-2.3.3-98.47 or higher on SUSE Linux Enterprise Server 9.
Packages check on Linux	The installer runs this check only if you are installing on Linux.The installer makes sure that the mandatory packages are installed. For example, it checks the gcc, sysstat and openmotif packages as specified in Table 3–2 for Red Hat Enterprise Linux AS 4.0 and Table 3–3 for SUSE Linux Enterprise Server 9.

4

Installing Oracle Business Intelligence

This chapter provides instructions for installing Oracle Business Intelligence components.

This chapter includes the following topics:

4.1 Starting the Installer

Follow the instructions in this section to start the installer

How to run the installer will depend on how you have obtained Oracle Business Intelligence, as described in the following steps:

1. If you have the Oracle Business Intelligence CD-ROM/DVD:
   a. Insert the CD-ROM/DVD into your computer's CD-ROM/DVD drive.
   b. Open a new console window.
   c. Navigate to the /install directory on the CD-ROM/DVD drive.
   d. Type the following:

      ```
      runInstaller
      ```

2. If you have downloaded Oracle Business Intelligence as a file from the Oracle Technology Network:
   a. Open a new console window.
   b. Extract the file to a local directory.
   c. Navigate to the `/Disk1/install` directory.
   d. Type the following:

      ```
      runInstaller
      ```

4.2 Installing Oracle Business Intelligence

Note the buttons you use to navigate the installer screens. You can click Help to view more information about each screen, or Installed Products to review the existing Oracle software on your computer. Click **Back** or **Next** when enabled to move backward or forward in the installer. When the Install button is enabled, clicking it begins the file installation. Click **Cancel** to stop the process and exit the installer. Additionally, clicking Deinstall Products (only available in the Welcome screen) enables you to deinstall existing Oracle software.

To install Oracle Business Intelligence with Oracle Universal Installer:

1. Start the installer following the instructions in Section 4.1, "Starting the Installer".
2. Review the Welcome screen, which provides information about Oracle Universal Installer, and click **Next** to continue.

   The installer performs some prerequisite checks (for more information, see Section 1.4.2, "Installer Prerequisite Checks").

   If this is the first time you have installed an Oracle product on the target computer, the installer creates the inventory directory for installation-related files (for more information about this directory, see Section 1.4.1.1, "The Installer Inventory Directory").
3. At the Specify File Locations screen:
   a. Verify the source path in the **Source Path** field.

      The source path is the full path to the products.xml file from which the product will be installed. The installer detects and uses a default path. Do not change the path.

   b. Verify the Oracle home name in the **Destination Name** field.

      You can use the default Oracle home name or select another name.

   c. Verify the destination path in the **Destination Path** field.

      The destination path is the directory name and full path to the Oracle home directory where the product will be installed. You can use the default name and path provided or select another name.

      The destination path must be a real, absolute path. It cannot contain environment variable names or spaces. For instructions on selecting the Oracle home directory, see Section 1.2, "Oracle Home Considerations".

   d. Click **Next** to continue.
4. At the Language Selection screen:
   a. Select the languages in which you want Oracle Business Intelligence to run.

      Hint: The more languages you select, the longer the installation time. The languages you select here determine the languages in which Discoverer Plus help is available. Note that you can install help in additional languages separately (for more information, see Section 4.6.1, "Installing Translated Help Files for Discoverer Plus After Installation").

   b. Click **Next** to continue.
5. You might be prompted to verify that the computer has sufficient memory available for the installation.

For more information about hardware requirements, see Section 2.1, "Hardware Requirements".

6. At the Specify Port Configuration Options screen, select the **Automatic** radio button (recommended) and click Next to continue.

   Note: Oracle recommends that you choose the **Automatic** option because this is appropriate for most installations. However, you can explicitly set which ports to use by specifying a configuration file called staticports.ini. The format and use of the staticports.ini file is described in the *Oracle Application Server 10g Installation Guide*.

7. At the Provide Outgoing Mail Server Information screen:

   a. Specify the SMTP server details (for example, `smtp.oracle.com`).

      Specifying the SMTP server enables end users to send Discoverer worksheets in an email message from Discoverer Viewer.

      Hint: If you are not sure of the SMTP server details to enter, you can leave the field blank. You can specify an SMTP server after installation using Application Server Control (for more information, see the *Oracle Business Intelligence Discoverer Configuration Guide*).

      Note: For information about specifying an SMTP Server for Reports Services, see Section 3.1, "About Specifying an SMTP Server for Reports Services").

   b. Click **Next** to continue.

8. At the Specify Instance Name and ias_admin Password screen, enter information to be used when you administer Oracle Business Intelligence using Application Server Control:

   a. Specify a name for this instance in the Instance Name field.

      Note that the host name and domain name will automatically be appended to the name you specify.

   b. Specify a password for the `ias_admin` Administrator user.

   c. Confirm the password for the `ias_admin` Administrator user.

   d. Click **Next** to continue.

9. Verify the selections you have made in the Summary screen.

   To make changes to the selections, click **Back** to return to the appropriate screen.

   Note: Insufficient disk space is indicated in red under Space Requirements.

10. Click **Install** to begin installing the files.

    The installer displays the Install screen and begins copying the required files for Oracle Business Intelligence. In this screen, you can monitor the progress of the installation and learn the full path of the installation log. For more information about the installation log, refer to Section 1.4.1.1, "The Installer Inventory Directory".

    If you want to stop the installation process, click Stop Installation. You can then choose to stop the installation of the entire product (default) or an individual component. Oracle recommends that you stop the entire product installation. If you choose to stop the installation of an individual component, associated components in the product may not function properly.

11. The Setup Privileges dialog is displayed, prompting you to run a configuration script called root.sh:

    a. Open a new console window and login as the root user.

    b. Run the `root.sh` script and follow the on-screen instructions.

    c. When the script has completed, close the console window.

    d. Click **OK** to close the Setup Privileges dialog.

    After installing the product, the installer displays the Configuration Assistants screen.

12. At the Configuration Assistants screen, review the status of the different configuration assistants that are automatically run.

    To retry a configuration assistant (for example, because it did not complete successfully), select the configuration assistant and click **Retry**.

    Oracle Corporation recommends that you do not attempt to stop a configuration assistant.

    When the installation is complete, the installer displays the End of Installation screen.

    Tip: Make a note of the URL to display the Oracle Business Intelligence Welcome Page. This is the URL you will use to start the different components (for more information, see Section 4.4, "Starting a Component").

13. Click **Exit**.

    A message dialog prompts you to confirm that you want to exit the installation program.

14. Click **Yes** to exit the installer.

    The Oracle Business Intelligence Welcome Page is displayed (provided a valid default web browser can be located on the system). The Welcome Page gives you access to:

    - the Quick Tour
    - tutorials
    - samples
    - documentation
    - Discoverer Plus and Discoverer Viewer (note that you might need to perform one or more post-installation tasks before you can use Discoverer Plus and Discoverer Viewer (for more information see Section 4.3, "Postinstallation Tasks"))

    Note: If the Oracle Business Intelligence Welcome Page is not displayed automatically, start a web browser and enter the URL you noted earlier to display the Welcome Page.

4.3 Postinstallation Tasks

The post-installation tasks for Oracle Business Intelligence are divided into the following parts:

- Section 4.3.1, "General Checklist"
- Section 4.3.2, "Postinstallation Tasks for All Discoverer Components"
- Section 4.3.3, "Component-Specific Postinstallation Tasks"

Note: Unless otherwise differentiated, ORACLE_HOME denotes the Oracle Business Intelligence home directory you used during installation.

4.3.1 General Checklist

Review the following general postinstallation checklist and perform the tasks that apply to your installation and environment.

- Section 4.3.1.1, "Updates"
- Section 4.3.1.2, "TNS Names"
- Section 4.3.1.3, "Port Numbers"
- Section 4.3.1.4, "Associating with an Oracle Application Server Infrastructure"

4.3.1.1 Updates

Once you have completed your installation, check for the latest certification and software updates on Oracle*MetaLink* (`http://metalink.oracle.com`). Oracle*MetaLink* provides access to technical information and assistance from Oracle Support Services.

For the latest information about Oracle Business Intelligence, check the Oracle Technology Network at `http://www.oracle.com/technology/products/bi/index.html`.

The Oracle Technology Network (`http://www.oracle.com/technology`) also provides services and resources that developers can use to build, test, and deploy applications using Oracle products and industry-standard technologies.

4.3.1.2 TNS Names

Before end users can use Discoverer, you must add entries to the tnsnames.ora file for the database containing the data that users will be querying (and for the database on which the EUL is installed, if different).

The tnsnames.ora and sqlnet.ora files are installed in the `ORACLE_HOME/network/admin` directory. You can update the files manually using a text editor, or use the configuration tool, Oracle Net Configuration Assistant. For more information about the configuration tool, refer to *Oracle Net Services Administrator's Guide* in the Oracle database documentation library.

4.3.1.3 Port Numbers

The installer automatically assigns ports to Oracle Business Intelligence components that require them. If the installer detects a port conflict while installing a component, it chooses an alternate port in the port number range allocated to the component.

Table 4–1 Default Port Numbers

Component	Default port number
Discoverer	Uses the same port as Oracle HTTP Server (which has a default of port 80 (on Windows) or port 7777 (on Solaris), and a port range of 7777 to 7877)

You can view and change the port numbers used by Oracle Business Intelligence components using Application Server Control. For more information about viewing and changing the port numbers used by Discoverer, refer to *Oracle Business Intelligence Discoverer Configuration Guide*.

4.3.1.4 Associating with an Oracle Application Server Infrastructure

When using Oracle Business Intelligence, the existence of an associated Oracle Application Server Infrastructure is optional. You can:

- run Oracle Business Intelligence without associating it with an Infrastructure
- associate Oracle Business Intelligence with an existing Infrastructure after installation

Note that the Oracle Application Server Infrastructure is a prerequisite for many Oracle Application Server middle tier components. If you do not associate Oracle Business Intelligence with an Oracle Application Server Infrastructure, there are a number of Oracle Business Intelligence features that you will not be able to use, including:

- Discoverer Portlet Provider and Discoverer portlets
- Single Sign-on (SSO) functionality in Discoverer
- public and private Discoverer connections (the Discoverer Connect Directly page is displayed instead)

For more information about associating Oracle Business Intelligence with an Oracle Application Server Infrastructure, refer to *Oracle Business Intelligence Discoverer Configuration Guide*.

4.3.2 Postinstallation Tasks for All Discoverer Components

Before Discoverer end users can start analyzing data, the steps in either or both the following sections must have been completed:

- Section 4.3.2.1, "How to Prepare for Multidimensional Analysis?"
- Section 4.3.2.2, "How to prepare for relational analysis"

4.3.2.1 How to Prepare for Multidimensional Analysis?

Before users can use Discoverer to query data from a multidimensional data source, the following steps must have been completed:

1. Install and prepare the database, as described in Section 4.3.2.1.1, "How to prepare an Oracle9i Release 2 Database for use with Discoverer" or Section 4.3.2.1.2, "How to prepare Oracle Database 10g Enterprise Edition for use with Discoverer".
2. Set up the data warehouse.

   If you are using Oracle Business Intelligence Warehouse Builder, see the *Oracle Warehouse Builder User's Guide*. Otherwise, see the *Oracle 9i OLAP User's Guide* (for Oracle9*i* Database) or the *Oracle OLAP Application Developer's Guide* (for Oracle Database 10*g*).

   The tasks to perform include:

   - installing the schema
   - creating appropriate metadata
   - (optional) creating an Analytic Workspace and adding content to it

- granting appropriate privileges to users (users must have SELECT privileges on the OLAP dimension tables, measures, and views)

Note that all users of Discoverer Plus OLAP have the D4OPUB role, which in turn has the OLAP_USER role. The OLAP_USER role provides access to OLAP metadata in the database.

3. Use Application Server Control to install the Discoverer Catalog on the Oracle OLAP database instance that users will connect to.

   For more information about how to install and configure the Catalog, refer to:

   - the *Oracle Business Intelligence Discoverer Configuration Guide*
   - the Application Server Control help system

4. Use Application Server Control to authorize database users (for more information, see the *Oracle Business Intelligence Discoverer Configuration Guide*).
5. Perform optional configuration tasks as appropriate (for more information, see the *Oracle Business Intelligence Discoverer Configuration Guide*).
6. Provide end users with the information required to launch Discoverer and to connect to the multidimensional data source.

   For more information about configuration and the information required by end users, see the *Oracle Business Intelligence Discoverer Configuration Guide*.

4.3.2.1.1 How to prepare an Oracle9*i* Release 2 Database for use with Discoverer Complete the following tasks to run against Oracle9*i* Release 2 Database:

1. If you have not already done so, install the Enterprise Edition of the Oracle9*i* Database, Release 2.

   - For instructions, download the *Oracle9 Installation Guide* for the appropriate platform from Oracle Technology Network:

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

   - See Section 2.4, "Database Requirements" for information on which database versions are supported.

   Note: When you install the database client, be sure to install it into a separate Oracle home directory.

2. Configure the database, following the configuration settings shown in *Best Practices for Tabular Cube Aggregation and Query Operations*. To access this document, download patch set 2529822. You must follow these configuration settings *exactly* to ensure that BI Beans works correctly and performs well. Because this document is updated as needed, check for a new version whenever you download a new patch set.
3. Define the appropriate OLAP metadata, as described in the *Oracle9i OLAP Release 2 - User's Guide*. This book is available on Oracle Technology Network (`http://www.oracle.com/technology`). You can also refer to the Help system for the OLAP management tool of Oracle Enterprise Manager, which is a tool that you use to create the metadata. As an alternative, you can create metadata using Oracle Warehouse Builder. If you do not define appropriate metadata, then you will not be able to create OLAP queries.

4.3.2.1.2 How to prepare Oracle Database 10*g* Enterprise Edition for use with Discoverer To run against Oracle Database 10*g* Enterprise Edition, complete the following tasks:

1. If you have not already done so, install Oracle Database 10*g* Enterprise Edition.

- For instructions, download the *Oracle Database 10g* Enterprise Edition *installation guide* for the appropriate platform from Oracle Technology Network:

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

- See Section 2.4, "Database Requirements" for information on which database versions are supported.
- If you are migrating an existing Discoverer Catalog to Oracle Database 10g Enterprise Edition Release 2 (10.2.0.1 and higher), then refer to Section 4.3.2.1.3, "How to migrate an existing Discoverer Catalog to Oracle Database 10g Enterprise Edition Release 2".

Note: When you install the database client, be sure to install it into a separate Oracle home directory.

2. Configure the database, following the configuration settings shown in *Best Practices for Tabular Cube Aggregation and Query Operations*. You must follow these configuration settings exactly to ensure that BI Beans works correctly and performs well. Because this document is updated as needed, check for a new version every time you download a new patch set. To access this document, download patch set 3760779.
3. Define the appropriate OLAP metadata, as described in the *Oracle OLAP Application Developer's Guide*. This book is available on Oracle Technology Network (`http://www.oracle.com/technology`). If you do not define appropriate metadata, then you will not be able to create OLAP queries. Use one of the following tools to define the metadata:
   - The OLAP management tool of Oracle Enterprise Manager. See the Help system for Oracle Enterprise Manager for information.
   - OracleBI Warehouse Builder. See the *OracleBI Warehouse Builder User's Guide* for information.
   - Analytic Workspace Manager. See the *Oracle OLAP Application Developer's Guide* for information.

4.3.2.1.3 How to migrate an existing Discoverer Catalog to Oracle Database 10g Enterprise Edition Release 2

To migrate an existing Discoverer Catalog to Oracle Database 10g Enterprise Edition Release 2 (10.2.0.1 and higher), you must update a PL/SQL package on the database server by performing the following procedure:

1. Install the patch as follows:
   a. Locate the `d4o.jar` in the following directory.

      ```
      BI_Home/sysman/webapps/emd/WEB-INF\lib
      ```

   b. Extract the bibcoreb.pls file from d4o.jar to a local directory. The jar has packing scope and will be extracted into the `oracle/dss/persistence/storagemanager/bi/scripts` directory.
2. Apply the patch as follows:
   a. At the command prompt, enter:

      ```
      cd oracle/dss/persistence/storagemanager/bi/scripts
      ```

   b. Connect to the D4OSYS schema as the D4OSYS user with sqlplus.
   c. At the sqlplus prompt, enter:

```
SQL> @bibcoreb.pls
```

This step displays the following output:

```
Package body created.
Commit complete.
```

3. Ensure that the package is valid as follows:
   a. Open a sqlplus session
   b. Enter the following SQL commands:

```
SQL> column OBJECT_NAME format a30;
SQL> column STATUS format a10;
SQL> select object_name, status from user_objects where object_name='BISM_
CORE';
```

The following display indicates that the patch has been applied successfully:

```
OBJECT_NAME          STATUS
-----------------------------------------------
BISM_CORE                  VALID
BISM_CORE                  VALID
```

4.3.2.2 How to prepare for relational analysis

Before users can use Discoverer to query data from a relational data source, they must have access to an EUL that has been created (or upgraded) using either of the following:

- the Discoverer EUL Command Line for Java (for more information, see the *Oracle Business Intelligence Discoverer EUL Command Line for Java User's Guide*)
- the version of Discoverer Administrator shipped on the Oracle Business Intelligence Tools 10*g* 10.1.2 CD-ROM/DVD (for more information, see the *Oracle Business Intelligence Discoverer Administration Guide*)

Note that if you upgrade an EUL from Discoverer version 9.0.2 or 9.0.4 (with EUL version number 5.0.x):

- the Discoverer version 10.1.2 EUL (with EUL version number 5.1.x) will overwrite (that is, destructively upgrade) the earlier EUL
- existing users cannot use Discoverer Version 9.0.x to access the EUL either during the upgrade process or after the upgrade process is completed

Therefore, create a backup of the earlier EUL before upgrading.

For more information about EUL creation and upgrade, see the *Oracle Business Intelligence Discoverer Administration Guide*.

4.3.3 Component-Specific Postinstallation Tasks

Review the component-specific postinstallation tasks and perform the tasks that apply to your installation and environment.

4.3.3.1 Postinstallation Tasks for Discoverer

This section lists post-installation tasks for Discoverer.

4.3.3.1.1 Preparing for analysis Before Discoverer end users can start analyzing data, the steps in either or both the following sections must have been completed:

- Section 4.3.2.2, "How to prepare for relational analysis"
- Section 4.3.2.1, "How to Prepare for Multidimensional Analysis?"

4.3.3.2 Postinstallation Tasks for Discoverer Viewer

This section lists post-installation tasks for Discoverer Viewer.

4.3.3.2.1 Preparing for analysis Before Discoverer end users can start analyzing data, the steps in either or both the following sections must have been completed:

- Section 4.3.3.2.3, "SMTP configuration"
- Section 4.3.3.2.2, "Workbook creation"

4.3.3.2.2 Workbook creation Discoverer Viewer end users analyze data using workbooks created using Discoverer Plus or Discoverer Desktop. At least one workbook must have already been created and be accessible before Discoverer Viewer can be used to analyze data.

4.3.3.2.3 SMTP configuration To enable end users to send Discoverer worksheets in an email message from Discoverer Viewer, you must configure the Discoverer middle tier to use an SMTP server. If you did not specify an SMTP server during installation, you can do it afterwards (for more information, see *Oracle Business Intelligence Discoverer Configuration Guide*).

4.3.3.3 Postinstallation Tasks for Discoverer Portlet Provider and Discoverer portlets

This section lists post-installation tasks for Discoverer Portlet Provider.

4.3.3.3.1 Preparing for analysis Before Discoverer end users can start analyzing data, the steps in either or both the following sections must have been completed:

- Section 4.3.3.3.2, "Associating with a Version 10.1.2 Oracle Application Server infrastructure"
- Section 4.3.3.3.3, "Registering Discoverer Portlet Provider"

4.3.3.3.2 Associating with a Version 10.1.2 Oracle Application Server infrastructure To use Discoverer Portlet Provider, Oracle Business Intelligence must be associated with an Oracle Application Server Version 10.1.2 Metadata Repository after installation. The Metadata Repository is part of the Oracle Application Server Infrastructure (for more information, see Section 4.3.1.4, "Associating with an Oracle Application Server Infrastructure" and the *Oracle Business Intelligence Discoverer Configuration Guide*).

4.3.3.3.3 Registering Discoverer Portlet Provider Before users can add Discoverer portlets to Oracle Portal pages, the Discoverer Portlet Provider must be registered with Oracle Portal (for more information, see the *OracleAS Discoverer Configuration Guide*).

4.4 Starting a Component

Before you start an Oracle Business Intelligence component, make sure you have completed the general and component-specific post-installation steps described in previous sections. Once you have completed a component's post-installation steps you can start the component, as described in the following topics:

- Section 4.4.1, "Starting Discoverer Plus"
- Section 4.4.2, "Starting Discoverer Viewer"
- Section 4.4.3, "Starting Discoverer Portlet Provider"

4.4.1 Starting Discoverer Plus

To start Discoverer Plus OLAP and Discoverer Plus Relational, do one of the following:

- Select the **Discoverer Plus** link on the Oracle Business Intelligence Welcome Page that appears at the end of installation.
- Enter the following URL in a Web browser:

  http://<*host.domain*>:<*port*>/discoverer/plus

  where:

  - <*host.domain*> is the server name and domain on which the Oracle HTTP Server is installed
  - <*port*> is the port number on which the Oracle HTTP Server is installed

  For example, http://myhost.mydomain:80/discoverer/plus.

  Note: The values of <*host.domain*> and <*port*> are shown at the end of the installation.

4.4.2 Starting Discoverer Viewer

To start Discoverer Viewer, do one of the following:

- Select the **Discoverer Viewer** link on the Oracle Business Intelligence Welcome Page that appears at the end of installation.
- Enter the following URL in a Web browser:

  http://<*host.domain*>:<*port*>/discoverer/viewer

  where:

  - <*host.domain*> is the server name and domain on which the Oracle HTTP Server is installed
  - <*port*> is the port number on which the Oracle HTTP Server is installed

  For example, http://myhost.mydomain:80/discoverer/viewer.

  Note: The values of <*host.domain*> and <*port*> are shown at the end of the installation.

4.4.3 Starting Discoverer Portlet Provider

Note: To use Discoverer Portlet Provider, Oracle Business Intelligence must be associated with an Oracle Application Server Version 10.1.2 Metadata Repository after installation. The Metadata Repository is part of the Oracle Application Server Infrastructure (for more information, see Section 4.3.1.4, "Associating with an Oracle Application Server Infrastructure" and the *Oracle Business Intelligence Discoverer Configuration Guide*).

You can confirm successful installation of Discoverer Portlet Provider by entering the following URL in a Web browser:

http://*host.domain*:*port*/discoverer/portletprovider/

where:

- *host.domain* is the server name and domain on which the Oracle HTTP Server is installed
- *port* is the port number on which the Oracle HTTP Server is installed

For example, http://myhost.mydomain:80/discoverer/portletprovider.

Note: The values of *host.domain* and *port* are shown at the end of the installation.

Before end users can create Discoverer portlets after an installation, you must first log in to Oracle Portal and register Discoverer Portlet Provider. Oracle Portal users can then create Discoverer portlets (that is, a Worksheet, List of Worksheets, or Gauges portlet). For more information, see Oracle Business Intelligence Discoverer Publishing Workbooks in Oracle Application Server Portal.

4.5 Using Samples

A number of sample workbooks are available for Discoverer. These workbooks demonstrate the features of Discoverer when querying multidimensional and relational data sources.

To use the sample workbooks:

1. Download the sample workbooks from `http://www.oracle.com/technology/products/bi/index.html`
2. Extract the files into a directory on your machine.
3. Follow the installation instructions included in the directory.

4.6 Installing and Accessing User Documentation and Help

All components have online help that is installed with the component. Refer to the online help for detailed information that describes how to use the component. In the case of Discoverer Plus, additional translated help files can be installed after an Oracle Business Intelligence installation (for more information, see Section 4.6.1, "Installing Translated Help Files for Discoverer Plus After Installation").

Some components provide additional documentation that is available on the Oracle Technology Network at `http://www.oracle.com/technology/products/bi`. This site also provides white papers, documentation updates, and other collateral.

The following Oracle Business Intelligence documentation is available on the Oracle Business Intelligence CD-ROM/DVD:

- this book (*Oracle Business Intelligence Installation Guide*)
- *Oracle Business Intelligence Release Notes*

To view the Oracle Business Intelligence documentation directly from the CD-ROM/DVD:

1. Use a Web browser to open the `index.htm` file in the `doc` directory on the CD-ROM/DVD.
2. Click a tab.
3. Click the HTML or PDF link next to a document title to see the document contents.

4.6.1 Installing Translated Help Files for Discoverer Plus After Installation

The installer installs Discoverer Plus help files for the languages you select during installation. If users need help files in additional languages that you did not select during installation, you can install the help files separately.

The Discoverer Plus help files are available as jar files in the `/extras` directory on the Oracle Business Intelligence CD-ROM/DVD. There are separate subdirectories for Discoverer Plus OLAP and Discoverer Plus Relational help files, and separate jar files for each language.

To install help files in additional languages after installing Oracle Business Intelligence:

1. Navigate to the appropriate directory on the Oracle Business Intelligence CD-ROM/DVD.

   There are separate subdirectories for Discoverer Plus OLAP and Discoverer Plus Relational, as follows:

   - for Discoverer Plus OLAP help files, navigate to the /extras/help/d4o directory
   - for Discoverer Plus Relational help files, navigate to the /extras/help/plus directory

2. Use Table 4–2 to identify the jar file(s) containing the translated help files in the required language(s).

   There are separate jar files for each language, named as follows:

   - jar files containing Discoverer Plus OLAP help files in the `/extras/help/d4o` directory have the name `d4ohelp_`*`locale_code`*`.jar`
   - jar files containing Discoverer Plus Relational help files in the `/extras/help/plus` directory have the name `plushelp_`*`locale_code`*`.jar`

   where *`locale_code`* is one of the following suffixes:

Table 4–2 List of locale code suffixes for Discoverer Plus help jar files

Locale code suffix	Language	Locale code suffix	Language
_ar	Arabic	_ko	Korean
_cs	Czech	_nl	Dutch
_da	Danish	_no	Norwegian
_de	German	_pl	Polish
_el	Greek	_pt	Portuguese
_es	Spanish	_pt_BR	Brazilian Portuguese
_es_ES	Iberian Spanish	_ro	Romanian
_fi	Finnish	_ru	Russian
_fr	French	_sk	Slovak
_fr_CA	French (Canada)	_sv	Swedish
_hu	Hungarian	_th	Thai
_it	Italian	_tr	Turkish

Table 4–2 (Cont.) List of locale code suffixes for Discoverer Plus help jar files

Locale code suffix	Language	Locale code suffix	Language
_iw	Hebrew	_zh_CN	Simplified Chinese
_ja	Japanese	_zh_TW	Traditional Chinese

3. Extract the required jar files to the `ORACLE_HOME/discoverer/plus_files/help` directory on the middle tier machine.

   Help will now be available in the additional languages.

4.6.2 Installing Additional Required Fonts After Installation

If you install a subset of languages during installation, you might not install all of the fonts required by Discoverer. If all required fonts are not installed (for example, Albany fonts ALBANWTJ.TTF, ALBANWTK.TTF), Discoverer might display some text as control characters.

The additional required fonts are stored in the `/utilities/fonts` folder on the MRUA and Utility CD-ROM or DVD.

To install additional required fonts after installing Oracle Business Intelligence:

1. Navigate to the `/utilities/fonts` directory on the MRUA and Utility CD-ROM/DVD.
2. Copy the contents of the `/utilities/fonts` directory on the MRUA and Utility CD-ROM or DVD to the `ORACLE_HOME/jdk/jre/lib/fonts` folder on the computer where Oracle Business Intelligence is being installed.

4.7 What to Do Next?

After completing the installation, you can proceed to:

- Explore an overview of Oracle Business Intelligence by navigating through the Quick Tour. To start the Quick Tour, do the following:
  - Type the following URL in a Web browser:

    http://*host.domain*:*port*/quicktour/index.htm

    where:

    * *host.domain* is the server name and domain on which the Oracle HTTP Server is installed
    * *port* is the port number on which the Oracle HTTP Server is installed

    Note: The values of *host.domain* and *port* are shown at the end of the installation.

- Read the *Oracle Business Intelligence Concepts Guide* (for more information, see Section 4.6, "Installing and Accessing User Documentation and Help").
- Read component-specific user documentation (for more information, see Section 4.6, "Installing and Accessing User Documentation and Help").
- Begin using Oracle Business Intelligence (for more information, see Section 4.4, "Starting a Component").

The Oracle Business Intelligence Welcome Page provides a convenient starting point from which to access all of these resources. To display the Oracle Business Intelligence Welcome Page, do the following:

- Type the following URL in a Web browser:

  http://<*host.domain*>

  where *host.domain* is as defined previously.

5

Deinstalling and Reinstalling Oracle Business Intelligence

This chapter contains instructions for deinstalling Oracle Business Intelligence. If you are deinstalling multiple or all components, make sure to follow the order presented in this chapter.

This chapter presents the deinstallation steps in the order that you must follow them:

- Section 5.1, "Deinstalling Oracle Business Intelligence"
- Section 5.2, "Reinstalling Oracle Business Intelligence"

5.1 Deinstalling Oracle Business Intelligence

Note: This section explains how to remove an Oracle Business Intelligence installation from a machine. If you want to remove an associated Oracle Application Server infrastructure installation, you must do that separately (for more information, see *Oracle Application Server Installation Guide*).

Always use Oracle Universal Installer to remove Oracle Business Intelligence from your computer. The following section guides you through the deinstallation process.

To deinstall Oracle Business Intelligence using the installer:

1. Terminate all Oracle services before deinstalling, as follows:
   a. Open a new console window.
   b. Navigate to the *Oracle Home*/opmn/bin directory and type the following:

      ```
      opmnctl stopall
      ```

   c. Navigate to the *Oracle Home* directory and type the following:

      ```
      emctl stop iasconsole
      ```

   d. Close the console window.
2. Start the installer following the instructions in Section 4.1, "Starting the Installer".

   The installer displays all Oracle products installed on this computer and enables you to deinstall as many products as you wish. These instructions only apply to the deinstallation of Oracle Business Intelligence.
3. At the Oracle Universal Installer Welcome screen, click **Deinstall Products**.
4. Select the Oracle home containing Oracle Business Intelligence 10*g* 10.1.2.0.2 from the list in the Inventory screen.

When available, the plus (+) or minus (-) sign before a product name enables you to expand or collapse the list of its dependent components and files.

You cannot deinstall individual components of Oracle Business Intelligence. The installer removes all of Oracle Business Intelligence even if you only select one component.

5. Make a note of the full location path to the Oracle home displayed in the Product Information box. You will need this information when you manually delete files and folders after the installer has completed.
6. When you are ready to proceed, click **Remove**.
7. At the Confirmation screen, verify the products you selected to deinstall and click **Yes** to start the deinstall process.

   Or, if you need to change your selection, click **No** to return to the Inventory screen.

   The installer displays the Remove Progress Bar for you to monitor the deinstallation process. If you want to discontinue the deinstallation, click **Cancel**, and then click **Yes** when prompted to confirm that you want to stop the deinstallation.
8. If the Deinstall Input dialog is displayed and prompts you to supply a value for secure command line, then click **OK** to continue.

   After deinstalling, the installer displays the Inventory screen again.
9. Click **Close** to exit this screen and return to the Welcome screen.
10. At the Welcome screen, click **Cancel** to exit the installer, then click **Yes** to confirm that you wish to exit.

> **Note:** At this point, a number of files associated with Oracle Business Intelligence still exist in the Oracle home directory. If Oracle Business Intelligence shares the Oracle home directory with another product (for example, Oracle Business Intelligence Tools), we recommend you do not delete any other files or directories from the Oracle home directory. If Oracle Business Intelligence does not share the Oracle home directory with any other product, you can delete the entire Oracle home directory.

11. (Optional) After reading the note, navigate to the Oracle home location you noted earlier and delete any remaining files and folders.

You have successfully deinstalled Oracle Business Intelligence.

5.2 Reinstalling Oracle Business Intelligence

The installer does not overwrite existing component installations. To completely reinstall Oracle Business Intelligence, you must first fully deinstall the product as instructed in Section 5.1, "Deinstalling Oracle Business Intelligence" and then install the product following the instructions in Chapter 4, "Installing Oracle Business Intelligence".

A

Troubleshooting

This appendix contains reference information to use in the event that you encounter errors or problems with your installation. This appendix includes the following topics:

- Section A.1, "Before You Begin"
- Section A.2, "Troubleshooting the Installation"
- Section A.3, "Using Discoverer Diagnostic and Logging Tools"

A.1 Before You Begin

Oracle recommends that you review the following before you attempt to fix problems in your Oracle Business Intelligence installation:

- Section A.1.1, "Verify Hardware and Preinstallation Requirements"
- Section A.1.2, "Read the Release Notes"

A.1.1 Verify Hardware and Preinstallation Requirements

First, review the Oracle Business Intelligence hardware and software requirements and pre-installation tasks:

- Ensure that your computer meets the hardware requirements specified in Section 2.1, "Hardware Requirements".
- Ensure that your operating system environment is supported by Oracle Business Intelligence. For a list of supported operating environments, see Section 2.2, "Software Requirements".
- Ensure that you have completed all the product-level pre-installation requirements specified at the beginning of Section 1.3, "Preinstallation Tasks".
- Ensure that you have completed all the component-level pre-installation requirements for the components you are installing. These are listed in Section 1.3.3, "Component-Specific Preinstallation Tasks".

A.1.2 Read the Release Notes

Oracle recommends reading the *Oracle Business Intelligence Release Notes* prior to installing. The *Oracle Business Intelligence Release Notes* are available:

- on the Oracle Business Intelligence CD-ROM (for more information, see Section 4.6, "Installing and Accessing User Documentation and Help")
- from the Oracle Technology Network at `http://www.oracle.com/technology/products/bi/index.html`

A.2 Troubleshooting the Installation

If you encounter an error while installing Oracle Business Intelligence, follow these steps:

- Do not exit the installer. You can find the installation log files more easily if you leave the installer running.
- Incorrect Information: If you think you have entered incorrect information on one of the installation screens, return to that screen by clicking Back until you see the screen, correct the information, then proceed with your installation.
- Copy Errors: If the installer reports an error while copying or linking files, do the following:

  1. Note the error, then review the installation logs for causes. The installation logs are in the inventory directory in the /logs subdirectory and have the following filenames:

     – installActions timestamp.log

     – oraInstall timestamp.err

     – oraInstall timestamp.out

     The string timestamp is a value that the installer adds to the filename at the start of the installation. The form of timestamp is yyyy- mm- dd_hh- mm- ss[AM | PM] where:

     – yyyy is the current year, for example 2004

     – mm is the current month number, for example 07 for July

     – dd is the current day number, for example 15 for the fifteenth

     – hh, mm, and ss are the hour, minute, and second at which the installation started

     – [AM/PM] is either AM or PM, depending on when the installation started

     The location of the inventory directory is specified during the first installation of an Oracle product on your computer. To learn more about the directory and how to find it, refer to Section 1.4.1.1, "The Installer Inventory Directory".

  2. Remove the failed installation by following the instructions in Chapter 5, "Deinstalling and Reinstalling Oracle Business Intelligence".
  3. Correct the problem that caused the error.
  4. Start the Oracle Business Intelligence installation again.

Note: To provide additional language support, you might need to install missing fonts after an Oracle Business Intelligence installation. For more information, refer to Section 4.6.2, "Installing Additional Required Fonts After Installation".

A.3 Using Discoverer Diagnostic and Logging Tools

Discoverer provides a number of diagnostic tools. For more information, refer to *Oracle Business Intelligence Discoverer Configuration Guide*.

B

Noninteractive and Silent Installation

This appendix describes the non-interactive and silent installation of Oracle Business Intelligence. The topics include:

- Section B.1, "Non-Interactive Installation"
- Section B.2, "Silent Installation"
- Section B.3, "Preinstallation"
- Section B.4, "Create the Response File"
- Section B.5, "Start the Installation"
- Section B.6, "Postinstallation"
- Section B.7, "Silent Deinstallation"

B.1 Non-Interactive Installation

Non-interactive installation of Oracle Business Intelligence is accomplished by supplying the Oracle Universal Installer with a response file. The response file is a text file containing installation settings that you want to supply to the installer.

The installer uses the variables and parameter values contained in the response file to provide answers to some or all of the installer user prompts. There is graphical output and if you have not provided responses to all of the installer prompts, you may need to enter information during the installation.

If this is a first time installation of Oracle Business Intelligence, then you must create the `oraInst.loc` file before starting. File creation is described in Section B.3, "Preinstallation". Following installation of Oracle Business Intelligence, you need to run the `root.sh` script. The `root.sh` script detects settings of environment variables and enables you to enter the full path of the local bin directory.

Use non-interactive installation of Oracle Business Intelligence when there are specific screens you want to observe during installation.

Additionally, you can use non-interactive installation when performing the Oracle Business Intelligence installation from a remote location using the command line.

B.2 Silent Installation

Silent installation of Oracle Business Intelligence is accomplished by supplying the Oracle Universal Installer with a response file and specifying the `-silent` flag on the command line. The response file is a text file.

The installer uses the variables and parameter values contained in the response file to provide answers to all the installer prompts. You include responses for all of the installer prompts in the response file. Silent installation displays no graphical output.

If this is a first time installation of Oracle Business Intelligence, you must create the `oraInst.loc` file before starting. File creation is described in Section B.3, "Preinstallation". Following installation of Oracle Business Intelligence, you need to run the `root.sh` script. The `root.sh` script detects settings of environment variables and enables you to enter the full path of the local bin directory.

Use silent installation of Oracle Business Intelligence when there are similar installations on more than one computer. Additionally, use silent install when performing the Oracle Business Intelligence installation from a remote location using the command line. Silent installation eliminates the need to monitor the Oracle Business Intelligence installation because there is no graphical output and no input by the user.

B.3 Preinstallation

If the `oraInst.loc` file does not exist on your computer, then you must create it before starting the silent and non-interactive installation of Oracle Business Intelligence.

The `oraInst.loc` file is typically stored in the `/etc` directory. It is used by the Oracle Universal Installer during installation.

As the `root` user, create the `oraInst.loc` file in the `/etc` directory. The `oracle` group is the group performing the installation.

Enter the following line of text in the `orainst.loc` file:

```
inventory_loc=/<full_path>/oraInventory
```

For example, `inventory_loc=/export/home/bi/oraInventory`.

The `oraInst.loc` file specifies `inventory_loc` location for inventory files. If the `oraInst.loc` file is not located in your Oracle home, make sure the file has read and write permission for the `oracle` group.

B.4 Create the Response File

Before silent or non-interactive installation you must provide information specific to your installation using the template response file on Disk 1 of the installation pack.

Open the Response file template `oracle.business.intelligence.as.BIServices.rsp` available in the `/Disk1/stage/Response` directory on the Oracle Business Intelligence CD-ROM, and modify it using a text editor.

> **Note:** You can also save the `oracle.business.intelligence.as.BIServices.rsp` file as a different file name, such as `my_responses.rsp`, and use the renamed file as a response file for an installation.

Definitions of response file parameters are described in response file itself.

In the response file, you must specify values for the following variables:

- COMPONENT_LANGUAGES
- FROM_LOCATION
- LOCATION_FOR_DISK1
- LOCATION_FOR_DISK2
- ORACLE_HOME
- ORACLE_HOME_NAME
- oracle.iappserver.instance:szl_InstanceInformation

Note the following:

- The installer will fail if you attempt a silent installation without appropriately configuring a response file.
- Oracle recommends specifying either "true" or "false" for Boolean parameters.

B.4.1 Example Response File

The following shows an extract from of a response file for a silent installation of Oracle Business Intelligence:

```
RESPONSEFILE_VERSION=2.2.1.0.0
UNIX_GROUP_NAME="oracleqa"
FROM_LOCATION="/home/BI_1012_Install/Disk1/stage/products.xml"
ORACLE_HOME="/home/BI_1012"
ORACLE_HOME_NAME="BI_1012"
SHOW_SPLASH_SCREEN=true
SHOW_WELCOME_PAGE=false
SHOW_COMPONENT_LOCATIONS_PAGE=false
SHOW_CUSTOM_TREE_PAGE=false
SHOW_SUMMARY_PAGE=false
SHOW_INSTALL_PROGRESS_PAGE=true
SHOW_REQUIRED_CONFIG_TOOL_PAGE=false
SHOW_CONFIG_TOOL_PAGE=false
SHOW_ROOTSH_CONFIRMATION=false
SHOW_END_SESSION_PAGE=false
SHOW_RELEASE_NOTES=false
SHOW_EXIT_CONFIRMATION=false
NEXT_SESSION=false
NEXT_SESSION_ON_FAIL=false
SHOW_DEINSTALL_CONFIRMATION=false
SHOW_DEINSTALL_PROGRESS=false
ACCEPT_LICENSE_AGREEMENT=true
TOPLEVEL_COMPONENT={"oracle.business.intelligence.as","10.1.2.0.0"}
DEINSTALL_LIST={"oracle.business.intelligence.as","10.1.2.0.0"}
DEPENDENCY_LIST={"oracle.java.j2ee.core:10.1.2.0.0"}
COMPONENT_LANGUAGES={"en","ko"}
```

B.5 Start the Installation

To make the installer use the response file, specify the location of the response file that you want to use as a parameter when starting the installer:

To perform a non-interactive installation:

```
prompt> setenv DISPLAY ias_hostname:0.0
prompt> ./runInstaller -responseFile absolute_path_and_filename
```

To perform a silent installation:

```
prompt> ./runInstaller -silent -responseFile absolute_path_and_filename
```

B.6 Postinstallation

The success or failure of non-interactive and silent installations is logged in the `installActions<time_stamp>.log` file. Additionally, the silent installation creates the `silentInstall<time_stamp>.log` file. The log files are created in the `oraInventory` directory during installation.

The `silentInstall<time_stamp>.log` file contains the following line if the installation was successful:

```
The installation of Oracle Business Intelligence 10g was successful.
```

B.7 Silent Deinstallation

You can perform a silent deinstallation of Oracle Business Intelligence by supplying a silent deinstallation parameter to the response file you used for installation. Add the following parameter to your installation response file:

```
REMOVE_HOMES={"<ORACLE_HOME to be removed>"}
```

To perform a silent deinstallation, use the `-deinstall` parameter when entering the command:

```
prompt> ./runInstaller -silent -deinstall -responseFile absolute_path_and_filename
```

C

Default Port Numbers

By default, the installer assigns port numbers to components from a set of default port numbers. This appendix contains a list of these port numbers.

If you want to use a different set of port numbers, you have to create a file called staticports.ini, in which you list the port numbers that you want to use. See Section 3.6.3, "Using Custom Port Numbers (the Static Ports Feature)" for details.

C.1 Method of Assigning Default Port Numbers

The installer assigns default port numbers to each component using the following method:

1. The installer checks if the default port number is in use. If it is not in use, the installer assigns it to the component.
2. If the default port number is already in use by an Oracle product or by any running application, the installer tries the lowest number in the port number range. It keeps trying the port numbers in the range until it finds one that is available.

C.2 Default Port Numbers

Table C–1 lists the default port numbers for components. The last column, Name in staticports.ini, specifies the component name as it appears in the `staticports.ini` file, which enables you to override the default port numbers. See Section 3.6.3, "Using Custom Port Numbers (the Static Ports Feature)" for details.

Table C–1 Default Port Numbers and Ranges (Grouped by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
Oracle Process Manager and Notification Server (OPMN)			
Oracle Notification Server Request Port	6003	6003 - 6099	`Oracle Notification Server Request port`
Oracle Notification Server Local Port	6100	6100 - 6199	`Oracle Notification Server Local port`
Oracle Notification Server Remote Port	6200	6200 - 6299	`Oracle Notification Server Remote port`
Oracle Application Server Containers for J2EE (OC4J)			

Table C–1 (Cont.) Default Port Numbers and Ranges (Grouped by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
OC4J AJP	12501	12501 - 12600	Not settable through staticports.ini
OC4J RMI	12401	12401 - 12500	Not settable through staticports.ini
JMS	12601	12601 - 12700	Not settable through staticports.ini
IIOP	13301	13301 - 13400	Not settable through staticports.ini
IIOPS1	13401	13401 - 13500	Not settable through staticports.ini
IIOPS2	13501	13501 -13600	Not settable through staticports.ini
OracleBI Discoverer			
OracleBI Discoverer	--	--	Uses the same port as Oracle HTTP Server.
OracleBI Discoverer OSAgent	16001	16001 - 16020	`Discoverer OSAgent port`
OracleAS Forms Services			
OracleAS Forms Services	Uses the same port as Oracle HTTP Server		
Oracle HTTP Server			
Oracle HTTP Server Listener (OracleAS Web Cache **not** configured)	7777	7777 - 7877	`Oracle HTTP Server Listen port`
Oracle HTTP Server Listener (SSL)	4443	4443 - 4543	`Oracle HTTP Server Listen (SSL) port`
Oracle HTTP Server Listener (non-SSL, OracleAS Web Cache configured)	7778	7777 - 7877	`Oracle HTTP Server port`
Oracle HTTP Server Listener (SSL, OracleAS Web Cache configured)	4444	4443 - 4543	`Oracle HTTP Server SSL port`
Java Object Cache	7000	7000 - 7099	`Java Object Cache port`
DCM Java Object Cache	7100	7100 - 7199	`DCM Java Object Cache port`
DCM Discovery	7100	7100-7199	`DCM Discovery port`
SOAP server	9998	9998 - 9999	Not settable through staticports.ini
Port Tunneling	7501	7501 - 7599	Not settable through staticports.ini
Oracle HTTP Server Diagnostic port	7200	7200 - 7299	`Oracle HTTP Server Diagnostic port`
OracleAS Portal			
OracleAS Portal	--	--	Uses the same port as Oracle HTTP Server.
OracleAS Single Sign-On			

Table C–1 (Cont.) Default Port Numbers and Ranges (Grouped by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
OracleAS Single Sign-On	--	--	Uses the same port as Oracle HTTP Server.
OracleAS Reports Services			
SQL*Net (for 6*i* backward compatibility only)	14040	14040 - 14049	`Reports Services SQL*Net port`
Discovery Service	14021	14021 - 14030	`Reports Services discoveryService port`
Bridge	14011	14011 - 14020	`Reports Services bridge port`
OracleAS Web Cache			
OracleAS Web Cache - HTTP Listener	7777	7777 - 7877	`Web Cache HTTP Listen port`
OracleAS Web Cache - HTTP Listener (SSL)	8250	8250 - 8350	`Web Cache HTTP Listen (SSL) port`
OracleAS Web Cache Administration	9400	9400 - 9499	`Web Cache Administration port`
OracleAS Web Cache Invalidation	9401	9400 - 9499	`Web Cache Invalidation port`
OracleAS Web Cache Statistics	9402	9400 - 9499	`Web Cache Statistics port`
OracleAS Wireless			
OracleAS Wireless	--	--	Uses the same port as Oracle HTTP Server.
Oracle Enterprise Manager 10*g* Application Server Control			
Application Server Control	1156	1156; 1810 - 1829	`Application Server Control port`
Oracle Management Agent	1157	1157; 1830 - 1849	Not settable through staticports.ini
Application Server Control - RMI	1850	1850 - 1869	`Application Server Control RMI port`
Application Server Control - SSL	1810	1810 - 1829	This port number is assigned after installation, when you configure Application Server Control for SSL. See the *Oracle Application Server Administrator's Guide* for details.
Enterprise Manager Console HTTP port (orcl)	5500		Not settable through staticports.ini
Enterprise Manager Agent port (orcl)	1831		Not settable through staticports.ini
Log Loader	44000	44000 - 44099	`Log Loader port`
Oracle Internet Directory			
Oracle Internet Directory	389	13060 - 13129	`Oracle Internet Directory port`

Table C–1 (Cont.) Default Port Numbers and Ranges (Grouped by Component)

Component	Default Port	Port Number Range	Name in staticports.ini
Oracle Internet Directory (SSL)	636 (but see the Note on page 4-13)	13130 - 13199	`Oracle Internet Directory (SSL) port`
OracleAS Certificate Authority (OCA)			
Server Authentication Virtual Host	6600	6600 - 6619	`Oracle Certificate Authority SSL Server Authentication port`
Mutual Authentication Virtual Host	6601	6600 - 6619	`Oracle Certificate Authority SSL Mutual Authentication port`

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