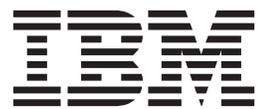


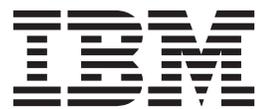
IBM FileNet Image Services
Version 4.2

*Guidelines for Installing and
Configuring Oracle Software on UNIX
Servers (Site-Controlled)*



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Version 4.2

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Servers (Site-Controlled)*



Note

Before using this information and the product it supports, read the information in "Notices" on page 89.

This edition applies to version 4.1.2 of IBM FileNet Image Services (product number 5724-R95) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About This Manual

This document, *Guidelines for Installing and Updating Oracle Software on UNIX servers for Image Services 4.2*, describes general procedures that must be followed when installing, configuring and updating Oracle relational database software on an IBM® FileNet® Image Services system. It is designed primarily for the database administrator to use when setting up Image Services configurations.

Document revision history

IS version	Date	Comment
4.2	May 2011	Initial release.

Accessing IBM FileNet Documentation

To access documentation for IBM FileNet products:

- 1 Navigate to the Information Management support page (www.ibm.com/software/data/support).
- 2 Select the appropriate IBM FileNet product from the “Select a category” list.
- 3 On the Product Support page, click **Documentation** and then click **Product Documentation**.
- 4 On the Product Documentation page, locate the document you need, then click the icon in the appropriate release column to access the document.

Conventions used in this manual

The following paragraphs discuss the ways in which we call your attention to information throughout this document.

File Paths

Since this manual is used for all UNIX platforms, an example of file path designation, where used, are given. For example:

The UNIX logo consists of the word "UNIX" in white, uppercase letters, centered within a red, parallelogram-shaped background.

/fnsw/local/sd

Console Displays

Information you see displayed at your console is shown in this document in the following manner:

```
Surface '3176' : 1 document processed
Local doc_id = '2235007' Original doc_id = '2235007'
Original ssn = '8502'
Primary copy. No tranlog copy exists.
* document successfully deleted from databases. *
* Purging pages from disk... *
* This document has been successfully purged. *
```

Cautions, Notes, and Tips

Three message types call your attention to important information:

CAUTION Signals possible damaging consequences of an action, such as loss of data or time.

Note Draws your attention to essential information you should be sure to read.

Tip Introduces an idea that might make your work easier.

IBM FileNet Education

IBM FileNet provides various forms of education. Please visit the Training and certification page on IBM's Web site at (www-306.ibm.com/software/sw-training/).

Feedback

Documentation feedback

Send comments on this publication or other IBM FileNet Image Services documentation by e-mail to comments@us.ibm.com. Be sure to include the name of the product, the version number of the product, and the name and part number of the book (if applicable). If you are commenting on specific text, include the location of the text (for example, a help topic title, a chapter and section title, a table number, or a page number).

Product consumability feedback

Help us identify product enhancements by taking a [Consumability Survey](#). The results of this comprehensive survey are used by product development teams when planning future releases. Although we are especially interested in survey responses regarding the most recent product releases, we welcome your feedback on any of our products.

The survey takes approximately 30 minutes to complete and must be completed in a single session; there is no option to save a partially completed response.

1

Guidelines for Installing and Updating Oracle 10g and 11g RDBMS Software on UNIX Servers

This document provides guidelines for installing and updating Oracle 10g Release 2 (10.2.0) and 11g Release 1 (11.1.0), and 11g Release 2 (11.2.0) relational database software for use with IBM FileNet Image Services on AIX/6000, HP-UX (HP 9000 and HP Integrity), and Sun SPARC Solaris servers.

Server Types

Perform the procedures in this document on these Image Services servers:

Root/Index - (Multi-server installation)

Root/Index/Storage Library - (Combined or Entry server install)

Application - (Running WorkFlo Queue Services,
SQL Services or VW Services)

The **Database Administrator** is responsible for installing and updating the Oracle RDBMS software. To ensure that Image Services software requirements are implemented correctly, the DBA must follow these guidelines to ensure compatibility with Image Services 4.2.

Supported Oracle RDBMS Software

Image Services supports Oracle 10g R2 with patchset 10.2.0.4, Oracle 11g R1 and Oracle 11gR2.

Oracle 10gR2

The following versions of Oracle 10g are supported:

- Oracle Database 10g Release 2 (10.2.0.1.0) for AIX-5L Based Systems (64-bit)
- Oracle Database 10g Release 2 (10.2.0.1.0) for HP-UX PA-RISC (64-bit)
- Oracle Database 10g Release 2 (10.2.0.1.0) for HP-UX Itanium
- Oracle Database 10g Release 2 (10.2.0.1.0) for Solaris Operating System (SPARC 64-bit)

Required Oracle 10g Patche Sets

- Oracle Patch Set 3 (10.0.2.0.4)

Oracle patch sets are available for download from the Oracle MetaLink Web site at: <http://www.oracle.com/support/metalink/index.html>

Oracle 11gR1

The following versions of Oracle 11gR1 are supported:

- Oracle Database 11g Release 1 (11.1.0.6) for AIX-5L Based Systems (64-bit)
- Oracle Database 11g Release 1 (11.1.0.6) for HP-UX PA-RISC (64-bit)

- Oracle Database 11g Release 1 (11.1.0.6)
for HP-UX Itanium
- Oracle Database 11g Release 1 (11.1.0.6)
for Solaris Operating System (SPARC 64-bit)

Required Oracle 11gR1 Patch Sets

No patch sets are required for Oracle 11gR1 at this time.

Required Oracle 11g Interim Patches (AIX and HP Integrity only)

AIX: Oracle Interim Patch 6800649

Prevents a core dump when Image Services connects to an Oracle 11gR1 database. See, [“Appendix B – Oracle 11gR1 Interim Patch for AIX” on page 83](#)

HP Integrity: Oracle Interim Patch 6661255

Replaces missing 32-bit libraries in \$ORACLE_HOME/lib32. See, [“Appendix C – Oracle 11gR1 Interim Patch for HP Integrity” on page 85](#)

Note Oracle Interim Patch 6800649 was intended to be included in Oracle patch set 11.1.0.7, but was not. Therefore this patch is needed on patch sets 11.1.0.6 or 11.1.0.7.

Oracle 11gR2

The following versions of Oracle 11gR2 are supported:

- Oracle Database 11g Release 2 (11.2.0.1)
for AIX-5L Based Systems (64-bit)

- Oracle Database 11g Release 2 (11.2.0.1) for HP-UX Itanium
- Oracle Database 11g Release 1 (11.2.0.1) for Solaris Operating System (SPARC 64-bit)

Required Oracle 11gR2 Patch Sets

No patch sets are required for Oracle 11gR2 at this time.

Required Oracle 11gR2 32-bit library

Oracle 11gR2 is not released with the 32-bit library \$ORACLE_HOME/lib32 that was released with previous Oracle versions. If the Oracle database is collocated with the FileNet Image Services server, it is required to have the same version of Oracle Instant Client installed.

See [**“Appendix D – Oracle 11gR2 Installation for Oracle Instant Client for Unix Servers” on page 87.**](#)

Note If the Oracle database is remote to the FileNet Image Services server, Oracle Client 32-bit is required to be installed on the Image Services server. Oracle Client 32-bit is different from Oracle Instant Client Package - Basic 32-bit, which alone is not supported.

Disk Space Requirements

Refer to Oracle documentation for information about the disk space requirements for the release you are installing.

Installing on a Local Server

To configure Oracle on the same server that will also host Image Services, see [Chapter 2, “Installation Guidelines for Servers with Local Oracle Databases,” on page 24](#) for further information.

Installing on a Remote Server

To configure a dedicated remote Oracle server and install Oracle client software on the Image Services server, see [Chapter 3, “Installation Guidelines for Remote Oracle Database Configurations,” on page 36](#) for further information.

Note FileNet Image Services supports a remote Oracle database on a Linux Server.

Updating a Local or Remote Server

Oracle 10gR2

To update an existing Image Services system to Oracle 10gR2, or to update a remote Oracle database server to Oracle 10gR2, see [Chapter 4, “Oracle 10gR2 Update Guidelines for UNIX Servers,” on page 59](#) for further information.

Oracle 11g (R1 & R2)

To update an existing Image Services system to Oracle 11g, or to update a remote Oracle database server to Oracle 11g, see [Chapter 5, “Oracle 11gR1 Update Guidelines for UNIX Servers,” on page 64](#) for further information.

Undo Segments and Rollback Segments

Oracle 10g and Oracle 11g allow you to use either rollback segments or undo segments to recreate the "before" image.

You must choose either rollback or undo segments. You cannot use both at the same time.

To use undo segments, all data is placed in an undo tablespace. Performance can be increased by using undo segments because the undo tablespace is locally managed.

The rollback data is managed via system-managed undo (SMU).

Image Services supports the undo feature only with site-controlled Oracle databases. FileNet-controlled databases will continue to use rollback segments.

Refer to Oracle documentation for further details.

2

Installation Guidelines for Servers with Local Oracle Databases

This chapter describes how to configure an Oracle database on the same server where the FileNet Image Services software will reside.

Before You Begin

Verify that the server has the appropriate version of the operating system:

- AIX 5L® (5.3, 6.1, or 7.1)
- HP-UX 11i v2 (B.11.23) or HP-UX 11i v3 (B.11.31)
- Solaris 9 or Solaris 10

Create an Oracle User and Group

Create a <dba group> and <dba user> for RDBMS administration using the appropriate system tool for your platform:

AIX**smit** (System Management Interface Tool)**HPUX****sam** (System Administration Manager)**SOL****smc** (Solaris Management Console)

Add the <dba user> to the **fnusr** group, if it exists already. Add the FileNet software user, such as **fns**w, to the <dba group>.

Group Name	Members	Group Description
fnusr	<fnsw>, root, <dba user>	FileNet User group. Members can operate any FileNet software (including COLD). All operators and administrators must belong to this group.
<dba group>	<fnsw>, <dba user>	Database Administration group.

Note The <dba group> name **dba** and the <dba user> name **oracle** are suggested but not required.

Prepare a Location for the Oracle Server Software

Create a file system for the Oracle Server software. Refer to Oracle documentation for information about the disk space requirements.

Verify Operating System Patches

After installing the appropriate operating system software, go to the IBM support page at <http://www.ibm.com/software/data/support> and refer to the Compatibility Matrix. To download this document from the IBM support page, see [“Accessing IBM FileNet Documentation” on page 14.](#)

Create an Oracle Home Directory

Within the Oracle base volume (ORACLE_BASE=/opt/oracle), create an Oracle home directory where you will install the new Oracle software.

- For Oracle 10g, create:
 /opt/oracle/product/10gR2

 (ORACLE_HOME=/opt/oracle/product/10gR2)
- For Oracle 11gR1, create:
 /opt/oracle/product/11gR1

 (ORACLE_HOME=/opt/oracle/product/11gR1)
- For Oracle 11gR2, create:
 /opt/oracle/product/11gR2

 (ORACLE_HOME=/opt/oracle/product/11gR2)

Install Oracle Server Software

- If you are installing Oracle 10R2, skip to [“Install Oracle Database 10gR2 Software” on page 26.](#)
- If you are installing Oracle 11gR1 or R2 skip to [“Install Oracle Database 11g \(R1 or R2\) Software”.](#)

Install Oracle Database 10gR2 Software

- 1 Load the first Oracle 10gR2 DVD for your operating system.
- 2 As the Oracle user, start the Oracle Universal Installer:

 runInstaller
- 3 Select the **Advanced Installation** option.
- 4 Select either the **Standard Edition** or the **Enterprise Edition** option.
 Image Services is compatible with both.

(Do not create a demo database.)

- 5 Select the **Install Software only** option.
- 6 Accept the default values for the remaining prompts and change DVDs as requested.

(There is no need to select individual products.)

Note You can ignore Warnings for patches that refer to older patch versions.

- 7 When the installation is finished, you are ready to install the patch set.
- 8 When the installation is finished, skip to **“Install the Oracle Patch Set” on page 28.**

Install Oracle Database 11g (R1 or R2) Software

- 1 Load the first Oracle 11g DVD for your operating system.
- 2 As the Oracle user, start the Oracle Universal Installer:

runInstaller

- 3 Select the **Advanced Installation** option.
- 4 Select either the **Standard Edition** or the **Enterprise Edition** option. Image Services is compatible with both.

(Do not create a demo database.)

- 5 Select the **Install Software only** option.
- 6 Accept the default values for the remaining prompts and change DVDs as requested.

(There is no need to select individual products.)

Note You can ignore Warnings for patches that refer to older patch versions.

- 7 When the installation is finished, you are ready to install the patch set.

Install the Oracle Patch Set

Install the appropriate patch set for your version of Oracle.

Oracle 10gR2

After you have installed the Oracle 10.2.0.1 software, install:

- Oracle Patch Set 3 (10.0.2.0.4)

Oracle 11gR1

No patch sets are required for Oracle 11gR1 at this time.

Required Oracle 11gR1 Interim Patches (for AIX and HP Integrity only)

AIX

An interim patch is required for AIX servers to prevent a core dump when Image Services connects to an Oracle 11gR1 database.

- Oracle Interim Patch 6800649

See [“Appendix B – Oracle 11gR1 Interim Patch for AIX” on page 83.](#)

HP Integrity

An interim patch is required for HP Integrity servers to replace missing 32-bit libraries in \$ORACLE_HOME/lib32.

- Oracle Interim Patch 6661255

See [“Appendix C – Oracle 11gR1 Interim Patch for HP Integrity” on page 85.](#)

Oracle 11gR2

No patch sets are required for Oracle 11gR2 at this time.

Required Oracle 11gR2 32-bit library

Oracle 11gR2 is not released with the 32-bit library \$ORACLE_HOME/lib32 that was released with previous Oracle versions. If the Oracle database is collocated with the FileNet Image Services server, it is required to have the same version of Oracle Instant Client installed.

See [“Appendix D – Oracle 11gR2 Installation for Oracle Instant Client for Unix Servers” on page 87.](#)

Note If the Oracle database is remote to the FileNet Image Services server, Oracle Client 32-bit is required to be installed on the server. Oracle Client 32-bit is different from Oracle Instant Client Package - Basic 32-bit, which alone is not supported.

Change Permissions for the Oracle Software

On all UNIX® platforms, for both Oracle 10g and 11gR1, enter the following command to set the access permissions:

```
$ORACLE_HOME/install/changePerm.sh
```

Create the Oracle Database

To create your new Oracle database, refer to Oracle documentation for complete information. Create the database large enough to hold the two tablespaces for IS use. You will configure them later in this chapter.

Create the Oracle data dictionary:

```
sqlplus "/ as sysdba"
SQL>@$ORACLE_HOME/rdbms/admin/catalog.sql
SQL>@$ORACLE_HOME/rdbms/admin/catproc.sql
```

Create Tablespaces for Oracle Objects

Image Services supports both local and dictionary managed tablespaces.

Two tablespaces are required for Image Service use; a third or fourth tablespace is optional.

Recommended Tablespace Names *	Minimum Tablespace Size (MB)	Tablespace Type
fnsys_ts	200	permanent
fntmp_ts	400	temporary
fnidx_ts (optional)	200	permanent
fnusr_ts (optional for WorkFlo Queue Services)	200	permanent

* **fnsys_ts** is the name of the dedicated IS default tablespace for tables.

fntmp_ts is the name of a general temporary tablespace.

fnidx_ts is the name of the optional IS index tablespace, which can be used to keep indexes separate from tables in the

fnsys_ts tablespace, if necessary. If you do not create this tablespace, tables and indexes will be kept together in fnsys_ts. **fnusr_ts** is the name of the optional IS user tablespace for WorkFlo Queue Services. If your Image Services system will not be using this product, you do not need to create this tablespace.

Tip You might want to create the fnsys_ts and fnidx_ts tablespaces on separate disks if your IS system does not include a SAN (Storage Area Network) or RAID (Redundant Array of Independent Disks).

You can name the tablespaces anything you choose, but their sizes should be at least as large as shown in the table. The FileNet SCouT (System Capacity Planning Tool) can help you determine the actual size needed for your application. Check with your IBM representative for details.

Set Oracle Environment Variables

Verify that the following environment variables are set correctly for the Oracle user, the IS software user, such as **fns**w, and optionally a user with **root** privileges:

```
ORACLE_BASE
ORACLE_HOME
NLS_LANG    (an 8-bit character set is recommended)
ORA_NLS10   (for Oracle 10g only)
ORA_NLS11   (for Oracle 11g only)
ORACLE_SID
```

To change these environment settings, you need to edit **both** the user's **.profile** **and** **.cshrc** file.

- a In the Bourne or Korn shell, edit the **.profile** file.

```
export ORACLE_BASE=/opt/oracle
export ORACLE_HOME=/opt/oracle/product/<10gR2 or11gR1>
export ORACLE_SID=<Oracle Instance Identifier>
export NLS_LANG=AMERICAN_AMERICA.WE8ISO8859P1
export ORA_NLS10=$ORACLE_HOME/nls/data
    (for Oracle 10g)
export ORA_NLS11=$ORACLE_HOME/nls/data
    (for Oracle 11g)
```

b In the C shell, edit the .cshrc file.

```
setenv ORACLE_BASE /opt/oracle
setenv ORACLE_HOME /opt/oracle/product/<10gR2 or11gR1>
setenv ORACLE_SID <Oracle Instance Identifier>
setenv NLS_LANG AMERICAN_AMERICA.WE8ISO8859P1
setenv ORA_NLS10 $ORACLE_HOME/nls/data
    (for Oracle 10g)
setenv ORA_NLS11 $ORACLE_HOME/nls/data
    (for Oracle 11g)
```

CAUTION

The NLS_LANG variable must be set correctly. This character set must be equivalent to or be a subset of the character set used for your database. This ensures that every character input through the terminal has a matching character to map to in the database.

If you need to check the character set used when the database was created, continue with the next step. Otherwise, skip to **[“Report to Sys Admin and Service Representative” on page 34.](#)**

Verify Oracle NLS Parameters

Since the database is located on the local IS server, check the Oracle NLS parameters as the Oracle user as follows:

```
sqlplus "/as sysdba"
SQL> select * from nls_database_parameters;
```

The displays looks similar to this:

PARAMETER	VALUE
NLS_LANGUAGE	AMERICAN
NLS_TERRITORY	AMERICA
NLS_CURRENCY	\$
NLS_ISO_CURRENCY	AMERICA
NLS_NUMERIC_CHARACTERS	.,
NLS_DATE_FORMAT	DD-MON-YY
NLS_DATE_LANGUAGE	AMERICAN
NLS_CHARACTERSET	WE8ISO8859P1
NLS_SORT	BINARY
NLS_CALENDAR	GREGORIAN
NLS_RDBMS_VERSION	11.1.0.6.0
11 rows selected	

Note In this example, the NLS_CHARACTERSET is set to WE8ISO8859P1 so it matches the environment setting. If the environment setting does **not** match the NLS setting in the database, the system will have issues with document security and could possibly have memory fault problems.

If this display had shown the NLS_CHARACTERSET to be US7ASCII, for example, set the NLS_LANG environment variable to US7ASCII.

For example: export NLS_LANG=AMERICAN_AMERICA.US7ASCII

or

```
setenv NLS_LANG AMERICAN_AMERICA.US7ASCII
```

Report to Sys Admin and Service Representative

Return the following information to the system administrator and your service representative.

Database Users for Image Services

Image Services requires four database users, **f_sw**, **f_sqi**, **f_open**, and **f_maint**. These users will be created on the local server during the Image Services software installation procedure. Image Services will grant specific privileges to these users, assign quotas, and temporary tablespaces.

Oracle Variables

Return the following information to the system administrator and your service representative.

Oracle Version: _____
(Oracle software version) (11.1.0.6, for example)

\$ORACLE_HOME: _____
(Oracle software directory) (/opt/oracle/product/11gR1, for example)

\$ORACLE_SID: _____
(instance identifier) (IDB, for example)

<Oracle User ID>: _____
(the Oracle administrator) (oracle, for example)

<DBA Group>: _____
(for database administration) (dba, for example)
Add the FileNet software user, such as **fns**, to this group.

Tablespace Names and Sizes

Recommended Tablespace Names	Tablespace Names You Actually Assign	Minimum Tablespace Size (MB)	Tablespace Size (MB) You Actually Create
fnsys_ts		200	
fntmp_ts		400	
fnidx_ts (optional)		200	
fnusr_ts (optional for WorkFlo Queue Services)		200	

Continue the Image Services Installation

After the Oracle software has been successfully installed, your service representative can continue with the Image Services installation in Chapter 4, “Installing FileNet Image Services Software.” of the *Image Services Installation and Configuration Procedures* for your platform.

To download this document from the IBM support page, see [**“Accessing IBM FileNet Documentation” on page 14.**](#)

Installation Guidelines for Remote Oracle Database Configurations

This chapter describes how to configure a remote Oracle database server and then configure the Image Services server as an Oracle client.

Note Remote relational databases can reside on either UNIX or Windows servers. If you are installing the remote Oracle database on a Windows server, see the *Guidelines for Installing/Updating RDBMS Software for Windows Server*, for more information. To download this document from the IBM support page, see [“Accessing IBM FileNet Documentation” on page 14](#).

Before You Begin

When the IS server and the remote Oracle server are both UNIX-based, they they must be running one of these operating systems:

- AIX 5L (5.3, 6.1, or 7.1)
- HP-UX 11i v2 (B.11.23) or HP-UX 11i v3 (B.11.31)
- Solaris 9 or Solaris 10

Prepare Locations for the Oracle Server and Client Software

On the Oracle database server, create a file system for the Oracle Server software. Refer to Oracle documentation for information about the disk space requirements.

Strategy

Before making any modifications to the Image Services server, you can configure the new Oracle server. This involves installing the same version of Oracle software that you plan to install on the Image Services server.

After installing the Oracle Server software on the new Oracle server, install the Oracle Client software on the IS server.

- To configure a **remote Oracle server** and a **FileNet Image Services Root/Index** server, continue with the following section, [**“Configure the New Oracle Server” on page 37.**](#)
- To add an Image Services **Application Server** to the configuration, skip to the section, [**“Configure the Image Services Server” on page 48.**](#)

Configure the New Oracle Server

After the new server has been set up with the appropriate version of the UNIX operating system and has been connected to the network, you can begin the Oracle configuration.

Note The use of IS Enterprise Backup and Restore (EBR) to backup a remote Oracle server is not supported by IBM.

Create an Oracle Home Directory

Within the Oracle base volume (ORACLE_BASE=/opt/oracle), create an Oracle home directory where you will install the new Oracle software.

- For Oracle 10g, you might create:
 /opt/oracle/product/10gR2

 (ORACLE_HOME=/opt/oracle/product/10gR2)
- For Oracle 11g, you might create:
 /opt/oracle/product/11gR1

 (ORACLE_HOME=/opt/oracle/product/11gR1)

Create a Directory for FileNet Use

To facilitate the installation of fix packs and test scripts, create a directory named /fnsw/oracle. For example, as the Oracle user, enter:

```
mkdir -p /fnsw/oracle
```

(After the Image Services software has been installed on the IS server, you will copy several scripts to this directory.)

Verify Oracle Environment Variables

Verify that the following environment variables are set appropriately:

```
ORACLE_BASE  
ORACLE_HOME  
NLS_LANG    (an 8-bit character set is recommended)  
ORA_NLS10   (for Oracle 10g only)  
ORA_NLS11   (for Oracle 11g only)  
ORACLE_SID
```

If you need to change any of them, use the following commands:

- In the Bourne or Korn shell:

```
export ORACLE_BASE=/opt/oracle
export ORACLE_HOME=/opt/oracle/product/<10gR2 or11gR1>
export ORACLE_SID=<Oracle Instance Identifier>
export NLS_LANG=AMERICAN_AMERICA.WE8ISO8859P1
export ORA_NLS10=$ORACLE_HOME/nls/data
      (for Oracle 10g)
export ORA_NLS11=$ORACLE_HOME/nls/data
      (for Oracle 11g)
```

- In the C shell:

```
setenv ORACLE_BASE /opt/oracle
setenv ORACLE_HOME /opt/oracle/product/<10gR2 or11gR1>
setenv ORACLE_SID <Oracle Instance Identifier>
setenv NLS_LANG AMERICAN_AMERICA.WE8ISO8859P1
setenv ORA_NLS10 $ORACLE_HOME/nls/data
      (for Oracle 10g)
setenv ORA_NLS11 $ORACLE_HOME/nls/data
      (for Oracle 11g)
```

CAUTION

The NLS_LANG variable must be set correctly. This character set must be equivalent to or be a subset of the character set used for your database. This ensures that every character input through the terminal has a matching character to map to in the database.

Verify Operating System Patches

After installing the appropriate operating system software, go to the IBM support page at <http://www.ibm.com/software/data/support> and refer to the Compatibility Matrix. To download this document from the IBM support page, see [“Accessing IBM FileNet Documentation” on page 14.](#)

Install Oracle Server Software

- If you're installing Oracle 10g, skip to [“Install Oracle 10gR2” on page 40](#).
- If you're installing Oracle 11g, skip to [“Install Oracle 11g” on page 41](#).

Install Oracle 10gR2

- 1 Load the first Oracle 10gR2 DVD for your platform.
- 2 As the Oracle user, launch the Oracle Universal Installer:

`runInstaller`
- 3 Select the **Advanced Installation** option.
- 4 Select either **Standard Edition** or the **Enterprise Edition** option. Image Services is compatible with both.

(Do not create a demo database.)
- 5 Select the **Install Software only** option.
- 6 Accept the default values for the remaining prompts and change DVDs as requested.

(There is no need to select individual products.)

Note You can ignore Warnings for patches that refer to older patch versions.

- 7 When the installation is finished, you are ready to install the patch set.
- 8 When the installation is finished, skip to [“Install the Patch Set” on page 41](#).

Install Oracle 11g

- 1 Load the first Oracle 11g DVD for your platform.
- 2 As the Oracle user, launch the Oracle Universal Installer:

runInstaller
- 3 Select the **Advanced Installation** option.
- 4 Select either **Standard Edition** or the **Enterprise Edition** option.
Image Services is compatible with both.

(Do not create a demo database.)
- 5 Select the **Install Software only** option.
- 6 Accept the default values for the remaining prompts and change DVDs as requested.

(There is no need to select individual products.)

Note You can ignore Warnings for patches that refer to older patch versions.

- 7 When the installation is finished, you are ready to install the patch set.

Install the Patch Set

Install the appropriate patch set for your version of Oracle.

Oracle 10g

After you've installed the Oracle 10.2.0.1 software, install:

- Oracle Patch Set 3 (10.0.2.0.4)

Oracle 11gR1

No patch sets are required for Oracle 11g at this time.

Required Oracle 11g Interim Patches (for AIX and HP Integrity Only)

AIX

An interim patch is required for AIX servers to prevent a core dump when Image Services connects to an Oracle 11gR1 database.

- Oracle Interim Patch 6800649

See [“Appendix B – Oracle 11gR1 Interim Patch for AIX” on page 83.](#)

HP Integrity

An interim patch is required for HP Integrity servers to replace missing 32-bit libraries in \$ORACLE_HOME/lib32.

- Oracle Interim Patch 6661255

See [“Appendix C – Oracle 11gR1 Interim Patch for HP Integrity” on page 85.](#)

Required Oracle 11gR2 32-bit library

Oracle 11gR2 is not released with the 32-bit library \$ORACLE_HOME/lib32 that was released with previous Oracle versions. If the Oracle database is collocated with the FileNet Image Services server, it is required to have the same version of Oracle Instant Client installed.

See [“Appendix D – Oracle 11gR2 Installation for Oracle Instant Client for Unix Servers” on page 87.](#)

Note If the Oracle database is remote to the FileNet Image Services server, Oracle Client 32-bit is required to be installed on the server. Oracle Client 32-bit is different from Oracle Instant Client Package - Basic 32-bit, which alone is not supported.

Change Permissions for the Oracle Software

On all UNIX platforms, for both Oracle 10g and 11g, set the access permissions:

```
$ORACLE_HOME/install/changePerm.sh
```

Create the Oracle Database

To create your new Oracle database, refer to Oracle documentation for complete information. Create the database large enough to hold the tablespaces for IS use that you will configure later in this chapter.

Create the Oracle data dictionary:

```
sqlplus "/ as sysdba"  
SQL>@$ORACLE_HOME/rdbms/admin/catalog.sql  
SQL>@$ORACLE_HOME/rdbms/admin/catproc.sql
```

Modify the SQLNET.ORA File

To prevent the Oracle server from terminating the connection to the IS server after an extended idle time, use your preferred text editor (such as **vi**) to modify the following file:

```
$ORACLE_HOME/network/admin/sqlnet.ora
```

Set the following entry to the number of minutes you want the Oracle server to wait before terminating the connection to the IS server:

```
sqlnet.expire_time = 30
```

In this example, the time delay has been set to thirty minutes.

Note Change this setting only on the Oracle database server, not on the Oracle client (Image Services) server.

Create the Database Users for Image Services

Create the following required users on the Oracle server so IS can access the database:

```
f_sw f_sqi f_open f_maint
```

Use sqlplus to create them. For example:

```
$sqlplus "/as sysdba"  
SQL> create user f_sw identified by <password>  
SQL> create user f_sqi identified by <password>  
SQL> create user f_open identified by <password>  
SQL> create user f_maint identified by <password>
```

Later on, Image Services will grant specific privileges to these users, assign quotas, and temporary tablespaces.

Create Tablespaces for IS Objects

Image Services supports both local and dictionary managed tablespaces.

A minimum of two tablespaces are required for Image Service use; a third or fourth tablespace is optional.

Recommended Tablespace Names *	Minimum Tablespace Size (MB)	Tablespace Type
fnsys_ts	200	permanent
fntmp_ts	400	temporary
fnidx_ts (optional)	200	permanent
fnusr_ts (optional for WorkFlo Queue Services)	200	permanent

* **fnsys_ts** is the name of the dedicated FileNet default tablespace for tables.

fntmp_ts is the name of the dedicated IS temporary tablespace.

fnidx_ts is the name of the optional IS index tablespace, which can be used to keep indexes separate from tables in the fnsys_ts tablespace, if necessary. If you do not create this tablespace, tables and indexes will be kept together in fnsys_ts.

fnusr_ts is the name of the optional IS user tablespace for WorkFlo Queue Services. If your Image Services system will not be using this product, you do not need to create this tablespace.

Tip Create the fnsys_ts and fnidx_ts tablespaces on separate disks if your IS system does not include a SAN (Storage Area Network) or RAID (Redundant Array of Independent Disks).

You can name the tablespaces anything you choose, but their sizes should be at least as large as shown in the table. The FileNet SCouT (System Capacity Planning Tool) utility can help you determine the actual size needed for your application. Check with your service representative for details.

Configure and Test Oracle Networking (TCP/IP)

- 1 To set up Oracle networking, create or update the following files on the Oracle server.

- tnsnames.ora
- listener.ora

Use Oracle tools to configure Oracle Networking.

To verify these files, as the Oracle user, change to the **\$ORACLE_HOME/network/admin** directory and use your preferred text editor (such as **vi**):

The tnsnames.ora File

```
# TNSNAMES.ORA Network Configuration File
# Oracle Server and Client Server

<Same name as the GLOBAL_DBNAME in the Listener.ora file> =
  for example: Michigan_IDB.filenet.com
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = <Oracle server name or IP
address>) (PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = <Same GLOBAL_DBNAME as in the Listener.ora file>)
    )
  )
```

The listener.ora File

```
# LISTENER.ORA Network Configuration File
# Oracle Server only

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS_LIST =
        (ADDRESS = (PROTOCOL = TCP) (HOST = <Oracle server name or IP
address>) (PORT = 1521))
      )
    )
  )

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = <ServerName_<oracleSID>.filenet.com> )
      Example: Michigan_IDB.filenet.com
      (ORACLE_HOME = <Oracle Server software location> )
      Example: /opt/oracle/product/10gR2
      (SID_NAME = <the SID you named your database instance> )
      FileNet default: IDB
    )
  )
)
```

2 Start the listener process:

```
lsnrctl
LSNRCTL> start
```

- 3 Verify that the internal Oracle networking is active and functional by running the Oracle loopback test on the Oracle server. Enter a sqlplus command in this format:

```
sqlplus <user>/<password>@<GLOBAL_DBNAME from  
tnsnames.ora file>
```

For example, enter:

```
sqlplus system/<system_password>@Michigan_IDB.filenet.com
```

If there are no errors, Oracle networking is working successfully. Exit from sqlplus.

Configure the Image Services Server

When the remote Oracle server is successfully configured, you can configure the Image Services server.

Note Oracle Client 32-bit is required for Image Services since Image Services is a 32-bit application and needs Oracle 32-bit shared client library to connect to the database. Oracle Instant Client Package 32-bit can not replace Oracle Client 32-bit to support Image Services.

Use the procedures in this section to configure one of the following:

- Image Services Combined server or Root/Index server,
- Image Services Application Server with WorkFlo Queue Services, SQL Services, or VWServices.

Note Configure the Combined or Root/Index server first.

When adding an Application server to the configuration, use the **same** ORACLE_SID (**IDB**, for example) and ORACLE_UID (**oracle**, for example) as the Combined or Root/Index server.

Prepare Location for Oracle Client Software

Create a file system for the Oracle Client software. The Oracle Client software requires a minimum of **1.6 GB**.

Create an Oracle Home Directory

Within the Oracle base volume (ORACLE_BASE=/opt/oracle), create an Oracle home directory where you will install the new Oracle software.

- For Oracle 10g, you might create:

`/opt/oracle/client/10gR2`

(ORACLE_HOME=/opt/oracle/client/10gR2)

- For Oracle 11gR1, you might create:

`/opt/oracle/client/11gR1`

(ORACLE_HOME=/opt/oracle/client/11gR1)

- For Oracle 11gR2, you might create:

`/opt/oracle/client/11gR2`

(ORACLE_HOME=/opt/oracle/client/11gR2)

Set Oracle Software Directory Ownership and Permissions

As a user with **root** privileges, change the ownership and access permissions for the Oracle software directory. Verify that the ownership is set to the Oracle user and the Database Administration group.

Install Oracle Client Software

- If you're installing Oracle 10g, skip to [“Install Oracle 10g” on page 50](#).
- If you're installing Oracle 11g, skip to [“Install Oracle 11g” on page 50](#).

Install Oracle 10g

- 1 Load the first Oracle 10g DVD for your platform.
- 2 As the Oracle user, launch the Oracle Universal Installer:

runInstaller
- 3 Accept the default values for the remaining prompts and change DVDs as requested.
- 4 When the installation is finished, skip to [“Install the Patch Set” on page 51](#).

Install Oracle 11g

- 1 Load the first Oracle 10g DVD for your platform.
- 2 As the Oracle user, launch the Oracle Universal Installer:

runInstaller

- 3 Accept the default values for the remaining prompts and change DVDs as requested.

Install the Patch Set

Install the appropriate patch set for your version of Oracle.

Oracle 10gR2

After you've installed the Oracle 10.2.0.1 Client 32-bit software, install:

- Oracle Patch Set 3 (10.0.2.0.4)

Oracle 11gR1

Install Oracle Client 11gR1 32-bit software. No patch sets are required for Oracle 11gR1 at this time.

Required Oracle 11gR1 Interim Patches (for AIX and HP Integrity Only)

AIX

An interim patch is required for AIX servers to prevent a core dump when Image Services connects to an Oracle 11gR1 database.

- Oracle Interim Patch 6800649

See [“Appendix B – Oracle 11gR1 Interim Patch for AIX” on page 83.](#)

Oracle 11gR2

Install Oracle Client 11gR2 32-bit software. No patch sets are required for Oracle 11gR2 at this time.

Change Permissions for the Oracle Software

On all UNIX platforms, for both Oracle 10g and 11g, set the access permissions:

```
$ORACLE_HOME/install/changePerm.sh
```

Set Oracle Environment Variables

Verify that the following environment variables are set correctly for the Oracle user, the IS software user, such as **fns**, and optionally a user with **root** privileges:

```
ORACLE_BASE
ORACLE_HOME
TWO_TASK
NLS_LANG    (an 8-bit character set is recommended)
ORA_NLS10   (for Oracle 10g only)
ORA_NLS11   (for Oracle 11g only)
ORACLE_SID
```

(The TWO_TASK variable is set to the <GLOBAL_DBNAME> set in the TNSNAMES.ORA file.)

Follow these guidelines:

Note If the **oracle** user's .profile and/or .cshrc file do not have any customized settings, run the **install_templates** command instead of directly modifying these files as described in the following steps.

To change these environment settings, edit **both** the user's .profile **and** .cshrc file.

For example:

- a In the Bourne or Korn shell, edit the .profile file.

```
export ORACLE_BASE=/opt/oracle
export ORACLE_HOME=/opt/oracle/client/<10gR2 or 11gR1>
export TWO_TASK=<GLOBAL_DBNAME from tnsnames.ora
file>
export NLS_LANG=AMERICAN_AMERICA.WE8ISO8859P1

export ORA_NLS10=$ORACLE_HOME/nls/data
           (for Oracle 10g)
export ORA_NLS11=$ORACLE_HOME/nls/data
           (for Oracle 11g)
```

- b In the C shell, edit the .cshrc file.

```
setenv ORACLE_HOME /opt/oracle/client/<10gR2 or 11gR1>

setenv TWO_TASK <GLOBAL_DBNAME from tnsnames.ora
file>

setenv NLS_LANG AMERICAN_AMERICA.WE8ISO8859P1

setenv ORA_NLS10 $ORACLE_HOME/nls/data
           (for Oracle 10g)
setenv ORA_NLS11 $ORACLE_HOME/nls/data
           (for Oracle 11g)
```

CAUTION

The NLS_LANG variable must be set correctly. This character set must be equivalent to or be a subset of the character set used for your database. This ensures that every character input through the terminal has a matching character to map to in the database.

If you need to check the character set used when the database was created on the Oracle server, continue with the next step. Otherwise, skip to **[“Prepare Location for Oracle Client Software” on page 49.](#)**

Verify Oracle NLS Parameters

On the **Oracle server**, you can check the Oracle NLS parameters by entering as the Oracle user:

```
sqlplus "/ as sysdba"
SQL> select * from nls_database_parameters;
```

The display looks similar to this:

PARAMETER	VALUE
-----	-----
NLS_LANGUAGE	AMERICAN
NLS_TERRITORY	AMERICA
NLS_CURRENCY	\$
NLS_ISO_CURRENCY	AMERICA
NLS_NUMERIC_CHARACTERS	.,
NLS_DATE_FORMAT	DD-MON-YY
NLS_DATE_LANGUAGE	AMERICAN
NLS_CHARACTERSET	WE8ISO8859P1
NLS_SORT	BINARY
NLS_CALENDAR	GREGORIAN
NLS_RDBMS_VERSION	11.1.0.6.0
11 rows selected	

Note In this example, the NLS_CHARACTERSET is set to WE8ISO8859P1 so it matches the environment setting. If the environment setting does **not** match the NLS setting in the database, the system will have issues with document security and could have memory fault problems.

If this display had shown the NLS_CHARACTERSET to be US7ASCII, for example, then you would need to set the NLS_LANG environment variable to US7ASCII.

For example:

```
export NLS_LANG=AMERICAN_AMERICA.US7ASCII
or
setenv NLS_LANG AMERICAN_AMERICA.US7ASCII
```

Copy the tnsnames.ora file onto the IS Server

Copy the **tnsnames.ora** file from the **\$ORACLE_HOME/network/admin** directory on the Oracle server to the **\$ORACLE_HOME/network/admin** directory on the FileNet Image Services server.

This ensures that the two tnsnames.ora files are identical on both servers.

Note The tnsnames.ora file on the Oracle server can describe more than one listener process if more than one independent FileNet Image Services system is configured to access the same Oracle server.

The tnsnames.ora file on the Image Services server should describe only one listener process.

On an Application server, the tnsnames.ora file should be identical to the tnsnames.ora file on the Combined or Root/Index server. That is, it should describe only one listener process.

Test Oracle Networking on the Image Services Server

Oracle Networking has already been configured and tested on the Oracle server. Now you can test the Oracle Client's ability to access the database on the remote Oracle server with the following command:

```
tnsping <GLOBAL_DBNAME>
```

where **<GLOBAL_DBNAME>** is the global database name used in the tnsnames.ora and listener.ora files. For example: Michigan_IDB.world. This verifies that the tnsnames file on the IS server can communicate successfully with the listener.ora file on the Oracle server.

To verify that you can access the Oracle database from the Image Services server, enter a sqlplus command in the following format:

```
sqlplus <user/password>@<GLOBAL_DBNAME>
```

where the user and password are the ones the Database Administrator set up earlier. For example:

```
sqlplus system/<system_password>@Michigan_IDB.filenet.com
```

You should now be logged on to the Oracle server with no errors.

Test the TWO_TASK Environment Setting

To verify the TWO_TASK environment setting, enter a sqlplus command in the following format:

```
sqlplus <user/password>
```

For example:

```
sqlplus f_sw/<f_sw password>
```

You should now be logged onto the Oracle database server via Oracle networking and the TWO_TASK environment setting, as will the Image Services software.

Exit from sqlplus.

Report to Sys Admin and Service Representative

The new Oracle server has been successfully installed and configured, and the server on which you plan to install FileNet Image Services software has been configured as an Oracle client.

Oracle Variables

Return the following information to the system administrator and your service representative.

Oracle Version: _____

(Oracle software version) (11.1.0.6, for example)

\$ORACLE_HOME: _____

(Oracle software directory) (/opt/oracle/client/11gR1, for example)

\$ORACLE_SID: _____

(instance identifier) (IDB, for example)

<Oracle User ID>: _____

(the Oracle administrator) (oracle, for example)

<DBA Group>: _____

(for database administration) (dba, for example)

The FileNet user **fns**w must be made a member of this group.

f_sw password: _____

f_sqi password: _____

f_open password: _____

f_maint password: _____

Tablespace Names

Recommended Tablespace Names	Tablespace Names You Actually Assign	Minimum Tablespace Size (MB)	Tablespace Size (MB) You Actually Create
fnsys_ts		200	
fntmp_ts		400	
fnidx_ts (optional)		200	
fnusr_ts (optional for WorkFlo Queue Services)		200	

Continue the Image Services Installation

After the Oracle software has been successfully installed, your service representative can continue with the Image Services installation in the section, “Installing FileNet Image Services Software,” of the *Image Services Installation and Configuration Procedures*.

To download this document from the IBM support page, see [**“Accessing IBM FileNet Documentation” on page 14.**](#)

4

Oracle 10gR2 Update Guidelines for UNIX Servers

The **Database Administrator** will update the Oracle RDBMS software as specified in this chapter.

This chapter covers updating both local and remote database configurations.

Operating System Considerations

Verify with the System Administrator that the server's operating system has been updated to the appropriate version and that the most recent patch sets, if any, have been installed.

Verify Operating System Patches

After installing the appropriate operating system software, go to the IBM support page at <http://www.ibm.com/software/data/support> and refer to the Compatibility Matrix. To download this document from the IBM support page, see [“Accessing IBM FileNet Documentation” on page 14.](#)

Create a New Oracle Home Directory

Within the Oracle base volume (ORACLE_BASE=/opt/oracle), create an Oracle home directory where you plan install the new Oracle software.

- For example, for Oracle 10gR2server software, you might create:
 /opt/oracle/product/10gR2

 (ORACLE_HOME=/opt/oracle/product/10gR2)
- For Oracle 10gR2 client software, you might create:
 /opt/oracle/client/10gR2

 (ORACLE_HOME=/opt/oracle/client/10gR2)

Turn Off Archive Logging (if necessary)

If Archive Logging is active on the server,turn it off before updating the Oracle software.

Turning off Archive Logging will prevent non-essential records from being written to the log file and will accelerate the update.

Install Oracle 10g Software

Refer to the Oracle documentation and the Oracle Metalink information (for registered users) on Oracle’s Web site for complete information.

- To install Oracle 10g **Server software** on an Image Services server or an independent (remote) Oracle server accessed by Image Services, continue with the next section, **“Oracle Server”**.
- To Install Oracle 10g **Client software** on an Image Services server, skip to the section, **“Oracle Client” on page 62**.

Oracle Server

Install Oracle 10g in a different ORACLE_HOME directory than your current version, for example: /opt/oracle/product/10gR2.

- 1 As the Oracle user, load the first Oracle10g DVD, and launch the Oracle Universal Installer.

runInstaller

- 2 Select the **Advanced Installation** option.
- 3 Select either the **Standard Edition** or the **Enterprise Edition** option. Image Services is compatible with both.
- 4 Select the **Update existing database** option.
- 5 Accept the default values for the remaining prompts and change DVDs as requested.

(There is no need to select individual products.)

Note You can ignore Warnings for patches that refer to older patch versions.

- 6 When the installation is finished, you are ready to install the patch set.

Install the Patch Set

After you've installed the Oracle 10.2.0.1 software, install one of the following patch sets:

- Oracle Patch Set 3 (10.0.2.0.4)

Change Permissions for the Oracle Software

On all UNIX platforms, set the access permissions:

```
$ORACLE_HOME/install/changePerm.sh
```

Turn On Archive Logging (if necessary)

If you turned off Archive Logging on the database server before updating the Oracle software, turn it on again.

When the Oracle 10g Server software has been installed successfully, continue with the next section to install the Oracle Client software.

Oracle Client

Install Oracle 10g in a different ORACLE_HOME directory than your current version, for example: /opt/oracle/client/10gR2.

- 1 As the Oracle user, load the first Oracle10g DVD, and start the Oracle Universal Installer.

runInstaller

- 2 Select the **Advanced Installation** option.
- 3 Select the **Client Software only** option.
- 4 Select the **Install Software only** option.
- 5 Accept the default values for the remaining prompts and change DVDs as requested.

(There is no need to select individual products.)

Note You can ignore Warnings for patches that refer to older patch versions.

- 6 When the installation is finished, you are ready to install the patch set.

Install the Patch Set

After you've installed the Oracle 10.2.0.1 software, install one of the following patch sets:

- Oracle Patch Set 3 (10.0.2.0.4)

Change Permissions for the Oracle

On all UNIX platforms, set the access permissions:

```
$ORACLE_HOME/install/changePerm.sh
```

Copy the tnsnames.ora File

After you've installed the Oracle 10g Client software, copy the tnsnames.ora file from its old location to the new \$ORACLE_HOME/network/admin directory.

Report to Sys Admin and Service Representative

Please return the following information to the System Administrator and your service representative.

\$ORACLE_SID: _____

(instance identifier) (IDB, for example)

Name of DBA Group: _____

(for database administration) (dba, for example)

Continue the Image Services Upgrade

After the Oracle software has been successfully installed, your service representative can continue with the Image Services Upgrade in section, "Upgrading the Image Services Software" of the *Image Services Upgrade Procedure*.

To download this document from the IBM support page, see [**"Accessing IBM FileNet Documentation" on page 14.**](#)

Oracle 11gR1 Update Guidelines for UNIX Servers

The **Database Administrator** will update the Oracle RDBMS software as specified in this chapter.

This chapter covers updating both local and remote database configurations.

Operating System Considerations

Verify with the System Administrator that the server's operating system has been updated to the appropriate version and that the most recent patch sets, if any, have been installed.

Verify Operating System Patches

After installing the appropriate operating system software, go to the IBM support page at <http://www.ibm.com/software/data/support> and refer to the Compatibility Matrix. To download this document from the IBM support page, see [“Accessing IBM FileNet Documentation” on page 14](#).

Create a New Oracle Home Directory

Within the Oracle base volume (ORACLE_BASE=/opt/oracle), create an Oracle home directory where you plan install the new Oracle software.

- For example, for Oracle 11g server software, you might create:
`/opt/oracle/product/11gR1`
(ORACLE_HOME=/opt/oracle/product/11gR1)
- For Oracle 11g client software, you might create:
`/opt/oracle/client/11gR1`
(ORACLE_HOME=/opt/oracle/client/11gR1)

Turn Off Archive Logging (if necessary)

If Archive Logging is active on the server, turn it off before updating the Oracle software.

Turning off Archive Logging will prevent non-essential records from being written to the log file and will accelerate the update.

Install Oracle 11gR1 Software

Refer to the Oracle documentation and the Oracle Metalink information (for registered users) on Oracle's Web site for complete information.

- To install Oracle 11gR1 **Server software** on an Image Services server or an independent (remote) Oracle server accessed by Image Services, continue with the next section, [“Oracle Server”](#).
- To Install Oracle 11gR1 **Client software** on an Image Services server, skip to the section, [“Oracle Client” on page 68](#).

Oracle Server

Install Oracle 11gR1 in a different ORACLE_HOME directory than your current version, for example: `/opt/oracle/product/11gR1`.

- 1 As the Oracle user, load the first Oracle11g DVD, and launch the Oracle Universal Installer.

runInstaller

- 2 Select the **Advanced Installation** option.
- 3 Select either the **Standard Edition** or the **Enterprise Edition** option. Image Services is compatible with both.
- 4 Select the **Upgrade existing database** option.
- 5 Accept the default values for the remaining prompts and change DVDs as requested.

(There is no need to select individual products.)

Note You can ignore Warnings for patches that refer to older patch versions.

- 6 When the installation is finished, you are ready to continue with the next section.

Oracle 11gR1 Patch Sets

No patch sets are required for Oracle 11gR1 at this time. However, interim patches are required for AIX and HP-UX Integrity servers.

Required Oracle 11gR1 Interim Patches

All operating systems

An interim patch to update the Oracle time zone files to version 4 is required. If you are upgrading from Oracle 9i or from a version of Oracle 10g earlier than version 10.2.0.4.

If you are upgrading from Oracle 10.2.0.4 or higher, you do not need this patch. Oracle 10.2.0.4 and higher versions already contain the correct version 4 files.

- Oracle Interim Patch 5632264

See [“Appendix A – Oracle 11gR1 Interim Patch for All Servers” on page 80.](#)

AIX only

An interim patch is required for AIX servers to prevent a core dump when Image Services connects to an Oracle 11gR1 database.

- Oracle Interim Patch 6800649

See [“Appendix B – Oracle 11gR1 Interim Patch for AIX” on page 83.](#)

HP Integrity only

An interim patch is required for HP Integrity servers to replace missing 32-bit libraries in \$ORACLE_HOME/lib32.

- Oracle Interim Patch 6661255

See [“Appendix C – Oracle 11gR1 Interim Patch for HP Integrity” on page 85.](#)

Change Permissions for the Oracle Software

On all UNIX platforms, set the access permissions:

```
$ORACLE_HOME/install/changePerm.sh
```

Turn On Archive Logging (if necessary)

If you turned off Archive Logging on the database server before updating the Oracle software, turn it on again.

When the Oracle 10g Server software has been installed successfully, skip to the section, **[“Update IS Configuration Files \(if necessary\)” on page 70.](#)**

Oracle Client

Install Oracle Client 32-bit 11gR1 in a different ORACLE_HOME directory than your current version, for example: /opt/oracle/client/11gR1.

- 1 As the Oracle user, load the first Oracle11g DVD, and launch the Oracle Universal Installer.

runInstaller

- 2 Select the **Advanced Installation** option.
- 3 Select the **Client Software only** option.
- 4 Select the **Install Software only** option.
- 5 Accept the default values for the remaining prompts and change DVDs as requested.

(There is no need to select individual products.)

Note You can ignore Warnings for patches that refer to older patch versions.

- 6 When the installation is finished, you are ready to continue with the next section.

Install the Patch Set

No patch sets are required for Oracle 11gR1 at this time.

Required Oracle 11gR1 Interim Patches

All operating systems

An interim patch to update the Oracle time zone files to version 4 is required if you are upgrading from Oracle 9i or from a version of Oracle 10g earlier than version 10.2.0.4.

If you are upgrading from Oracle 10.2.0.4 or higher, you do not need this patch. Oracle 10.2.0.4 and higher versions already contain the correct version 4 files.

- Oracle Interim Patch 5632264

See [“Appendix A – Oracle 11gR1 Interim Patch for All Servers” on page 80.](#)

AIX only

An interim patch is required for AIX servers to prevent a core dump when Image Services connects to an Oracle 11gR1 database.

- Oracle Interim Patch 6800649

See [“Appendix B – Oracle 11gR1 Interim Patch for AIX” on page 83.](#)

Copy the tnsnames.ora File

After you’ve installed the Oracle 11g Client software, copy the tnsnames.ora file from its old location to the new \$ORACLE_HOME/network/admin directory.

Update IS Configuration Files (if necessary)

You can upgrade from Oracle 10g to Oracle 11g several weeks or months after upgrading to Image Services 4.2. If you are upgrading to Oracle 11g independently of an Image Services 4.2 installation or upgrade, run **fn_setup_rdb** to update the IS configuration files and RDBMS related files.

(This step is also included in the IS 4.2 Upgrade procedures, so you do not need to run this command now if you are also upgrading to IS 4.2 at this time.)

Note If the IS system is configured with a Site-controlled relational database (on a local or on a remote database server), verify that the relational database is up before running the `fn_setup_rdb` command.

As an IS software user, such as **fns**, enter:

```
fn_setup_rdb -u
```

Report to Sys Admin and Service Representative

Please return the following information to the System Administrator and your service representative.

\$ORACLE_SID: _____
(instance identifier) (IDB, for example)

Name of DBA Group: _____
(for database administration) (dba, for example)

Continue the Image Services Upgrade

After the Oracle software has been successfully installed, your service representative can continue with the Image Services Upgrade in the section, “Upgrading the Image Services Software” of the *Image Services Upgrade Procedure*.

To download this document from the IBM support Web site, see **“Accessing IBM FileNet Documentation” on page 14.**

Appendix A – Oracle 11gR1 Interim Patch for All Servers

Applying “version 4” Time Zone Files

Oracle's time zone definitions are stored in two time zone files, time-zone.dat and timezlg.dat. From time to time these time zone files are updated and released as a new version.

You must upgrade the Oracle time zone files to version 4 before you upgrade your relational database to Oracle 11g.

Note Oracle 10.2.0.4 and higher releases already contain version 4 time zone files, but earlier Oracle 10g versions and all Oracle 9i versions do not. You must install the version 4 files before you upgrade the database to Oracle 11g,

If your current version of Oracle is 10.2.0.4 or higher, skip this appendix and return to the chapter you came from.

Download the patch file

Download Oracle patch 5632264 for your specific Oracle level and operating system, p5632264_<oracle_level>_<your_os>.zip. For example, if your current version of Oracle is 10.2.0.2 and is running on a Solaris 64-bit server, download:

p5632264_10202_SOLARIS64.zip.

Patch installation instructions:

To apply the patch, unzip the PSE container file for your Oracle level and operating system. For example:

```
unzip p5632264_10202_SOLARIS64.zip
```

Set your current directory to the directory where the patch is located:

```
cd 5632264
```

Ensure that the directory containing the `opatch` script appears in your `$PATH`; then enter the following command:

```
opatch apply
```

Patch special instructions

Ensure that all instances running under the `ORACLE_HOME` being patched are cleanly shutdown before installing this patch. Also ensure that the tool used to terminate the instances has exited cleanly.

If the Oracle inventory is not setup correctly, this utility will fail. To check accessibility to the inventory you can use the following command:

```
opatch lsinventory
```

If you have any problems installing this PSE or are not sure about inventory setup please, call Oracle support.

Now you can continue the upgrade procedure to configure Image Services as usual. Return to the chapter you came from.

Patch removal instructions

If you decide to remove the patch, use the following command:

```
cd 5632264
```

```
opatch rollback -id 5632264
```

Appendix B – Oracle 11gR1 Interim Patch for AIX

OCIEnvCreate Core Dump on \$ORACLE_HOME/lib32

An Image Services core dump occurred when IS was connected to an Oracle 11gR1 database. Oracle has provided an interim patch 6800649 (Description MAP:PERMISSION DENIED WHEN SQLPLUS IS STARTED IN SUID ENVIRONMENT WITH EUID=IUID) to fix the problem. This patch is needed on AIX platforms until the next patchset release 11.1.0.7.0 becomes available.

Patch installation instructions:

To apply the patch, unzip the PSE container file:

```
p6800649_11106_AIX64-5L.zip
```

Set your current directory to the directory where the patch is located:

```
cd 6800649
```

Ensure that the directory containing the opatch script appears in your \$PATH; then enter the following command:

```
opatch apply
```

Patch special instructions

Ensure that all instances running under the ORACLE_HOME being patched are cleanly shutdown before installing this patch. Also ensure that the tool used to terminate the instances has exited cleanly.

If the Oracle inventory is not setup correctly, this utility will fail. To check accessibility to the inventory you can use the following command:

opatch lsinventory

If you have any problems installing this PSE or are not sure about inventory setup please, call Oracle support.

Now you can continue the installation or upgrade procedure to configure Image Services as usual.

Patch removal instructions

If you decide to remove the patch, use the following command:

cd 6800649

opatch rollback -id 6800649

Appendix C – Oracle 11gR1 Interim Patch for HP Integrity

HP Integrity: 32-bit Libraries Are Not Installed

After installing Oracle11g (11.1.0.6) Enterprise Edition and Client on an HP Integrity server, there are no 32-bit libraries installed (\$ORACLE_HOME/lib32). This is reported in Oracle bug 6661255. According to Oracle, for Oracle11g and beyond, HP-UX on HP Integrity servers will no longer create \$ORACLE_HOME/lib32.

To have 32-bit applications work on HP Integrity servers, Oracle has separately released HP-UX Itanium 32-bit Instant Client software on <http://otn.oracle.com>.

To navigate to the Instant Client software downloads page, follow these steps:

- 1 Go to <http://otn.oracle.com>.
- 2 Click on **Downloads** (near the top of the page) and select "More..." from the drop down list
- 3 Click on the **Instant Client** link (within the "Database" category)
- 4 Click on the **Instant Client for HP-UX Itanium (32-bit)** link at the bottom of the list of platforms

Alternatively, the direct link is:

<http://www.oracle.com/technology/software/tech/oci/instant-client/htdocs/hpitanium32soft.html>

- 5 Download "Instant Client Package - Basic" for Version 11.1.0.6.0
- 6 Unzip the packages into \$ORACLE_HOME/lib32 as the **oracle** user or the user who installed Oracle 11gR1 software.
- 7 Make a symbolic link as **oracle** user or the user who installed Oracle 11gR1 software:


```
ln -s $ORACLE_HOME/lib32/libclntsh.so.11.1 $ORACLE_HOME/lib32/libclntsh.so
```
- 8 Now you can continue the installation or upgrade procedure to configure Image Services as usual.

Appendix D – Oracle 11gR2 Installation for Oracle Instant Client for Unix Servers

Install Instant Client Package - Basic 32-bit

After installing Oracle11gR2 there are no 32-bit libraries installed. Oracle 11gR2 is not released with the 32-bit library \$ORACLE_HOME/lib32 that was released with previous Oracle versions. On all UNIX platforms, if the Oracle database is collocated with the FileNet Image Services server, it is required to have the same version of Oracle Instant Client installed.

- 1 Download Oracle **Instant Client Package - Basic** (32-bit) for Version 11.2.0 for your specific OS.

<http://www.oracle.com/technology/software/tech/oci/instant-client/index.html> **wnload**

- 2 Unzip the **Instant Client Package** into \$ORACLE_HOME/lib32 as the Oracle user or the user who installed Oracle 11gR2 software, where \$ORACLE_HOME is the path Oracle 11gR2 software is installed.
- 3 For **Solaris** and **HP-UX** platforms, make a soft link to \$ORACLE_HOME/lib32/libclntsh.so.11.1:

```
cd $ORACLE_HOME/lib32
ln -s libclntsh.so.11.1 libclntsh.so
```

Note It is important to run `fn_setup_rdb -f` (for fresh installations) or `fn_setup_rdb -u` (for upgrades) after the Oracle database is setup/upgraded.

Note It is also important to update `.profile` or `.cshrc` to reflect the new `ORACLE_HOME` for IS users on UNIX platforms.

- 4 Now you can continue the installation or upgrade procedure to configure Image Services as usual.

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