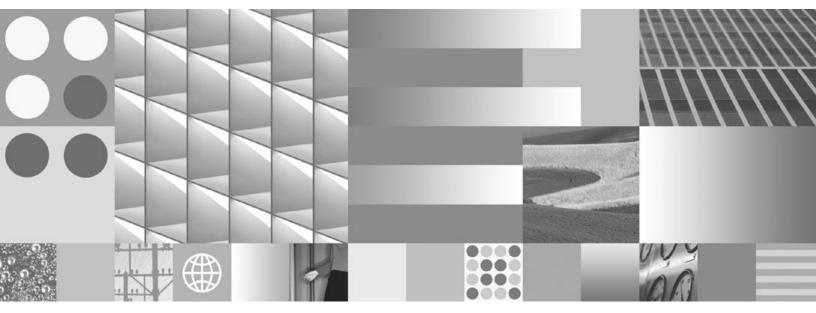IBM FileNet Image Services

Version 4.1
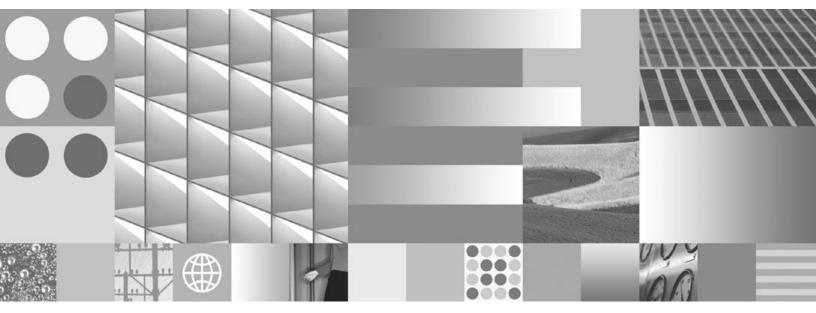
Oracle 10g Installation Procedures (FileNet-Controlled)

IBM FileNet Image Services

Version 4.1

Oracle 10g Installation Procedures (FileNet-Controlled)

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About This Manual

This document provides procedures and guidelines for installing and upgrading Oracle 10g software in a FileNet-controlled environment for IBM® FileNet® Image Services (IS) systems on both UNIX® and Windows® Server platforms.

Important Before installing or upgrading the Oracle software on your IS system, read this document to familiarize yourself with the tasks you will need to perform.

Audience

This manual is written for IS System Administrators and support personnel. We assume that you are familiar with the IS Application Executive (Xapex), which includes Storage Library Control, Background Job Control, and Database Maintenance, as well as the IS System Configuration Editor. We also assume that you are familiar with your operating system environment and workstation operations.

Document revision history

IS version	Date	Comment
4.1	July 2008	Refined upgrade instructions in Chapter 2. Expanded the instructions for downloading the readiness scripts.
4.1	June 2008	Incorporated CSS edits.
4.1	March 2008	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 From the Product Support page, click **Product Documentation** under Learn.

4 From the Product Documentation page:

a If necessary, click the Doc Link for the appropriate component product to display the document list.

b Click the icon in the appropriate release column to access the document you need.

Conventions Used in this Manual

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

Typing Instructions

To indicate commands, values, or other information you enter at your keyboard, we use the following indentation and typeface:

help [CSM_exim]

Screen Displays

Windows and screen examples shown in the procedures in this document are from Windows servers. These windows and screens could look different on UNIX servers.

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. *
```

Observe Cautions, Important Notes, Notes, and Tips

Important information and warnings appear in cautions, important notes, notes, and tips. Read these items carefully:

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

Important Gives added emphasis to notes that contain particularly vital information that must not be skipped over. While all the information in each section is important, these notes are especially important.

Note	Draws your attention to essential information you should read.

Tip	Introduces an idea that might make your work easier.

Command Syntax

Command syntax definitions are indented:

ddexim –e > <filename>

Optional Parameters

Optional parameters and keywords are within square brackets:

ddexim [–e] > <filename>

Required Parameters

Parameters that require you to provide information are shown within angle brackets (< >).

For example, for the following command:

ddexim –e > <filename>

you must substitute the name of a command for the parameter in angle brackets, such as:

ddexim –e > myfile

Comments and Suggestions

Send your comments 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 chapter and section title, a table number, a page number, or a help topic title).

1

Installing and Upgrading Oracle 10g Software

This chapter explains how to install Oracle 10g software for a FileNet-controlled RDBMS on IBM® FileNet® Image Services 4.1 servers.

Server Types Perform the sections in this document only on the:

Root/Index server during a DUAL server installation.

Root/Index/Storage Library server during a Combined or Entry server installation.

Application server during a WorkFlo Queue Services or SQL Services installation.

Do not install relational database software on Storage Library servers or on Application servers that will not be using WorkFlo Queue Services or SQL services.

Tip The procedures in this section require that you enter commands as a user with **root** privileges, a FileNet sofware user such as **fnsw**, and an **oracle** user. To simplify, open three terminal windows and logon as a different user in each window.

Note Throughout this document, you will see references using **/opt/oracle/product/10gR2** as a file system home directory, **oracle** as a user (and also as a directory), and **dba** as a group. This document uses /opt/

oracle/product/10gR2, oracle, and dba only as examples. Use file systems, groups, directories, and users on your system in place of the examples.

Supported Operating System Software

The following operating systems are supported:

- AIX 5L (5.2 and 5.3 with IS 4.1 and higher)
  (6.1 with IS 4.1.1 and higher)

- HP-UX 11i v1 (B.11.11) and HP-UX 11i v2 (B.11.23)

- Solaris 9 and Solaris 10

- Windows Server 2003 and Windows Server 2003 R2 (with IS 4.1 and higher)
  Windows Server 2005 (with IS 4.1.1 and higher)

Supported Oracle10g RDBMS Software

The following versions of Oracle10g are supported:

- Oracle Database 10g Release 2 (10.2.0.1.0)
  for AIX-Based 5L 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)

- Oracle Database 10g Release 2 (10.2.0.1.0)
  for Microsoft Windows (32-bit)

Required Oracle 10g Patches

Also required is:

• Oracle Patch Set 1 (10.0.2.0.2) or higher

The Oracle patch set is supplied by IBM FileNet.

Required Oracle 10g Interim Patches (for AIX and Solaris Only)

This patch is included in Oracle patch sets higher than 10.0.2.0.2. If you install a higher Oracle patch set, check to see if this patch is included:

• Oracle Interim Patch **5087548**

This Oracle patch is also supplied by IBM FileNet.

Installation Prerequisites

Follow the guidelines in the section, "Installation Prerequisites" in Chapter 1 of the Image Services 4.1 installation procedure for your platform:

• *Installation and Configuration Procedures for AIX/6000*

• *Installation and Configuration Procedures for HP-UX (HP 9000 and HP Integrity)*

• *Installation and Configuration Procedures for Solaris*

• *Installation and Configuration Procedures for Windows Server*

To download these manuals from the IBM support page, see **"Accessing IBM FileNet Documentation" on page 11**.

Upgrade Prerequisites

If you're upgrading from Oracle 8i or Oracle 9i, you must verify that the current version of Oracle is:

- Oracle 8.1.7.4

- Oracle 9.2.0.4 or higher

Follow the guidelines in the section, "Upgrade Prerequisites" in Chapter 1 of the Image Services 4.1 upgrade procedure for your platform:

- *Image Services Upgrade Procedures for AIX/6000*

- *Image Services Upgrade Procedures for HP-UX (HP 9000 and HP Integrity)*

- *Image Services Upgrade Procedures for Solaris*

- *Image Services Upgrade Procedures for Windows Server*

To download these manuals from the IBM support page, see **"Accessing IBM FileNet Documentation" on page 11**.

Create Users and Groups for fresh installations

If you are installing Oracle on the server for the first time, create a Database Administrator group (such as **dba**) containing an Oracle user (such as **oracle**) using the appropriate system tool for your platform:

AIX   **smit** (System Management Interface Tool)

HPUX   **sam** (System Administration Manager)

SOL   **smc** (Solaris Management Console)

WIN   **User Profiles tab on the System control panel**

Also create an **fnusr** group containing a FileNet software user, such as **fnsw**. (Consult with the System Administrator to decide on an appropriate FileNet software user name.)

Add the <dba user> to the **fnusr** group, and add the FileNet software user, such as **fnsw**, 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

For both fresh installations and upgrades, create a file system for the new Oracle Server software. The Oracle Server software requires a **minimum** of:

	Free Space for Oracle Software	Free Space for Database
AIX/6000	**3.0 GB**	**1.2 GB**
HP-UX (HP 9000)	**2.5 GB**	**1.2 GB**

	Free Space for Oracle Software	Free Space for Database
HP-UX (HP Integrity)	**5.0 GB**	**1.2 GB**
Solaris	**3.5 GB**	**1.2 GB**
Windows	**2.0 GB**	**1.2 GB**

The volume names, mount points, user and group names in these tables are only examples. You can name them anything you choose.

AIX/6000

Volume Name	Mount Point	Minimum Size	Actual Size You Create	User Name	Group Name	Mode
orabase1 (Server)	/opt/oracle	**3.0 GB**		oracle	dba	755
oratmp ***	/oratmp	**400 MB**		oracle	dba	755

HP-UX (HP 9000 and HP Integrity)

Volume Name	Mount Point	Minimum Size	Actual Size You Create	User Name	Group Name	Mode
orabase1 (Server)	/opt/oracle	**5.0 GB**		oracle	dba	755
oratmp ***	/oratmp	**400 MB**		oracle	dba	755

Solaris

Volume Name	Mount Point	Minimum Size	Actual Size You Create	User Name	Group Name	Mode
orabase1 (Server)	/opt/oracle	**3500m**		oracle	dba	755
oratmp ***	/oratmp	**400m**		oracle	dba	755

> * The oratmp file system is used for temporary space during the Oracle software installation. It can be removed at the end of this procedure.

Windows

The Windows operating system does not use logical volumes. Oracle requires **2 GB** for the Oracle 10g software, **1.2 GB** for datasets, and **500 MB** for temporary space.

The temporary space is required for decompressing Oracle files from the media onto the c: drive, and is only needed temporarily. These files are automatically deleted when the installation is finished. If desired, you can move this space to another drive by setting the TEMP variable.

To check your free disk space, open the Windows Explorer, right click on the drive where you plan to install your FileNet or RDBMS software, and choose Properties.

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 example:

- For Oracle 10g, you might create:

    /opt/oracle/product/10gR2

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

Set Oracle Directory Ownership and Permissions

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

Note On Solaris servers, use the Volume Manager to verify that the user and group ownership and the access permissions (mode) are set appropriately as shown in the table in the previous subsection.

If the access permissions are not correct, change them using this syntax:

    chown -R <Oracle user>:<DBA group> <path>
    chmod -R 775 <path>

For example, if the Oracle software is going to be located in /usr/ora/10g, enter commands similar to these:

chown -R oracle:dba /opt/oracle/product/10gR2
chmod -R 775 /opt/oracle/product/10gR2

Upgrade from an earlier version of Oracle

- If you are performing an **upgrade** from Oracle 8i or 9i, skip to **Chapter 2, "Upgrade to Oracle 10g Release 2," on page 28**.

- If you are performing a **fresh installation** of Oracle 10g on this server, continue with the next section.

Set the Environment Variables on UNIX Servers

If you're installing Oracle on a Windows server, skip to **"Install the Oracle 10.2.0.1.0 Software" on page 24**.

1 As the **oracle** user, verify the environment variables ORACLE_HOME and ORACLE_SID are set correctly.

   echo $ORACLE_HOME
   echo $ORACLE_SID

2 ORACLE_HOME must point to the location of the Oracle 10.2.0 software, and ORACLE_SID must be IDB, for example. To change them:

- For Bourne or Korn shell, enter:

     export ORACLE_HOME=<Oracle Home Directory>
     export ORACLE_SID=<Oracle Site Identifier>

- For C shell, enter:

     setenv ORACLE_HOME <Oracle Home Directory>
     setenv ORACLE_SID <Oracle Site Identifier>

3 Verify that the DISPLAY environment variable is set.

- For Bourne or Korn shell, enter:

     export DISPLAY=<host_identifier>:0

- For C shell, enter:

     setenv DISPLAY <host_identifier>:0

where <host_identifier> is either the server name or its IP address.

Install the Oracle 10.2.0.1.0 Software

This section provides information on installing **Oracle Database 10g Enterprise Edition, version 10.2.0.1.0.** The Oracle 10g media is composed of multiple DVDs.

Load the Oracle 10g Software Media

1   Insert into the DVD drive and use the appropriate command to mount the first Oracle 10g DVD, if necessary.

AIX   •   On AIX servers, insert the first DVD into the drive and enter:

mount -rv cdrfs /dev/cd0 /dvd

HPUX   •   On HP-UX servers, insert the first DVD into the drive and enter a command similar to this:

/usr/sbin/mount -F cdfs -o rr /dev/dsk/cxtydz /dvd

In this exapmle, /dvd is the disc mount point directory and /dev/dsk/cxtydz is the device name for the disc device, for example /dev/dsk/c0t2d0.

SOL   •   On Solaris servers, insert the first DVD. The DVD mounts automatically.

WIN   •   On Windows servers, insert the DVD. (There is just one DVD for Oracle 10g on Windows.) The DVD mounts automatically.

Launch the Oracle Universal Installer

1   As **oracle** user, log into the root directory and launch the Oracle Universal Installer by entering:

AIX • On AIX servers:

> **cd /**
> **/dvd/runInstaller**

HPUX • On HP-UX servers:

> **cd /**
> **/dvd/runInstaller**

SOL • On Solaris servers:

> **cd /**
> **/dvd/dvd0/runInstaller**

WIN • On Windows servers:

> **<drive>:\runinstaller**

Important DO NOT change directories onto the DVD to run the Oracle installer. If you're logged onto the DVD, you won't be able to change disks when requested.

2 On the **Inventory** screen, enter the location where the base files are to be installed, such as /opt/oracle/product/10gR2.

3 On the **UNIX Group** screen, select the group that will have admin access, such as dba.

4 On the **root.sh** screen, run /tmp/oraRoot.sh before continuing with the installation.

5 At the File Locations screen, verify the destination directory is correct (such as, /opt/oracle/product/10gR2).

6 On the Available Products screen, select **Advanced Installation**.

7 On the Installation Types screen, select either:

- **Enterprise Edition**
- **Standard Edition**

Tip Image Services is compatible with both; however, Enterprise Edition is recommended.

8 Select the **Install Software only** option. (Do not create a demo database.)

9 Accept the default values for the remaining prompts.

10 On UNIX servers, when the Oracle Installer is finished installing products from Disk 1, the Disk Location screen displays and prompts you to insert Disk 2.

a   As a user with **root** privileges, unmount or eject the current DVD.

b   Remove Disk 1 and insert Disk 2 into the DVD drive.

c   As soon as the second DVD is mounted, click **OK** on the Disk Location screen.

The Oracle Universal Installer continues installing products.

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

11 When the Oracle software installation is successful, return to the **oracle** user's home directory and unmount/eject the final Oracle DVD.

Install the Oracle Patch Set

Click the appropriate link below for the Oracle patch set instructions for your specific Image Services platform:

- **Chapter 3, "AIX/6000," on page 41**
- **Chapter 4, "HP-UX (HP 9000)," on page 46**
- **Chapter 5, "HP-UX (HP Integrity)," on page 51**
- **Chapter 6, "Solaris," on page 56**
- **Chapter 7, "Windows Server," on page 61**

2
Upgrade to Oracle 10g Release 2

This chapter covers upgrading local Oracle database configurations from Oracle 8.1.7.4 or Oracle 9.2.0.4 to Oracle 10.0.2.0.2.

Important   Follow the steps in this chapter **after** you have upgraded the Image Services software to IS 4.1.

Skip Chapter 3 of the *IS Upgrade Procedure* for your operating system.

When you get to the section "Additional Relational Database Tasks" in Chapter 4 of the upgrade procedure, come back to this document to install the Oracle 10g software.

Install the Oracle 10g software

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

Verify the current Oracle release

Verify that the current version of Oracle is:

- Oracle **8.1.7.4** (for IS 3.6.x)

- Oracle **9.2.0.4** or higher (for IS 4.0.x or higher)

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 10g server software, create:

/opt/oracle/product/10gR2

Launch the Oracle installer

Install Oracle 10g in the ORACLE_HOME directory you created in the previous section.

1 Launch the Oracle Universal Installer:

UNIX On UNIX servers:

As the **oracle** user, make sure the Oracle10g media has been downloaded to your server or that the DVD media is loaded, and launch the Oracle Universal Installer.

Important On AIX servers coming from IS 3.6.0, you must change the AIX operating system from 32-bit to 64-bit before running the installer.

runInstaller

WIN On Windows servers:

If you received the Oracle10g software on DVD media, the Oracle Universal Installer starts automatically when you load the DVD. If the installer does not start automatically, or if you downloaded the

media, use Windows Explorer to navigate to the location of the software and click Setup.

2   Select the **Advanced Installation** option.

3   Select the **Enterprise Edition** option.

(Do not create a demo database.)

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   Leave the ORACLE_HOME variable set to the current location of the Oracle 8i or Oracle 9i software.

Download the Readiness and Rollback segment scripts

Before you upgrade the IS index database to Oracle 10gR2, you must run the Oracle 10gR2 utility to check the database and make sure it is ready for the upgrade. This Oracle utility and a FileNet utility to expand rollback segments are available for download on the IBM Web site.

Important   When you run the following scripts on an Oracle 8I system, the server must be running in 32-bit mode.

1   On the IBM Web site, navigate to the Information Management Product Fulfillment page and sign in with your IBM ID and password.

2   In the next window, select FileNet Products, and click **Continue**.

3   Verify your Business Contact Information, and click **Submit**.

4   In the Entitlement area of the subsequent window, enter your access key. Click **Submit**.

5   From the list of FileNet Products, select **Oracle 10g Pre-Upgrade Prep Scripts**. Scroll to the bottom of the window and click **Continue**.

6   Select either the .tar file or the .zip file:

UNIX   **ora10g_preupgradeprep.tar**

WIN   **ora10g_preupgradeprep.zip**

7   View the license agreement. If you choose to continue the download, select **I agree** and click **I confirm** to complete the download.

8   Expand the downloaded file to extract the two scripts inside:

   utlu102i.sql – This Oracle script determines the readiness of your databases for the upgrade to Oracle 10g. Copy this script to /fnsw/local/tmp on a UNIX server, or to \fnsw_loc\tmp on a Windows server.

   fn_oraaltrbs8.sql – This FileNet script extends the size of Oracle rollback segments, if necessary. Copy this script to /fnsw/oracle on a UNIX server, or to \fnsw\oracle on a Windows server.

Run the Oracle readiness utility

1 As the FileNet software user, such as **fnsw**, enter the following comand to start the Oracle software:

fn_util startrdb

2 As either the **fnsw** user or the **oracle** user, run the readiness utility. (The following is a UNIX example.)

Note ORACLE_HOME should be set to the location of the current Oracle 8i software.

$sqlplus "/as sysdba"

SQL>**spool /tmp/utlu102i.out**

SQL>**@/tmp/utlu102i.sql**

SQL>**exit**

3 Check the output file /tmp/utlu102i.out for any warnings and failures, and fix the problems appropriately.

a If some tablespaces need to be extended for a successful upgrade, refer to IS Upgrade manuals for the specific platform for the fn_edit procedures to add a datafile to the specific tablespace.

b If the rollback segments need to be extended, run the following script as the **fnsw** user:

UNIX   **$sqlplus @/fnsw/oracle/fn_oraaltrbs8.sql**

WIN   **$sqlplus @C:\fnsw\oracle\fn_oraaltrbs8.sql**

Verify the oratab file (UNIX servers only)

Make sure the IDB instance is listed in the oratab file so the Oracle tools can identify the instances that need to be upgraded. The location of oratab is different for different platforms:

AIX
HPUX

On AIX and HP-UX servers:

/etc/oratab

SOL

On Solaris servers:

/var/opt/oracle/oratab

For example, verify that the following entries are in oratab:

*:/usr/ora/817:N
IDB:/usr/ora/817:N

where IDB is the $ORACLE_SID and
/usr/ora/817 is the current $ORACLE_HOME

Create a raw partition for the SYSAUX tablespace (UNIX servers only)

1 Use your operating system tools to create a new raw partition for the SYSAUX tablespace. The new raw partition must be at least **500 MB**.

2 After the raw partition has been created, use the chmod tool to set the access permissions for the partition:

chmod 664 SYSAUX

3 Then change to the /fnsw/dev/1 directory:

cd /fnsw/dev/1

4 Link the new partition to /fnsw/dev/1. For example:

AIX **In -s /dev/rSYSAUX SYSAUX**

HPUX **In -s /dev/fnvg/SYSAUX SYSAUX**

SOL **In -s /dev/vx/rdsk/fndg/SYSAUX SYSAUX**

Update the ORACLE_HOME Location

1 Use the inst_templates tool to set the ORACLE_HOME variable to the location of Oracle 10gR2 software, such as /opt/oracle/product/10gR2.

As the FileNet software user, enter:

/fnsw/etc/inst_templates

2 Accept the defaults for each prompt until you are asked to enter the relational database home directory. Enter the location of the Oracle 10gR2 software, such as /opt/oracle/product/10gR2.

```
Enter the relational database home directory [...]: /opt/oracle/product/10gR2
```

Accept the default values for the remaining prompts.

3 When inst_templates is finished, log out as the FileNet software user and log back in to put the templates into effect.

Upgrade the Index database

Turn off Archive Logging (if necessary)

If Archive Logging is active on the server, turn it off before updating the Oracle database to prevent non-essential records from being written to the log file. Turning off Archive Logging will help the upgrade run faster.

Stop the Image Services Software

1   As the FileNet software user, such as **fnsw,** shut down the FileNet Image Services software by entering:

      initfnsw -y stop

2   Kill all remaining FileNet processes by entering:

UNIX   **killfnsw -DAy**

WIN   **killfnsw -Dy**

The -D option terminates FileNet daemons (such as TM_daemon). Normally, the TM_daemon process continues to run after IS is stopped, but occasionally, it is necessary toterminate TM_daemon too.

The -A option removes all IPC segments. (UNIX only)

The -y option automatically answers Yes to subsequent **killfnsw** prompts.

Launch the Oracle Database Upgrade Assistant

Upgrade the index database for Oracle 10gR2. Select the defaults for each prompt, unless indicated in the following steps.

1 Change to the new ORACLE_HOME directory and launch the Oracle database upgrade assistant:

cd $ORACLE_HOME/bin

dbua

2 During the index database upgrade, you are prompted for the path name of the initialization parameter file. Enter:

/fnsw/local/oracle/init.ora

3 Click **Yes** to continue when you see the warning of CONNECT role changes.

4 When you are prompted for creating SYSAUX tablespace, enter the path /fnsw/dev/1.

- Click "Reuse Existing File Name"
- Keep the default size of 500 MB
- Clear the check box, "Automatically extend datafile when full"

5 When you are prompted for configure the database with OEM, select "Use Database Control for Database Management."

6 Enter passwords for DBSNMP and SYSMAN.

7 When the Oracle database upgrade assistant is finished, check the log files in the following directory and ensure that there are no errors:

$ORACLE_HOME/cfgtoollogs/dbua

8 Start the database and verify that it starts successfully:

fn_util startrdb

9 Then shutdown the database again:

fn_util stoprdb

Install the Oracle 10gR2 (10.0.2.0.2) patch set

Click the appropriate link below for the Oracle patch set instructions for your specific Image Services operating system:

- **Chapter 3, "AIX/6000," on page 41**
- **Chapter 4, "HP-UX (HP 9000)," on page 46**
- **Chapter 5, "HP-UX (HP Integrity)," on page 51**
- **Chapter 6, "Solaris," on page 56**
- **Chapter 7, "Windows Server," on page 61**

After you have finished installing the patch set, and interim patch for AIX and Solaris, return to this section.

Test the Oracle database

1 Start the database and verify that it starts successfully:

fn_util startrdb

2 Then shutdown the database again:

fn_util stoprdb

Add the SYSAUX tablespace to the IS configuration (UNIX and Windows)

Use the IS configuration editor, fn_edit, to add the SYSAUX tablespace to the IS configuration.

1 Launch the IS configuration editor:

fn_edit &

2 On the Relational Databases tab, select the Oracle subtab.

a Verify that the Version Number field is set correctly. Change the value in this field to reflect the newly installed Oracle version. For example:

10.2.0.2

b Also verify that the Oracle Home field contains the correct path to the Oracle 10g software. For example:

/opt/oracle/product/10gR2

3 Select the Procedures tab.

a Choose the procedure "Create an Optional Relational DB Dataset."

b When you are prompted to select the dataset type to create, choose "Oracle sysaux tablespace."

c When you are prompted to enter the dataset path, enter:

/fnsw/dev/1/SYSAUX

d When you are prompted to enter the dataset size, enter the size of the raw partition you created earlier, such as 500 MB.

4   After you have added the new dataset to the configuration, exit from fn_edit and save your changes.

5   Run fn_build to regenerate the IS system configuration files.

   fn_build -a

6   Then run fn_util to update the relational database.

   fn_util updaterdb

7   Start both the IS and Oracle software together by entering:

   Initfnsw start

Update IS Configuration Files

You can upgrade from Oracle 9i to Oracle 10g several weeks or months after upgrading to Image Services 4.1. If you are upgrading to Oracle 10g independently of an Image Services 4.1 installation or upgrade, you must run **fn_setup_rdb** to update the IS configuration files and RDBMS related files.

(This step is also included in the IS 4.1 installation and upgrade procedures, so you do not need to run this command now if you are also also upgrading to IS 4.1 at this time.)

Note   Verify that the relational database is up before running the fn_setup_ rdb command.

As the FileNet software user, such as **fnsw**, enter:

   fn_setup_rdb -u

You will be prompted to enter the passwords for the four IS database users, fn_sw, f_sqi, f_open, and f_maint.

Continue with the Image Services upgrade

If you are upgrading the Oracle software in conjunction with an Image Services software upgrade, continue with the section, "Additional Relational Database Tasks" in Chapter 4, "Upgrading the Image Services Software" of the appropriate *IS Upgrade Procedure* for your operating system. To download these manuals from the IBM support page, see **"Accessing IBM FileNet Documentation" on page 11**.

3
AIX/6000

Prepare to Install the Patch Set

Load the Oracle Patch Set 10.0.2.0.2 DVD

1   Insert the FileNet DVD containing the 10.0.2.0.2 Patch Set for Oracle Database Server AIX-5L Based.

2   Mount the DVD using this command syntax:

mount -rv cdrfs <device_name> <mount_point>

a   If you're not sure of the DVD <device_name>, enter the following command:

lsdev -C l grep cd

The DVD device name will be similar to **/dev/dvd0**.

b   The <mount_point> is a directory on the server. If a /dvd directory does not already exist on the server for this purpose, enter:

mkdir /dvd

Then, enter the mount command similar to this example:

mount -rv cdrfs /dev/dvd0 /dvd

Set Environment Variables

1 As the **oracle** user, verify that the environment variables ORACLE_
HOME and ORACLE_SID are set correctly.

> **echo $ORACLE_HOME**
> **echo $ORACLE_SID**

2 ORACLE_HOME must point to the location of the Oracle 10.2.0 soft-
ware, and ORACE_SID must be IDB, for example. To change them:

- For Bourne or Korn shell, enter:

   > **export ORACLE_HOME=<Oracle Home Directory>**
   > **export ORACLE_SID=<Oracle Site Identifier>**

- For C shell, enter:

   > **setenv ORACLE_HOME <Oracle Home Directory>**
   > **setenv ORACLE_SID <Oracle Site Identifier>**

3 Verify that the DISPLAY environment variable is set.

- For Bourne or Korn shell, enter:

   > **export DISPLAY=<host_identifier>:0**

- For C shell, enter:

   > **setenv DISPLAY <host_identifier>:0**

where <host_identifier> is either the server name or its IP address.

4 Use the Oracle Universal Installer to install the Patch Set as described
in the next section.

Launch the Oracle Universal Installer

1   As **oracle** user, enter the following command to launch the installer:

   ./dvd/runInstaller

2   On the File Locations screen in the **Source...** entry field, click the **Browse...** button and navigate to the *stage* directory located on the DVD. (The **stage** directory is located under the Disk1/ sub-directory on the DVD.)

3   Select the products.jar file.
   The products file will be read and the installer will load the product definitions. The products to be loaded are displayed on the Summary screen.

4   When you're prompted to select either the Oracle Universal Installer or the Oracle Patch Set, select:

   Oracle10gR2 10.0.2.0.2.0 Patch Set

5   Verify the products listed on the Summary screen.

Note   Disregard the amount of space shown as Required. It assumes that all products will be installed, and is **not** accurate for this update. The amount of space you actually need is much less.

6   On the Summary screen, click **Install**. Expect the installation to take about an hour.

7   If you encounter problems writing to a file during the installation process, as shown below, change the permissions for the Oracle libraries and binaries.

   Error in writing to file /opt/oracle/product/10gR2/...

- To add write permission for the owner of a file, enter:

   chmod u+w <filename>

- To change the ownership of a file, enter:

   chown oracle:dba <filename>

- To rename a file, enter:

   mv <filename> <newfilename>

After you have made the appropriate change, click **Retry** on the Error screen to continue.

8 When the installer prompts you to run the root.sh script, open a new X window and log on as a user with **root** privileges to run $ORACLE_ HOME/root.sh.

Accept the default values at any prompts you receive.

9 After the installation has completed successfully, use the following command to unmount Disk1.

   umount /dvd

Install the Interim Patch

Use the Oracle opatch utility to install:

Interim Patch **5087548**

The interim patch is available from FileNet on DVD.

a As a user with **root** privileges, mount the interim patch DVD.

b Create a temporary directory for the patch:

   mkdir /tmp/5087548

c   Copy the contents of the DVD into the temporary directory.

d   As the Oracle user, change to the temporary directory.

    cd /tmp/5087548

e   Apply the interim patch:

    $ORACLE_HOME/OPatch/opatch apply

Change Permissions for the Oracle Software
Set the access permissions:

    $ORACLE_HOME/install/changePerm.sh

Continue with the installation or upgrade

Installation

If you are performing a fresh installation of Oracle and Image Services software on a new server, you are now ready to install the Image Services software.

Refer to the Image Services 4.1 *Installation and Configuration Procedures for AIX/6000*. To download this manual from the IBM support page, see **"Accessing IBM FileNet Documentation" on page 11**.

Upgrade

If you are upgrading the Oracle software on an exisiting IS system, return to the section, **"Test the Oracle database" on page 37** in Chapter 2.

4
HP-UX (HP 9000)

Prepare to Install the Patch Set

Create a Temporary File System

1   Use SAM to create a temporary file system named /ora10g_p. This file
system must be **600 MB** or larger.

2   Give this new file system universal access privileges:

   chmod 777 /ora10g_p

Load the Oracle Patch Set 10.0.2.0.2 DVD

1   Insert the FileNet DVD containing the 10.0.2.0.2 Patch Set for Oracle
Database Server HP-UX PA-RISC.

2   As a user with **root** privileges, mount the DVD device on the /dvd
directory by entering a command similar to the following:

   mount /dev/dsk/c2t2d0 /dvd

where **/dev/dsk/c2t2d0** is the DVD device file name.

3   Change to the new file system and extract the Patch Set archive file
from the DVD. Enter:

   cd /ora10g_p
   cpio -idcmv < /dvd/10202_hpunix_Release.cpio

Set Environment Variables

As the **oracle** user, verify that the environment variables ORACLE_
HOME and ORACLE_SID are set correctly.

echo $ORACLE_HOME
echo $ORACLE_SID

ORACLE_HOME must point to the location of the Oracle 9.2.0 soft-
ware, and ORACE_SID must be unchanged, such as IDB.

- For Bourne or Korn shell, enter:

    export ORACLE_HOME=<Oracle Home Directory>
    export ORACLE_SID=<Oracle Site Identifier>

- For C shell, enter:

    setenv ORACLE_HOME <Oracle Home Directory>
    setenv ORACLE_SID <Oracle Site Identifier>

4 Verify that the DISPLAY environment variable is set.

- For Bourne or Korn shell, enter:

    export DISPLAY=<host_identifier>:0

- For C shell, enter:

    setenv DISPLAY <host_identifier>:0

where <host_identifier> is either the server name or its IP address.

5 Use the Oracle Universal Installer to install the Patch Set as described
in the next section.

Launch the Oracle Universal Installer

1   Change to the $ORACLE_HOME/bin directory where the Oracle Universal Installer is located.

For example:

cd /opt/oracle/product/10gR2/bin

2   Start the installer from the appropriate directory on your server:

./runInstaller

3   On the File Locations screen, click **Browse** for the Source... entry field and navigate to the *stage* directory where it was copied onto the server's hard drive.

4   Select the products.jar file.
The products file will be read and the installer will load the product definitions. The products to be loaded are displayed on the Summary screen.

5   At the prompt to select either the Oracle Universal Installer or the Oracle Patch Set, select:

Oracle10gR2 10.0.2.0.2.0 Patch Set

6   Verify the products listed on the Summary screen.

Note   Disregard the amount of space shown as Required. It assumes that all products will be installed, and is **not** accurate for this update. The amount of space you actually need is much less.

7 On the Summary screen, click **Install**. Expect the installation to take about an hour.

8 If you encounter problems writing to a file during the installation process, change the permissions for the Oracle libraries and binaries.

Error in writing to file /opt/oracle/product/10gR2/...

• To add write permission for the owner of a file, enter:

chmod u+w <filename>

• To change the ownership of a file, enter:

chown oracle:dba <filename>

• To rename a file, enter:

mv <filename> <newfilename>

After you've made the appropriate change, click **Retry** on the Error screen to continue.

9 At the prompt to run the root.sh script, open a new X window and log on as **root** user to run $ORACLE_HOME/root.sh.

Accept the default values at any prompts you receive.

10 After the installation has completed successfully, click **Exit** and confirm to exit the installer.

Change Permissions for the Oracle Software

Set the access permissions by entering:

$ORACLE_HOME/install/changePerm.sh

Continue with the installation or upgrade

Installation

If you are performing a fresh installation of Oracle and Image Services software on a new server, you are now ready to install the Image Services software.

Refer to the Image Services 4.1 *Installation and Configuration Procedures for HP-UX*. To download this manual from the IBM support page, see **"Accessing IBM FileNet Documentation" on page 11**.

Upgrade

If you are upgrading the Oracle software on an exisiting IS system, return to the section, **"Test the Oracle database" on page 37** in Chapter 2.

5
HP-UX (HP Integrity)

Prepare to Install the Patch Set

Load the Oracle Patch Set 10.0.2.0.2 DVD-ROM

1 Insert the FileNet DVD containing the 10.0.2.0.2 Patch Set for Oracle Database Server HP-UX Itanium.

2 As a user with **root** privileges, mount the DVD-ROM device on the /dvd directory by entering a command similar to the following:

> **mount /dev/dsk/c2t2d0 /dvd**

where **/dev/dsk/c2t2d0** is the DVD-ROM device file name.

Set Environment Variables

1 As the **oracle** user, verify that the environment variables ORACLE_HOME and ORACLE_SID are set correctly.

> **echo $ORACLE_HOME**
> **echo $ORACLE_SID**

ORACLE_HOME must point to the location of the Oracle 10.2.0 software, and ORACE_SID must be unchanged; IDB, for example.

- For Bourne or Korn shell, enter:

   export ORACLE_HOME=<Oracle Home Directory>
   export ORACLE_SID=<Oracle Site Identifier>

- For C shell, enter:

   setenv ORACLE_HOME <Oracle Home Directory>
   setenv ORACLE_SID <Oracle Site Identifier>

2   Verify that the DISPLAY environment variable is set.

- For Bourne or Korn shell, enter:

   export DISPLAY=<host_identifier>:0

- For C shell, enter:

   setenv DISPLAY <host_identifier>:0

where <host_identifier> is either the server name or its IP address.

3   Use the Oracle Universal Installer to install the Patch Set as described in the next section.

Launch the Oracle Universal Installer

1   Start the installer from the appropriate directory on your server:

   /dvd/Disk1/runInstaller

2   On the Specify File Locations screen, click the **Browse** button for the Source entry field and navigate to the *stage* directory where it was copied onto the server's hard drive.

3   Select the products.xml file.
   The products file will be read and the installer will load the product def-

initions. The products to be loaded are displayed on the Summary screen.

4   At the prompt to select either the Oracle Universal Installer or the Oracle Precompilers, select:

Oracle10gR2 Patchset 10.0.2.0.2.0

5   Verify the products listed on the Summary screen.

Note	Disregard the amount of space shown as Required. It assumes that all products will be installed, and is **not** accurate for this update. The amount of space you actually need is much less.

6   On the Summary screen, click **Install**. Expect the installation to take about an hour.

7   If you encounter problems writing to a file during the installation process, change the permissions for the Oracle libraries and binaries.

Error in writing to file /opt/oracle/product/10gR2/...

• To add write permission for the owner of a file, enter:

chmod u+w <filename>

• To change the ownership of a file, enter:

chown oracle:dba <filename>

• To rename a file, enter:

mv <filename> <newfilename>

After you've made the appropriate change, click **Retry** on the Error screen to continue.

8   At the prompt to run the root.sh script, open a new X window and log on as a user with **root** privileges to run $ORACLE_HOME/root.sh.

Accept the default values at any prompts you receive.

Change Permissions for the Oracle Software
Set the access permissions by entering:

$ORACLE_HOME/install/changePerm.sh

Continue with the installation or upgrade

Installation

If you are performing a fresh installation of Oracle and Image Services software on a new server, you are now ready to install the Image Services software.

Refer to the Image Services 4.1 *Installation and Configuration Procedures for HP-UX on HP Integrity Servers*. To download this manual from the IBM support page, see **"Accessing IBM FileNet Documentation" on page 11**.

Upgrade

If you are upgrading the Oracle software on an exisiting IS system, return to the section, **"Test the Oracle database" on page 37** in Chapter 2.

6
Solaris

Prepare to Install the Patch Set

Create a Temporary File System

1   Create a temporary file system named /ora10g_p. This file system must be **900 MB** or larger.

2   Give this new file system universal access privileges:

   chmod 777 /ora10g_p

Load the Oracle Patch Set 10.0.2.0.2 DVD

Insert the DVD containing the 10.0.2.0.2 Patch Set for Oracle Database Server Solaris Operating System (SPARC 64-bit). The DVD mounts automatically.

Set Environment Variables

1   As the **oracle** user, verify that the environment variables ORACLE_HOME and ORACLE_SID are set correctly.

   echo $ORACLE_HOME
   echo $ORACLE_SID

ORACLE_HOME must point to the location of the Oracle 10g software, and ORACE_SID must be unchanged, such as IDB.

- For Bourne or Korn shell, enter:

    export ORACLE_HOME=<Oracle Home Directory>
    export ORACLE_SID=<Oracle Site Identifier>

- For C shell, enter:

    setenv ORACLE_HOME <Oracle Home Directory>
    setenv ORACLE_SID <Oracle Site Identifier>

2 Change to the $ORACLE_HOME/bin directory where the Oracle Universal Installer is located.

For example:

    cd /opt/oracle/product/10gR2/bin

3 Verify that the DISPLAY environment variable is set.

- For Bourne or Korn shell, enter:

    export DISPLAY=<host_identifier>:0

- For C shell, enter:

    setenv DISPLAY <host_identifier>:0

where <host_identifier> is either the server name or its IP address.

4 Use the Oracle Universal Installer to install the Patch Set as described in the next section.

Launch the Oracle Universal Installer

1 Start the installer from the appropriate directory on your server:

  ./runInstaller

2 On the File Locations screen at the **Source...** entry field, click **Browse...** and navigate to the *stage* directory located on the DVD. (The *stage* directory is located under the Disk1/ sub-directory on the DVD.)

3 Select the products.jar file.
The products file will be read and the installer will load the product definitions. The products to be loaded will be displayed.

4 At the prompt to select either the Oracle Universal Installer or the Oracle Patch Set, select:

  Oracle10iR2 10.0.2.0.2.0 Patch Set

5 Verify the products listed on the Summary screen.

Note Disregard the amount of space shown as Required. It assumes that all products will be installed, and is **not** accurate for this update. The amount of space you actually need is much less.

6 On the Summary screen, click **Install**. Expect the installation to take about an hour.

7 If you encounter problems writing to a file during the installation process, change the permissions for the Oracle libraries and binaries.

  Error in writing to file /opt/oracle/product/10gR2/...

- To add write permission for the owner of a file, enter:

     chmod u+w <filename>

- To change the ownership of a file, enter:

     chown oracle:dba <filename>

- To rename a file, enter:

     mv <filename> <newfilename>

After you have made the appropriate change, click **Retry** on the Error screen to continue.

8   At the prompt to run the root.sh script, open a new X window and log on as a user with **root** privileges to run $ORACLE_HOME/root.sh.

Accept the default values at any prompts you receive.

Install the Interim Patch

Use the Oracle opatch utility to install:

Interim Patch **5087548**

The interim patch is available from FileNet on DVD.

a   As a user with **root** privileges, mount the interim patch DVD.

b   Create a temporary directory for the patch:

     mkdir /tmp/5087548

c   Copy the contents of the DVD into the temporary directory.

d   As the Oracle user, change to the temporary directory.

cd /tmp/5087548

e   Apply the interim patch:

$ORACLE_HOME/OPatch/opatch apply

Change Permissions for the Oracle Software
Set the access permissions:

$ORACLE_HOME/install/changePerm.sh

Continue with the installation or upgrade

Installation

If you are performing a fresh installation of Oracle and Image Services software on a new server, you are now ready to install the Image Services software.

Refer to the Image Services 4.1 *Installation and Configuration Procedures for Solaris*. To download this manual from the IBM support page, see **"Accessing IBM FileNet Documentation" on page 11**.

Upgrade

If you are upgrading the Oracle software on an exisiting IS system, return to the section, **"Test the Oracle database" on page 37** in Chapter 2.

7
Windows Server

Prepare to Install the Patch Set

1   Insert the DVD containing the 10.0.2.0.2 Patch Set for Oracle Database Server Microsoft Windows (32-bit) into the DVD drive.

2   Unzip the Patch Set file from the DVD onto the server's hard drive.

Launch the Oracle Universal Installer

1   Open a Command Prompt window and change to the following directory:

      <drive>:\<unzip_directory>\Disk1

2   Start the Patch Set installer:

      setup

3   In the File Locations dialog box in the Source...entry field, click **Browse** to navigate to the Stage directory.

Tip   The Stage directory is located in the following directory structure:
      <drive>:\<unzip_directory>\Disk1\

4   Select the products.jar file.

5   Verify the products listed and click **Install**.

Tip   If a write error occurs, rename the noted file and select the retry option.

6   When the installation is complete, reboot the Oracle server and log on as Windows **Administrator** or a user with **Administrator** privileges.

Continue with the installation or upgrade

Installation

If you are performing a fresh installation of Oracle and Image Services software on a new server, you are now ready to install the Image Services software.

Refer to the Image Services 4.1 *Installation and Configuration Procedures for Windows Server*. To download this manual from the IBM support page, see **"Accessing IBM FileNet Documentation" on page 11**.

Upgrade

If you are upgrading the Oracle software on an exisiting IS system, return to the section, **"Test the Oracle database" on page 37** in Chapter 2.

Appendix A – Defining Additional RDB Objects

A brand new Image Services system has a basic set of default objects. Defining additional RDB objects allows you to customize the data layout of your relational database. The object name, in conjunction with the location, tells the Image Services software where in the database that object (or group of objects) is to be created.

An object can be a table like doctaba, a retrieval key (rdb index) like f_docnumber, or a whole group of objects like everything created from WFL, queues, workspaces, etc. The scope of the RDB object depends on how the RDB object name is formatted or built.

It's very important to build the object name string correctly. When the Image Services software is directed to create an RDB object (WFL queue, table, etc.), it dynamically builds a string that must exactly match the one that is defined in the object name column. The Image Services software searches the configuration database for a matching RDB_Object to find the location of the object. If it's not found, the search continues for the location of the parent object.

RDB Object Name Basic Syntax

The object name is a multi-part character string, separated by periods. Its maximum length is 255 characters plus a null terminator. The object name is built in a hierarchy where all names begin with fn_data. For example:

Object name format:

   fn_data[.services_name[.subname1[.subname2[.subname3]]]]

fn_data.services_name.subname1.subname2 is the parent of
.subname3
fn_data.services_name.subname1 is the parent of .subname2
fn_data.services_name is the parent of .subname1

Note   Not all services support all the subnames. See the following examples.

Index Services Example

To have the Image Services software create all index services tables
and indexes in a specific location in your database, define an RDB
Object using the following name:

fn_data.INXdb

Then, to have the Image Services software create doctaba in its own
location, define the object name as:

fn_data.INXdb.doctaba

To have the Image Services software create a specific index (retrieval
key) in its own location, define the object name as one of the following
examples:

fn_data.INXdb.doctaba.f_docnumber
fn_data.INXdb.table_name.index_name

WFL Services Example

To have the Image Services software create all WQS Database Objects in one location, you would define an RDB Object with the following object name:

fn_data.WFLdb

Then, to create an index (retrieval key) of a queue in its own location, you would enter:

fn_data.WFLdb.Workspace_name.queue_name.index_name

VW Services Example

The object name is composed of the following values:

For VW queues:

For indexes:

fn_data.vw.region<region#>.server<server#>. queue.<logical_queue_table_name>.<logical_index_ name>

For base data sets:

fn_data.vw.region<region#>.server<server#>. queue.<logical_queue_table_name>

For VW rosters (indexes and base data set):

For indexes:

**fn_data.vw.region<region#>.server<server#>.
roster.DefaultWCTable.<logical_index_name>**

For base data sets:

**fn_data.vw.region<region#>.server<server#>.
roster.DefaultWCTable**

For all other VW tables:

For indexes

**fn_data.vw.region<region#>.server<server#>.
table.<table_name>.<index_name>**

For base data sets:

**fn_data.vw.region<region#>.server<server#>.
table.<table_name>**

Key In the previous examples:

<region#> is the isolated region number>
<server#> is the VW server number.
<logical_queue_table_name> is the name of the table for the
    queue as specified in Composer.
<table_name> is the actual table name.
<index_name> is the actual index name.

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