Image Services

Update Procedure for HP-UX

Release 4.0.0

9844073-001

May 2003

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1
Getting Started

This procedure describes how to use the FileNet Wizard Update to update an HP 9000 Series 800 Business Server (HP 9000/800) from the following versions of FileNet Image Services software using the FileNet Wizard Update:

- IDMIS 3.5.0 with Oracle 8.0.6

- Image Services 3.6 with Oracle 8.1.7

to release 4.0.0 of FileNet Image Services for 64-bit HP-UX 11i and 64-bit Oracle 9i Release 2 (9.2.0) of RDBMS software.

Note If your FileNet system has a different version of FileNet software, you should update to one of these versions Image Services and the associated version of Oracle before continuing with this procedure.

Required Skills

Please read this entire document from start to finish before performing the update so you'll know what to expect as you go along. This procedure assumes you are familiar with these topics:

- UNIX and HP-UX operating system commands
- A text editor such as **vi**
- SAM, HP's System Administration Manager
- Oracle Database Administration

Documentation Conventions

We have tried to make this procedure easy to follow, whether you're a new or experienced technician. The organization and format of this procedure are designed to clarify the tasks you are about to perform.

To familiarize yourself with the conventions used in this document and for other general information, link to the ***Doc_Conventions*** file on the Image Services 4.0.0 documentation CD.

End User License Agreement

Please take a few moments to read the ***End User License Agreement***, which is on the Image Services 4.0.0 documentation CD. By installing the Image Services 4.0.0 software, the customer agrees to be bound by the terms of this agreement.

New Features of the Image Services 4.0.0 Update

This release of Image Services software includes major improvements in the ease and flexibility of updating to the new release. Please read the following sections carefully.

MSAR Storage Library

The Magnetic Storage and Retrieval (MSAR) storage library is a new feature that has been added to FileNet Image Services in this release. It provides high speed and high capacity storage libraries on magnetic disk media instead of using optical media or large magnetic disk caches (Cache-only systems). For information, refer to the *MSAR Procedures and Guidelines* document.

Oracle9i RDBMS Software

Oracle9i Enterprise Edition 9.2.0 (64-bit) is the only supported Oracle version for FileNet-controlled Oracle installations. (Site-controlled installations can also use Oracle Standard software.) The Oracle9i

software is supplied on four CD-ROMs, which require **3.7 GB** of free space for installation.

Note The Oracle9i CD-ROM media is not supplied by FileNet.

Oracle9i Media Must Be Copied onto the Server

To minimize mounting and unmounting CDs during the update, the Wizard expects to the Oracle media to be copied onto the server's hard drive, or mounted remotely. Copying the Oracle9i media onto the server requires an additional **3 GB** of free space. Specific instructions for copying the media onto the server are provided before you run the Wizard with the Upgrade option.

Wizard Update Overview

The Wizard assesses the server and determines the update steps required. One of three update "tracks" can be taken. These tracks for your server depend on the following two factors:

- If Oracle is not present on the server, the Wizard will skip the Oracle steps altogether and go on to install Image Services 4.0.0.

- If Oracle9i (64-bit) is already present on the server, the Wizard will skip the Oracle steps and go on to install Image Services 4.0.0.

- If Oracle is installed on the server, the Wizard will verify that the Oracle version is appropriate to begin the update, update the Oracle software to version 9.2.0, and continue on to install Image Services 4.0.0.

Wizard Flowchart

The following flowchart outlines the general steps the Wizard may take to update your software.

Note The flowchart illustrates the events which occur in a single pass of the Wizard. It does not take into account any operating system contingencies.

CAUTION   If you are updating Image Services software in a multiple server environment, make sure you perform the Image Services update on the **Root server** first!
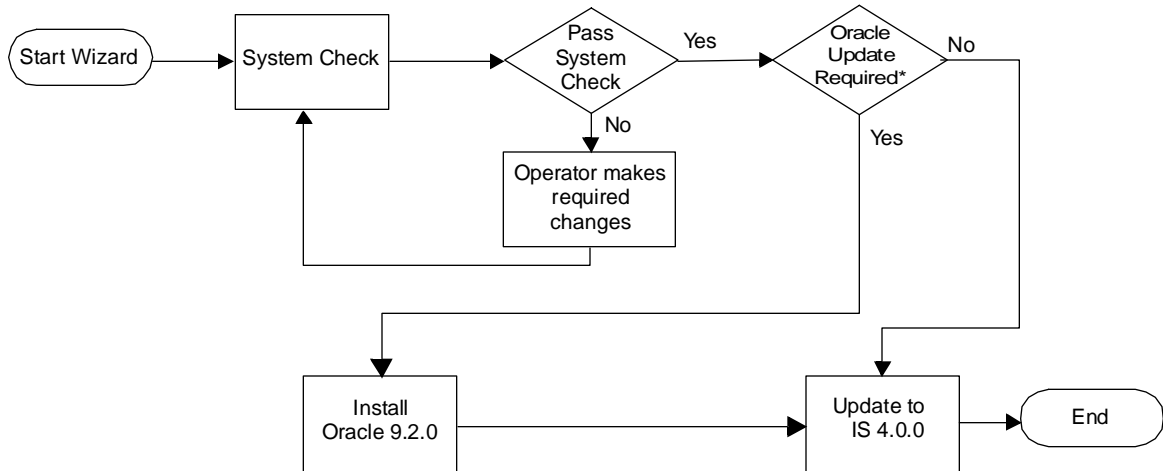
*If Oracle is Site-controlled,
the Oracle update must be
executed manually.

Update Event Logs

Events specific to the Wizard Update will be sent to:

/fnsw/local/logs/wizard/yyyymmdd_hhmm.log

Events specific to the Wizard System Check will be sent to:

/fnsw/local/logs/wizard/SysChk_yyyymmdd_hhmm
  and
/fnsw/local/logs/wizard/yyyymmdd_hhmm.log

Troubleshooting the Wizard

The Wizard event log provides information on how the Wizard pro-
gressed. Instructions on how to read the event log as well as general
troubleshooting are found in **"Appendix D – Troubleshooting the
Wizard" on page 259** for further details.

Restarting the Wizard

The Wizard tracks checkpoints throughout the update process. If you should exit the update for whatever reason, the Wizard will remember the last checkpoint you reached. This allows you to resume the update from that checkpoint. See **"Appendix D – Troubleshooting the Wizard" on page 259** for further details on steps you need to take to restart the Wizard.

Manual/Separate Oracle Installation (Site-Controlled Only)

If your site requires a manual, non-automated Oracle update, it's up to the Database Administrator to perform the update. The Database Administrators of **Site-controlled Oracle installations** should refer to the *Guidelines for Installing and Updating Oracle Software for UNIX Servers* for information they need to provide to the System Administrator and FileNet Technical Consultant for this update.

Update Paths to Image Services 4.0.0

Because of the variety of possible system configurations, several update scenarios have been developed to simplify the update process.

Important! Servers running HP-UX 10.20, HP-UX 11.0, or HP-UX 11i (32 bit) are required to run the Wizard System Check **BEFORE** upgrading to HP-UX 11i (64-bit). After all the System Check prerequisites have been met, the server can be updated to HP-UX 11i (64-bit).

Updating to HP-UX 11i (64-bit)

If a server is currently running HP-UX 10.20, HP-UX 11.0, or HP-UX 11i (32-bit), you need to run the Wizard System Check in both production mode and non-production mode before you upgrade the operating system to HP-UX 11i (64-bit). After you've run the System Check as many times as necessary to resolve all the Update prerequisites, there should be only two remaining issues to resolve: that you need to upgrade to HP-UX 11i (64-bit), and that you need to either install Oracle 9.2.0 or copy the media onto the hard drive.

Then you can upgrade to HP-UX 11i (64-bit), and proceed with the Wizard Update.

Note   Oracle9i for HP requires 64-bit HP-UX operating system and hardware. If the current servers use 32-bit processors, it will be necessary to install to new servers with 64-bit processors, see the *Guidelines for Updating HP-UX Systems from 32- to 64-bit Hardware (FileNet-Controlled Oracle Only)*, which is available by request from the FileNet Upgrade/Install Assurance Team.

CAUTION   This document **does not** include instructions for updating the HP-UX operating system. Contact your HP representative for further information on updating HP-UX.

HP-UX Patches

After installing 64-bit HP-UX 11i and the most recent Patch Bundle, make sure the most recent HP Patch Bundle has been applied. Go to

the FileNet Web site **http://www.css.filenet.com** and log into Customer Service & Support. Click on:

> **Product Tech Info**
> **Image Services**
> **Compatibility & Dependency**
> **IS 4.0.x**

Select your operating system from the list, and review the patch recommendations and requirements. Make sure the most recent patch bundle has been installed.

HP-UX Bug

Due to a known HP bug (Doc. id: KBRC00003627), the default HP-UX (64-bit) operating system installation does not create a few required X library symbolic links. These links must be created manually before starting Oracle9i installation.

As **root** user, enter the following commands to create the required links:

```
cd /usr/lib
ln -s /usr/lib/libX11.3 libX11.sl
ln -s /usr/lib/libXIE.2 libXIE.sl
ln -s /usr/lib/libXext.3 libXext.sl
ln -s /usr/lib/libXhp11.3 libXhp11.sl
ln -s /usr/lib/libXi.3 libXi.sl
ln -s /usr/lib/libXm.4 libXm.sl
ln -s /usr/lib/libXp.2 libXp.sl
ln -s /usr/lib/libXt.3 libXt.sl
ln -s /usr/lib/libXtst.2 libXtst.sl
```

Rerun the Wizard System Check

Now you'll need to run the Wizard System Check one more time so it can detect that HP-UX 11i (64 bit) has been installed. **The Wizard Update will only update the Image Services software to IS 4.0.0 when the System Check has reported no ERRORs.**

The following diagram summarizes the paths you can take to reach your destination.

```
┌─────────────────────┐  ┌─────────────────────┐   Image Services      ┌─────────────────────┐
│ HP-UX 10.20/11.0    │  │ HP-UX 11.0/11i      │    3.5.0/3.6          │ HP-UX 11i (64-bit)  │
│ IDMIS 3.5.0         │  │ (32-bit) IS 3.6     │    Starting Points... │ IS 3.6              │
│ Oracle 8.0.6        │  │ Oracle 8.1.7        │                       │ Oracle 8.1.7        │
└─────────────────────┘  └─────────────────────┘                       └─────────────────────┘
```

WIZard System Check (Production Mode)

WIZard System Check (non-Production Mode)

Ugrade to HP-UX 11i (64-bit)

WIZard System Check (non-Production Mode)

WIZard System Check (Production Mode)

WIZard System Check (non-Production Mode)

WIZard Update to Image Services 4.0.0 and/or Oracle 9.2.0

Image Services 4.0.0 Ending Point ...

HP-UX 11i (64-bit) IS 4.0.0 (32-bit) Oracle 9.2.0 (64-bit)

Multiple Server Requirements

If your FileNet domain is composed of more than one Image Services server, you must run some preparation steps on **each** server **before** you do the actual update. In other words, perform all the steps in this manual up to **"Exit from FileNet Programs" on page 147** on each Image Services server in the domain.

These preparation steps include:

- Run the Wizard System Check in both Production and non-Production modes (Chapter 2).

- Fulfill any prerequisites identified by the System Check (Chapter 3).

- Prepare the server - check system table space, make backups, evaluate cache, etc. (Chapter 4).

- Reboot the server; check for errors (Chapter 4).

After you have performed these preparation steps on each server, you can use the Wizard to perform the actual update. **Be sure to update the Root server first!**

Update Strategy

When updating a multi-server system:

1 Stop the FileNet and Oracle software on all servers in this order:

   a Application server(s)

   b Storage Library server(s)

   c Root server

2 Update the Root server. (The Root server may be a Combined server or Root/Index server.)

3 Start the FileNet and Oracle software on the Root server.

4 Update the Storage Library server(s).

5 Start the FileNet software on the Storage Library server(s).

6 Update the Application server(s).

7 Start the FileNet (and Oracle, if present) software on the Application servers.

CSS Worldwide Customer Support

The following sub-sections describe various support documents and tables that will give you additional, up-to-the-minute information concerning your update. These are all available on the FileNet Web site at **http://www.css.filenet.com**. Login to Worldwide Customer Support to review these topics.

Release Notes for Image Services 4.0.0

The **Release Notes** file is available in two places.

The latest Release Notes file can be retrieved at any time from the FileNet Web site.

The Release Notes are also located on the CD-ROM **Image Services 4.0.0 for HP-UX** in **/relnotes.html.**

The **Release Notes** contain valuable information you need to install and configure Image Services software. Do not start the update without first reading the **Release Notes**.

Pay special attention to the **"Patches"** mentioned in the Release Notes. (Search for the keywords **PRE-UPDATE** and **REQUIRED** to locate information about HP-UX, Oracle, and Image Services patches that need to be applied before starting this update.) Image Services patches are located on the FileNet Web site.

Operating System Notes

Review the Operating System Notes for your current version of HP-UX to determine if any additional patches need to be installed prior to this Image Services update. The System Administrator is responsible for obtaining and installing these patches. The Operating System Notes are available on the FileNet Web site.

Release Dependency Spreadsheet

Review the Image Services Release Dependency spreadsheet for information that might be pertinent to the entire system configuration. The Release Dependency spreadsheet contains software compatibility information for client workstations, fax servers, and printer servers.

You may see this spreadsheet referred to as the Support Matrix or the Compatibility/Dependency Matrix.

Note When running Image Services and the Image Services Toolkit (formerly known as WAL) on the same server, the Image Services Toolkit must be version 3.6 or later.

Update Requirements

Before you begin the update procedure, make sure the hardware and software environment is appropriate for this update, and make sure you have all the correct pieces of release media.

Minimum Hardware Requirements

Note These requirements have changed from previous Image Services releases and from previous versions of this document.

Server Architecture

Servers containing PA-RISC processors that support the HP-UX11i operating system are required. (Itanium processors are not supported.)

- **64-bit** processors for all servers with Oracle9i software including Root/Index servers and Application servers with either WorkFlo Queue Services (WQS), SQL Services, or VWServices.

Note Oracle9i software is not compatible with 32-bit HP-UX hardware.

- **32-bit** or **64-bit** processors for servers without Oracle such as separate Storage Library servers and Application servers with only Batch, Print, and/or Cache Services.

Server Memory

- Root/Index and Application Servers with Oracle:

    512 MB memory for each processor in the server.

- Storage Library and Application Servers without Oracle:

    256 MB memory for each processor in the server.

Total Swap Space

Oracle recommends that swap space be at least **2 times** the amount of server memory. For example, a server with 512 MB of memory should have at least 1 GB of swap space.

However, if the server has more than 1 GB of server memory, Oracle recommends that swap space be **1.5 to 2 times** that amount.

Total Disk Space

This update requires an apparently large amount of free disk space; however, much of this space can be reused after the update is done.

Disk Space for Software

For FileNet Image Services software, Oracle software, and temporary working storage, this update requires:

- **7.218 GB** (Servers with Oracle) or **40 MB** (Storage Library Servers)

Table 1.1 Disk Space Requirements

	Combined or Root/Index Server	**Storage Library Server**
Oracle9i Software* (for example, /usr/ora/920)	**3.7 GB**	**-**
Temporary space for Oracle9i Media** (FileNet-Controlled Oracle only)	**3.0 GB**	**-**
Free space in **/** (root)	**1 MB**	**1 MB**
Free space in **/oratmp*****	**428 MB**	**-**
Free space in **/tmp**	**16 MB**	**16 MB**
Free space in **/usr**	**3 MB**	**3 MB**
Free space in **/var**	**20 MB**	**20 MB**

Table 1.1 Disk Space Requirements, Continued

	Combined or Root/Index Server	**Storage Library Server**
Free space in directory above $ORACLE_HOME (e.g., /usr/ora)	**50 MB**	**-**
Total	**7.218 GB**	**40 MB**

   * The space required for installing the Oracle 9.2.0 software is greater than the amount of space it will eventually occupy. Also, the disk space currently occupied by the Oracle 8.0.6 or 8.1.7 software can be reused when it is removed from the server at some future date.

  ** The space required for copying the Oracle media onto the hard drive is only needed temporarily and can be reused after the update is finished.

 *** The space required for temporary workspace while installing the Oracle 9.2.0 software If this directory does not exist, the Wizard will use the $ORACLE_HOME directory instead, in which case the $ORACLE_HOME directory needs to be **400 MB** larger than shown. This space can be reused after the update is finished.

ServiceGuard

If you are going to update a system that already uses HP's **MC/ServiceGuard** with a shared disk array between the primary and failover server, this update may only need to be performed on the primary server, if the FileNet Image Services software resides on the disk array.

CAUTION You should only perform this update while the FileNet Image Services software is running on the primary server. DO NOT update the Image Services or Oracle software while the system is in failover mode!

If you plan to configure an existing HP system to use ServiceGuard, you should update the FileNet Image Services software first; then after the Image Services software has been updated successfully, you can reconfigure the system with ServiceGuard.

To install and configure a new ServiceGuard system, refer to the: ***Image Services Installation and Configuration Procedures for HP-UX.***

More information on HP MC/ServiceGuard is available at:

http://www.hp.com/products1/unix/highavailability/ar/mcservice-guard/index.html

Software Requirements

To perform the update to Oracle 9.2.0 and Image Services 4.0.0, you'll need these media:

Image Services Software

FileNet Image Services & COLD™ 4.0.0 for HP-UX 11i (CD-ROM). This media contains the Image Services 4.0.0 software including COLD 4.0.0 software.

Oracle RDBMS Software

Note The Oracle9i software media are not supplied by FileNet.

- **Oracle9i Database Release 2 Enterprise/Standard Edition for HP-UX (64-bit)** (4 CD-ROMs). These compact disks contain all the Oracle9i RDBMS software products, and are compatible with only the 64-bit version of HP-UX 11i.

- **Oracle Patch Set 2 (9.2.0.2)**

- **Oracle Interim Patch 2645455***

  *This Interim Patch corrects a problem with the US7ASCII character set. If you plan to use a different character set, such as WE8ISO8859P1, this patch is not required.

Note **At the time this document was published, Oracle Patch Set 3 (9.2.0.3) did not include the fix for the US7ASCII problem, and no equivalent Interim Patch for Patch Set 3 was available. However, Oracle may include this patch in subsequent Patch Sets. Check the Image Services 4.0.0 Release Notes on FileNet's Web site http://www.css.filenet.com for the latest news.**

The patch set and interim patch are available for download from the Oracle MetaLink Web site. For Patch Set installation instructions, see **"Appendix F – Installing Oracle Patch Set 9.2.0.2" on page 285**.

For Interim Patch installation instructions, see **"Appendix G – Installing Oracle9i Data Server Interim Patch 2645455" on page 298**.

Note   If the **database administrator** or **system administrator** wants to install Oracle 9.2.0 before the FileNet Technical Consultant arrives to update the Image Services software see **Guidelines for Installing and Updating Oracle Software for UNIX Servers**. Use these guidelines to update the Oracle RDBMS.

Debugging Software

Debugging software is required for Image Services 4.0.0 and must be installed on each Image Services server. A debugger enables FileNet support personnel to troubleshoot both FileNet and HP-related problems.

Important!   If your current operating system is HP-UX 10.20 or HP-UX 11.0, wait until you've upgraded to HP-UX 11i to install the latest debugging software.

The HP **WDB 3.1.x** debugger is an HP-supported implementation of the GDB debugger. It supports source-level debugging of object files written in HP C, HP aC++, Fortran 90, and FORTRAN77 on HP-UX Release 11.0 and later.

HP WDB is the recommended debugger for HP-UX 11.0 and 11.11 systems. Other debuggers, such as xdb and HP DDE may not be available or may not support features in upcoming HP-UX releases.

After you've upgraded the HP-UX operating system to 11i or later, install the most recent version of the WDB debugger as described in the section, .

Update Prerequisites

The following table lists the documents, media, and server resources required to successfully update your Image Services software to

release 4.0.0. Each requirement is described in detail later in this document.

Table 1-2: Update Prerequisites

Prerequisites	Comments
Run the Wizard System Check.	Refer to **"Appendix A – Wizard System Check Steps" on page 212** for specific server items inspected by the Wizard System Check
Read FileNet Release Notes.	Available on the Image Services CD at /relnotes.html and at Worldwide Customer Support on FileNet's Web site at **www.css.filenet.com**.
Install HP-UX patches, if needed.	Check Worldwide Customer Support on the FileNet Web site for patches that may be required prior to this update.
Install the Required Pre-Update fixes that were identified in the Release Notes.	It is mandatory to have the appropriate pre-update fixes installed when you start your update. Otherwise, your update will fail. The fixes are available at **www.css.filenet.com** and on the Tech Info CD, which is distributed to FileNet Technical Consultants.

Table 1-2: Update Prerequisites, Continued

Prerequisites	Comments
Back up the entire system.	Include FileNet datasets, cache, and HP-UX.
Obtain proper CD-ROMs for Image Services and Oracle software	Refer to the section, **"Software Requirements" on page 40**
For Servers With Oracle:	
Create a new 3.7 GB file system for Oracle 9.2.0.	Do not use your current Oracle file system for Oracle 9.2.0. (Must have at least 3.7 GB free space on HP-UX 11i)
Create a home directory for the **oracle** user, if necessary	It can't be /usr/oracle or the same directory where Oracle software is stored.
Create a directory (e.g., /ora_media) to copy the contents of the Oracle CD-ROM media into.	The Oracle media requires 3.0 GB of free space on the server's hard drive. This space can be reused after the Wizard update is finished.

Related Documents

As you read this procedure, you may see references to other documents you may need to review. You may want to keep these documents handy in case you need to use them during this update.

The following documents are contained on the *Image Services 4.0.0 Documentation CD-ROM:*

- ***Image Services System Administrator's Handbook***

- ***Image Services System Administrator's Companion for UNIX***

- ***Enterprise Backup and Restore User's Guide***

- ***Third-Party Backup/Restore Guidelines***

2
Preparing for the Update

At least four weeks prior to the update, the FileNet Technical Consultant or the ValueNet Partner **must** do these things:

- Schedule the update with the FileNet Upgrade/Install Assurance Team and access the team's latest list of current scheduling procedures.

- Copy the Image Services CDB file. Send it to the Upgrade/Install Assurance Team at upgrade@filenet.com.

- Run spacerpt. Send the results to the Upgrade/Install Assurance Team, and keep a printed copy for comparison after the update is complete.

- Run the Wizard System Check. Send the results to the Upgrade/ Install Assurance Team. Make the required changes to the server.

When you are instructed to send a file or output to the FileNet Upgrade/Install Assurance Team, you can either:

a   FTP the file from the server to a client PC so you can easily copy the file to a floppy disk, or...

b   Send the file to the FileNet Upgrade/Install Assurance Team via e-mail at upgrade@filenet.com.

Switching to 64-bit Hardware

Because Oracle9i requires a 64-bit processor, you may need to acquire a new HP-UX server with 64-bit processors and the 64-bit version of the HP-UX 11i operating system.

•   If Oracle is FileNet-controlled, you can follow the instructions in the *Guidelines for Updating HP-UX Systems from 32- to 64-bit Hardware*, which is available from the FileNet Upgrade/Install Assurance Team.

•   If Oracle is site-controlled, the System Administrator and Database Administrator can follow these general steps to recreate your cur-

rent Image Services system on the new hardware. Then, after they're confident that the new server is running successfully, you can follow the remaining procedures in this document to update to Oracle9i and IS 4.0.0.

Configure the New 64-bit Server

On the new server, install your current 32-bit version of Oracle and your current 32-bit version of Image Services. Refer to the *Installation and Configuration Procedures for HP-UX* for your current release.

HP-UX Patches

After installing 64-bit HP-UX 11i, go to the FileNet Web site **http://www.css.filenet.com** and log into Customer Service & Support. Click on:

> **Product Tech Info**
> **Image Services**
> **Compatibility & Dependency**
> **IS 4.0.x**

Select your operating system from the list, and review the patch recommendations and requirements. Make sure the most recent patch bundle has been installed.

HP-UX Bug

Due to a known HP bug (Doc. id: KBRC00003627), the default HP-UX (64-bit) operating system installation does not create a few required X library symbolic links. These links must be created manually before starting Oracle9i installation.

As **root** user, enter the following commands to create the required links:

```
cd /usr/lib
ln -s /usr/lib/libX11.3 libX11.sl
ln -s /usr/lib/libXIE.2 libXIE.sl
ln -s /usr/lib/libXext.3 libXext.sl
ln -s /usr/lib/libXhp11.3 libXhp11.sl
ln -s /usr/lib/libXi.3 libXi.sl
ln -s /usr/lib/libXm.4 libXm.sl
```

```
ln -s /usr/lib/libXp.2   libXp.sl
ln -s /usr/lib/libXt.3   libXt.sl
ln -s /usr/lib/libXtst.2 libXtst.sl
```

Back Up Data on the Current Server

On your current server, perform a full EBR backup. Refer to the *Enterprise Backup and Restore Guide* for your current release.

Restore Data onto the New Server

Use EBR to restore the data onto the new 64-bit server. Refer to the *Enterprise Backup and Restore Guide* for your current release.

Verify Image Services Operation

The new 64-bit server should now be fully operational. Make sure the Image Services and Oracle software functions as usual.

Continue with the Image Services 4.0.0 Update

When you're ready to update to Oracle9i and Image Services 4.0.0, you can continue with the rest of the procedures in this document.

Copy the Image Services .CDB File

The FileNet Upgrade/Install Assurance Team will need to inspect your Image Services CDB file before you begin the update. This file allows your service provider to check the configuration for database integrity.

The CDB file is built by the configuration editor (fn_edit) and is stored in the /fnsw/local/sd/conf_db directory. The naming convention is **IMS_n.cdb** where 'n' is a sequentially assigned number that is incremented each time the CDB file is rebuilt. You will likely find several versions of the CDB file.

Copy the most recent CDB file (the one with the highest "n" number) and send it to your FileNet Upgrade/Install Assurance Team at upgrade@filenet.com.

Copy the MasterSnmpd_start File

Make a backup copy the **/fnsw/bin/MasterSnmpd_start** file. SNMP is the Simple Network Management Protocol. See the ***SNMP Reference Manual*** for more information.

Important!	**Do not skip this step!** Installing the new version of Image Services software overwrites the current version of this file. At the end of this update procedures, you'll compare the newly installed version against this saved version.

For example, as **fnsw** user, save the current file by entering:

cp /fnsw/bin/MasterSnmpd_start /fnsw/bin/MasterSnmpd_save

Run spacerpt

The FileNet Upgrade/Install Assurance Team will need to inspect your database configuration to make sure the Oracle RDBMS objects are correct.

You need to know the f_maint password to run spacerpt.

1   As **fnsw** user, make sure Oracle is up by entering:

ps -ef | grep ora

You should see at least four Oracle processes. If not, you need to start the Oracle software.

• If Oracle is FileNet-controlled and If there are no Oracle processes running, you can start Oracle by entering:

fn_util startrdb

• If Oracle is Site-controlled, ask the DBA to start Oracle.

2   As **fnsw** user, run spacerpt and send the output to an output file by entering:

spacerpt > <output_file_name> &

where <output_file_name> can be any name you choose.

3 If you want to stop Oracle:

- For FileNet-controlled Oracle, enter:

    fn_util stoprdb

- For Site-controlled Oracle, ask the DBA to stop Oracle.

4   Send the output file to the FileNet Upgrade/Install Assurance Team at upgrade@filenet.com. Also print a copy of this file and keep it in a safe place. You will need to compare this copy with the spacerpt run at the end of this update procedure.

Verify the System Serial Number

Use the **ssn** command to display the system serial number. As **root** user, enter:

   ssn

Important!   The 10-digit ssn, which is assigned by FileNet, is written onto all storage media and **must** be unique for each Image Services system.

If you have more than one Image Services system (domain), each **must** use its own unique ssn to prevent potential problems if media are ever transferred from one IS system to another.

Disable the Screensaver

While the Wizard is running, the Screensaver might be activated. When you reactivate the screen by moving the mouse, the top Wizard screen moves to the background and may be covered by other windows. You might not realize the Wizard is waiting for a response.

To prevent this from happening, turn off the Screensaver feature of your terminal before you run the Wizard!

Run the Wizard System Check

You can run the Wizard System Check while your Image Services system is in production mode. **It will not disrupt your operation and it will not change any files.** This allows you and the FileNet Upgrade/

Install Assurance Team to understand well in advance what needs to be changed or added to the server to ensure a smooth and predictable update.

You'll need to run the Wizard System Check at least twice:

- First while the Image Services software is running.

  The Wizard makes several checks that are only possible while the databases are running. (You'll get unavoidable "errors" stating that the FileNet software is running, but that's okay for now.)

After you resolved as many of the "errors" as possible,

- Then while the Image Services software is shut down.

Important! | **Make sure the System Check runs with absolutely NO ERRORs before you continue with the Wizard Update in Chapter 4.**

The Wizard System Check inspects the server for prerequisites and lists any warning and error conditions in two locations:

- • Pop-up windows on your screen.

- • Report and log files in the /fnsw/local/logs/wizard directory.

Note You can ignore error messages about your Image Services and/or Oracle software being up during the Wizard System Check. You won't have to shut down Image Services until you are ready to run the actual update.

Load the FileNet Image Services CD-ROM

1 Load the Image Services 4.0.0 CD-ROM into the drive.

2 As **root** user, mount the CD-ROM file system by entering the following commands:

a First, create a CD-ROM directory, if one does not already exist.

mkdir /cdrom

a If necessary, determine the CD-ROM device file name.

ioscan -fnC disk

b Locate the CD-ROM device file name on the **ioscan** display. For example:

```
Class   I   H/W Path      Driver S/W State   H/W Type     Description
======================================================================
  .
  .
disk    5   0/0/2/0.1.0   sdisk  CLAIMED     DEVICE       HP  DVD-ROM 305
                          /dev/dsk/c2t2d0   /dev/rdsk/c2t2d0
  .
  .
```

> **Note** When you examine the **ioscan** display, you may see that some optical
> devices have 'unclaimed' and 'unknown' in the S/W State and H/W
> Type columns. This is normal, since FileNet does not use the standard
> drivers. This does not affect the operation of the FileNet software.

In the display above, the device file name is /dev/dsk/c2t2d0.

3 Then mount the CD-ROM device on the /cdrom directory. For example:

> **mount /dev/dsk/c2t2d0 /cdrom**

where /dev/dsk/c2t2d0 is the CD-ROM device file name shown on the **ioscan** display.

4 To make sure the CD-ROM mounted successfully, enter:

> **mount**

You should see the CD-ROM device listed.

Run the Wizard System Check

1 Make sure you're logged on as **root** user.

2 If you are running this program from a remote terminal, make sure you export the display from the server to your current terminal.

- In the Bourne or Korn shell, enter:

    export DISPLAY=<host_identifier>:0

- In the C shell, enter:

    setenv DISPLAY <host_identifier>:0

where <host_identifier> is the server identifier, either a name or IP address.

3 If you're going to run the Wizard from a remote terminal, make sure you allow access to the host display by entering this command at the remote terminal:

    xhost +

If the server has an Xconsole, rather than an ASCII terminal, enter the xhost + command there, too.

Note If you used the **su** command to switch from any user to **root** user, you must enter the **xhost +** command at the original CDE login window.

Tip You can test your DISPLAY setting by entering:

xclock &

If the clock appears on your remote terminal screen, the DISPLAY variable was exported correctly. If you don't see the clock, try the export or setenv command again using the IP address rather than the server name.

4 As **root** user, invoke the Wizard by entering:

cd /
/cdrom/setup

CAUTION Do not **cd** to /cdrom to run the program. Run this from the / (root) file system.

• You can also run the Wizard with the -v (verbose) option. This option displays additional information on the console as the Wizard executes. To run the Wizard in verbose mode, enter:

  /cdrom/setup -v

To run the Wizard System Check on an ASCII terminal, you can use TTY mode.

• For TTY mode (non-GUI), enter:

  /cdrom/setup -t

5 In graphical mode, you'll see the following screen. It'll take a few minutes to display.
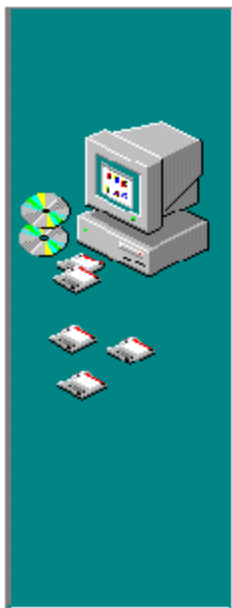
* Welcome to Image Services Setup Wizard. This tool will guide you through the setup procedure.

| System Check | Verify system configuration only. No system changes are made. |

| Upgrade Image Services | Upgrade Image Services Only |

| Upgrade Oracle | Upgrade Oracle Only |

| Upgrade Oracle and Image Services | Upgrade Both |

| Quit |

WARNING: This program is protected by copyright law and international treaties.

6   Select **System Check**.

Note   On-screen Help is available.

7   The System Check looks for a default file system named /usr/ora/920 for the new Oracle software. If it does not find this file system, you will see this dialog box:
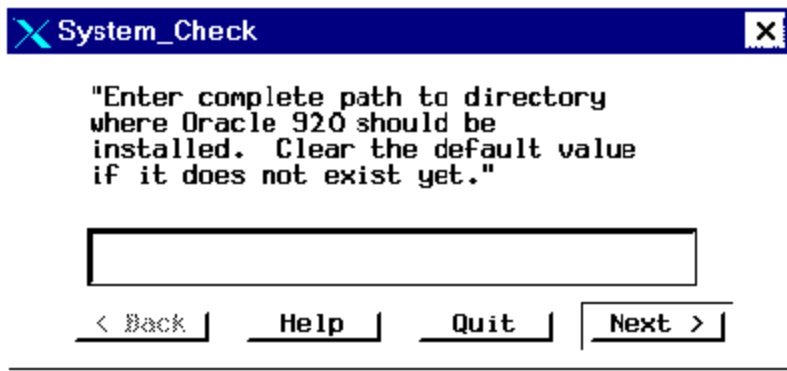
Enter the correct directory path. If you haven't created this directory yet, make sure the field is completely blank. You will be creating the

file system for Oracle in the next chapter, if one is needed. Click **Next** to continue.

8 In the next screen, enter the directory where the Oracle CD contents are located. The Wizard verifies that you have the correct version of Oracle.
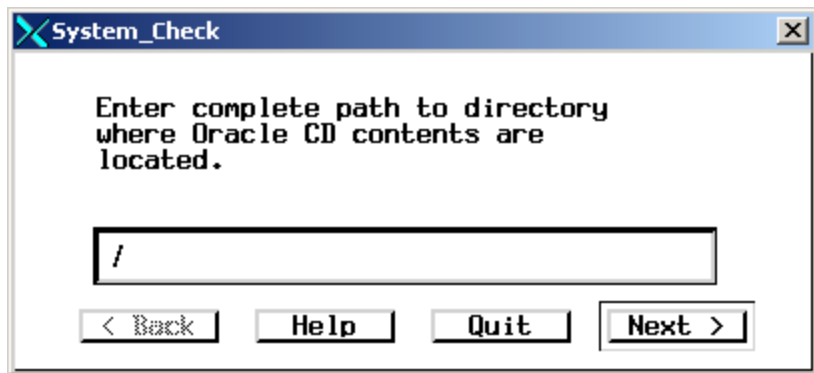
If you haven't copied the contents of the four Oracle CDs onto the server yet, just enter ' / '. The Wizard will log a warning and will continue checking. Be sure to copy the Oracle media onto the server before you run the Wizard Setup. Click **Next** to continue.

9   The Wizard System Check will terminate when all the steps are completed. You will be asked if you want to display the report of error and warnings found by the System Check.

The **Yes** option is already selected. Click **Next** to continue. You can also see the report at:

/fnsw/local/logs/wizard/SysChk_yyyymmdd_hhmm

/fnsw/local/logs/wizard/yyyymmdd_hhmm.log

where yyyymmdd_hhmm represents the date and time the Wizard System Check was run.

The Wizard System Check also creates several temporary (.tmp) files and if there were no errors found, archives these .tmp files in a tar file.

For more information on how to use these .tmp files, see **"Appendix D – Troubleshooting the Wizard" on page 259**.

10 Take note of the errors and warnings. Exit out of the report and the Wizard System Check as directed by the dialog boxes.

11 You must eliminate all the error conditions reported by the Wizard System Check. Go to **Chapter 3, "Resolving Wizard System Check Prerequisites," on page 69** for instructions.

12 After you've completed as many of the prerequisite tasks as possible, send a copy of these reports to the FileNet Upgrade/Install Assurance Team at upgrade@filenet.com.

13 If no "Errors" were flagged by the System Check, you can proceed to **Chapter 4, "Updating Image Services and/or Oracle," on page 140**.

3

Resolving Wizard System Check Prerequisites

The first time you ran the Pre-Update System Check, you likely received errors and warnings. This chapter shows you how to resolve those warnings and errors.

Using This Chapter

This chapter is primarily a reference chapter. You won't necessarily follow it sequentially. Each section in this chapter corresponds to a Wizard System Check error or warning (with the exception being the system backup recommendation). Read and perform the steps in each section only if you received the corresponding error or warning message.

The error correction steps in this chapter will fall under two categories: **production mode** and **non-production mode**. You can fix the production mode error conditions while your Image Services system is up and running. However, some corrections can't be made while your system is in production. Non-production mode changes must be made just prior to running the Wizard Update.

Perform Necessary Backups

Because this chapter involves changes to your system, you must have a full backup before making the changes specified in this chapter.

The backup should include:

- File Systems and Datasets. Use the Enterprise Backup/Restore (EBR) or third party backup programs.

- Capture Settings (if FileNet Capture Professional is being used). Refer to the Capture Professional documentation for information on backing up the repository to a local PC.

For more information on performing a full system backup, refer to:

- ***Image Services System Administrator's Handbook***

- ***Image Services System Administrator's Companion for UNIX***

- ***Enterprise Backup/Restore User's Guide***

- ***Third-Party Backup/Restore Guidelines***

Production Mode Error Corrections

The following error corrections in this section can be achieved while the system is in production mode. These steps won't degrade performance or affect other files.

WARNING: You must be logged on as root for successful check.

To run the Pre-Update System Check, and also to run the Wizard Update later on, you need to be logged on as the **root** user.

WARNING: SCSI Passthru should be installed.

You need to install the SCSI-Passthru software product that contains the SCSI Passthru driver. This software is required to configure optical storage libraries on your system. To see if this driver has been installed, enter the following command:

/usr/sbin/swlist -l product | grep SCSI

If this command does not locate **SCSI-Passthru**, the System Administrator must install it from the HP-UX operating system release media.

Refer to the **man** page for scsi_pt for instructions on how to configure the driver as well as the optical devices.

WARNING: LVM should be installed.

You must have Logical Volume Manager software. Enter the following command:

/usr/sbin/swlist -l product | grep LVM

If this command does not locate an **LVM** line, the System Administrator must install it from the HP-UX operating system release media.

WARNING: No debugger found. Please install a debugger after completing the Update.

Debugging software is required for Image Services 4.0.0 and must be installed on each Image Services server. A debugger enables FileNet support personnel to troubleshoot both FileNet and HP-related problems.

Important! If your current operating system is HP-UX 10.20 or 11.0, wait until you've upgraded to HP-UX 11i to install the latest debugging software.

The HP **WDB 3.1.x** debugger is an HP-supported implementation of the GDB debugger. It supports source-level debugging of object files written in HP C, HP aC++, Fortran 90, and FORTRAN77 on HP-UX Release 11.0 and later.

HP WDB is the recommended debugger for HP-UX 11.0 and 11.11 systems. Other debuggers, such as xdb and HP DDE may not be available or may not support features in upcoming HP-UX releases.

Wildebeest 3.1.x

The Hewlett-Packard **Wildebeest (WDB)** debugger is HP's strategic source-level debugger. The HP WDB debugger is a fully HP-supported version of the GDB debugger, first developed by the Free Software Foundation.

You can download a version that's compatible with your current version of the HP-UX operating system for no charge by going to **http://www.hp.com/go/wdb/**. Documentation is also available for download.

Downloading and Expanding the WDB Debugger

Fill out the required information on the WDB web page and download the debugger file to your local server. Copy the compressed file to your /tmp directory. For example, if you downloaded the WDB debugger for HP-UX 11i, you might enter:

cp wdb-3.1.01-11.11.depot.gz /tmp

- If the compressed file has a .z extension, use the uncompress tool to expand it:

    uncompress /tmp/wdb-3.1.01-11.11.depot.gz

- If the compressed file has a .gz extension, use the gunzip tool to expand it:

    /usr/contrib/bin/gunzip /tmp/wdb-3.1.01-11.11.depot.gz

Installing the WDB Debugger

After you have expanded the compressed debugger installation file, use the **swinstall** command to install the WDB debugger on your server. For example, if you downloaded the debugger file for HP-UX 11.11 into your /tmp directory, you would enter all on one line:

**swinstall -x enforce_dependencies=false
        -s /tmp/wdb-3.1.01-11.11.depot WDB**

Note   To reinstall the same version of HP WDB in the same location on your system, use the option **-x reinstall=true**.

Running the WDB Debugger

The Wildebeest debugger is HP's implementation of the GDB debugger. To use the debugger, enter:

/opt/langtools/bin/gdb a.out

where a.out is the executable you are going to debug.

Tip   If you include /opt/langtools/bin in the environment path of your .cshrc or .profile file, you won't need to type the complete path name each time.)

For additional information, read and print the *HP WDB 0.75 Quick Start Guide*, which is installed on your server with the debugger in /opt/lang-tools/bin/refcard.ps, and which describes a wide variety of the debugger's options.

For a brief summary of debugger options, enter:

/opt/langtools/bin/gdb -help

ERROR: 200 MB free space required for SYSTEM tablespace.

The SYSTEM tablespace requires expanding to accommodate the Oracle update. You'll need at least 200 MB of contiguous space.

Verify SYSTEM Tablespace

It's important to know if your Oracle database is in **coexistence mode** or **non-coexistence mode**. This will determine how much SYSTEM tablespace expansion is required.

- **Coexistence mode** means the Oracle SYSTEM tablespace is in the oracle_sys0 datafile.

- **Non-coexistence mode** means the Oracle SYSTEM tablespace is in the oracle_db0 datafile.

Note	Oracle must be up and running for the following procedure to work.

1 Make sure Oracle is up by entering:

ps -ef | grep ora

You should see at least four Oracle processes (they're named IDB if the instance is FileNet-controlled).

2 If Oracle is not up and your Oracle instance is FileNet-controlled, enter the following as **fnsw** user:

fn_util startrdb

(If Oracle is Site-controlled, ask the Database Administrator to start Oracle.)

3 As **fnsw** user, run spacerpt and send the output to an output file by entering:

spacerpt > <output_file_name> &

where <output_file_name> can be any name you choose.

Output for **coexistence mode** should appear similar to this:

```
TABLESPACE_NAME                 FILE_NAME
------------------------------------------------------------------
 SYSTEM                         /fnsw/dev/1/oracle_sys0
 FNTMP_SYS                      /fnsw/dev/1/oracle_tr0
 FNSYS_TS                       /fnsw/dev/1/oracle_db0
3 rows selected.
```

Notice that SYSTEM tablespace is in a dedicated file (oracle_sys0) in the above example. This means that the database is in **coexistence mode**. If SYSTEM was part of oracle_db0, it would be in non-coexistence mode.

Output for **non-coexistence** mode would appear similar to this:

```
TABLESPACE_NAME                 FILE_NAME
-------------------------------------------------------------------
SYSTEM                          /fnsw/dev/1/oracle_db0
TS1                             /fnsw/dev/1/oracle_tr0
 2 rows selected.
```

Notice that SYSTEM tablespace is in oracle_db0 for **non-coexistence mode**.

4   Take note as to whether or not your system is in coexistence mode. You will need to use this information for **Step 5 on page 84**.

5   You will be adding an additional Oracle dataset later in this procedure. It will be a data partition (oracle_db<n>) if your database is in non-coexistence mode or a system partition (oracle_sys<n>) if your database is in coexistence mode. Take note of the highest number 'n' that follows your named files from the output above.

6 Now that you know which dataset you need to expand, you can choose to use manual steps or automated steps.

- **Manual Steps:** The advantage to using the manual steps is that they enable you to place the expanded dataset on a specific physical drive. To add this space manually, skip to .

- **Automated Steps:** You can optionally use automated steps, which include the fn_dataset_config tool. To add this space automatically, continue with the next section.

Add the Dataset Automatically

1 If you are running this program from a remote terminal, make sure you export the display to your current terminal. For Korn or Bourne shell, enter:

export DISPLAY=<your hostname>:0.0

For C-shell, enter:

setenv DISPLAY <your hostname>:0.0

2 If you are running this program from a remote terminal or from an X console at the server, make sure you allow access to the host display by entering the following:

xhost +

Note If you used the **su** command to switch from any user to root user, then you must enter **xhost +** at the original CDE login window.

Tip Test your remote terminal environment with **xclock &**

3 As **root** user, use the fn_dataset_config command to begin the pro-cess of expanding a dataset.

fn_dataset_config

Note fn_dataset_config will shut down FileNet Image Services software and leave Oracle running.

You will see a window that looks like the following graphic:

Dataset Name	Current Size	Modified Size		Copies		Increment	Volume Group	
Cache	104	104	⇕	1	⇕	104	fnvg	⬇
Permanent Database	104	104	⇕	1	⇕	104	fnvg	⬇
Permanent Redologs	40	40	⇕	1	⇕	40	fnvg	⬇
Transient Database	24	24	⇕	1	⇕	24	fnvg	⬇
Transient Redologs	40	40	⇕	1	⇕	40	fnvg	⬇
Oracle Database	400	400	⇕	1	⇕	200	fnvg	⬇
Oracle Redologs	144	144	⇕	1	⇕	24	fnvg	⬇
Oracle Temp Space	24	24	⇕	1	⇕	24	fnvg	⬇
Security Database	32	32	⇕	1	⇕	16	fnvg	⬇
Security Redologs	8	8	⇕	1	⇕	8	fnvg	⬇
Oracle System Space	160	160	⇕	1	⇕	40	fnvg	⬇

4 Use the scroll bar to locate the Oracle SYSTEM Table Space. In the above example, it is the dataset entitled **Oracle System Space**. If you can't locate the Oracle System Space, locate **Oracle Database** instead.

- The standard increment for the Oracle SYSTEM Tablespace is **at least 200MB**

- The standard increment for the Oracle Database is **at least 200MB**

Note If an Oracle System Space is not listed, Oracle is not in coexistence mode.

5 Locate the associated up-arrow under the **Modified Size** column that corresponds to the database you will be increasing. Click the arrow so that Oracle System Space is increased by **one increment**. If no System Space exists, increase the Oracle Database by **one increment**.

6 Click OK to accept the new size. This will run the necessary processes to commit the necessary changes to logical volumes, configuration files and the Oracle database.

7 Verify the new SYSTEM Tablespace configuration. As **fnsw** user, run the spacerpt command again:

spacerpt > <output_file_name> &

where <output_file_name> can be any name you choose.

8 Check the list of data files displayed to make sure a new SYSTEM tablespace dataset has been created. There should be an oracle_sys (or oracle_db) dataset that is numbered one greater than the dataset you noted earlier.

9 To stop the Oracle software, enter as **fnsw** user:

   fnutil stoprdb

(If Oracle is Site-controlled, ask the Database Administrator to stop Oracle.)

ERROR: 400MB total space required for temporary rollback tablespace.

The FNTMP_TS tablespace, used for temporary space and rollback segments, requires expanding to accommodate the Oracle update. You'll need **at least 400 MB** of contiguous space.

Verify FNTMP_TS Tablespace

Note   Oracle must be up and running for the following procedure to work.

1   Make sure Oracle is up by entering:

   ps -ef | grep ora

   You should see at least four Oracle processes (they will be named IDB if the instance is FileNet-owned).

2   If Oracle is not up and your Oracle instance is FileNet-controlled, enter the following as **fnsw** user:

   fn_util startrdb

   (If Oracle is Site-controlled, ask the Database Administrator to start Oracle.)

3   Start Oracle Server Manager by entering:

   spacerpt > <output_file_name> &

where <output_file_name> can be any name you choose.

4 The Oracle temporary tablespace is named oracle_tr<n>. There may be more than one oracle_tr dataset, so take note of the highest number 'n' that follows your named files from the output above.

5 To expand the dataset, you can use manual steps or automated steps.

- **Manual Steps:** The advantage to using the manual steps is that they enable you to place the expanded dataset on a specific physical drive. To add this space manually, skip to **"Appendix C – Manually Expanding Tablespace" on page 228**.

- **Automated Steps:** You can optionally use automated steps, which include the fn_dataset_config tool. To add this space automatically, continue with the next section.

Add the Dataset Automatically

1 If you are running this program from a remote terminal, make sure you export the display to your current terminal.

For Korn or Bourne shell, enter:

export DISPLAY=<your hostname>:0.0

For C-shell, enter:

setenv DISPLAY <your hostname>:0.0

2 If you're running this program from a remote terminal or from an X console at the server, make sure you allow access to the host display by entering the following:

xhost +

Note If you used the **su** command to switch from any user to root user, then you must enter **xhost +** at the original CDE login window.

Tip Test your remote terminal environment with **xclock &**

3 As **root** user, use the fn_dataset_config command to begin the process of expanding a dataset.

fn_dataset_config

Note   fn_dataset_config will shut down FileNet Image Services software and
leave Oracle running.

You will see a window that looks like this:

Dataset Name	Current Size	Modified Size	Copies	Increment	Volume Group
Cache	104	104	1	104	fnvg
Permanent Database	104	104	1	104	fnvg
Permanent Redologs	40	40	1	40	fnvg
Transient Database	24	24	1	24	fnvg
Transient Redologs	40	40	1	40	fnvg
Oracle Database	400	400	1	200	fnvg
Oracle Redologs	144	144	1	24	fnvg
Oracle Temp Space	24	24	1	24	fnvg
Security Database	32	32	1	16	fnvg
Security Redologs	8	8	1	8	fnvg
Oracle System Space	160	160	1	40	fnvg

4 Use the scroll bar to locate the Oracle temporary tablespace. In the above example, it's the dataset named **Oracle Temp Space**.

- The standard increment for the Oracle Temp Space is **at least 20 MB**

Important! FileNet recommends that you have **at least 400 MB** for Oracle temporary data and rollback segments. Your system may require more.

5 Locate the associated up-arrow under the **Modified Size** column that corresponds to the database you will be increasing. Click the arrow to increase the Oracle Temp Space by as many increments as needed to bring the total size to **at least 400 MB**.

6 Click **OK** to accept the new size. This will run the necessary processes to commit the necessary changes to logical volumes, configuration files, and the Oracle database.

7 Verify the new FNTMP_TS tablespace configuration. As **fnsw** user, enter:

   spacerpt > <output_file_name> &

   where <output_file_name> can be any name you choose.

8 Check the list of data files displayed to make sure a new FNTMP_TS
   tablespace dataset has been created. There should be an oracle_tr
   dataset that is numbered one greater than the dataset you noted ear-
   lier.

9 To stop the Oracle software, enter as **fnsw** user:

   fnutil stoprdb

   (If Oracle is Site-controlled, ask the Database Administrator to stop
   Oracle.)

ERROR: Oracle rollback segments must be online and 1048576 bytes

The Oracle Universal Installer cannot install Oracle9i until the rollback
segments have been expanded. FileNet provides software to do this
automatically for FileNet-controlled Oracle systems.

If your current release of Image Services software is:

IDMIS 3.5.0 SP3 or IS 3.6 SP2

the necessary files are already on your server. Skip to Step 2.

Otherwise, continue with the next step.

1 The two files needed to automatically expand the rollback segments are located on the Image Services 4.0.0 software CD.

- Copy **oraaltrbs8** into the **/fnsw/bin** directory.

- Copy **fn_oraaltrbs8.sql** into the **/fnsw/oracle** directory.

2 Use the **chmod** command to set the permissions for each of these files to **755**.

3 As **oracle** user, start the Oracle software by entering:

fn_util startrdb

4 Make sure all FileNet production rollback segments are online. (If they're listed in the init.ora file, they will be.)

Use **svrmgrl** to execute the following select statement to report the status of the rollback segments:

select segment_name, owner, status from dba_rollback_segs;

The expected output will be similar to this:

```
SEGMENT_NAME          OWNER    STATUS
SYSTEM                SYS      ONLINE
RSYS                  SYS      OFFLINE
RS0                   PUBLIC   ONLINE
RS1                   PUBLIC   ONLINE
RS2                   PUBLIC   ONLINE
RS3                   PUBLIC   ONLINE
```

The FileNet production rollback segments should be owned by PUBLIC or SYS, and will usually have names such as RS0, RS1, and so on. (All rollback segments should be listed in the init.ora file.) A

secondary SYSTEM rollback segment, usually called RSYS, may be present. It's all right if this segment is offline.

If a production rollback segment is not online, the fn_oraaltrbs.sql script will fail and will produce an error message. An offline production rollback segment indicates a problem.

Tip   Use your preferred text editor, such as **vi**, to examine the init.ora file and verify that all the rollback segments displayed by the select statement are also specified there. For example:

   rollback_segment = rs0, rs1, rs2, rs3

   If necessary, add any missing rollback segments to this line, and restart Oracle.

5   Then update the rollback segments by entering:

   /fnsw/bin/oraaltrbs8

Oraaltrbs8 calls the fn_oraaltrbs8.sql script to update the rollback segments. The script runs quickly and when it's finished, the Oracle9i installation will be successful.

ERROR: /fnsw/local/sd/no_build.txt was found.

If the Pre-Update System Check detected the presence of the no_build.txt file, do **not** change the state of your server. Do **not** delete any files. Read the appropriate Release Note on this state and contact CSS for further instructions.

ERROR: Paging Space (nn MB) is less than the required amount.
WARNING: Paging Space (nn MB) is less than the required amount.

Perform the steps in this section if the Pre-Update System Check issues any errors or warnings about the current swap space size.

An ERROR indicates the swap space is below the minimum of 512 MB, while a WARNING indicates the swap space is less than the recommended amount (1024 MB), but more than the minimum.

Oracle recommends that swap space be **2 times** the amount of server memory. However, if the server has more than 1 GB of server memory, Oracle recommends that swap space be **1.5 to 2 times** that amount.

1   To see how much Swap space is currently configured, enter:

   swapinfo -fdrmt

This command displays the amount of Swap space in Megabytes. For example, if the server has 512 MB of memory, the minimum swap space should be **1024 MB (1 GB)**. To increase the amount of Swap space, continue with the following steps.

2   Launch SAM by entering:

   sam

3   Select the Disks and File Systems option. When the option is highlighted, press **Return**.

4   From the Disk and File Systems Manager menu of SAM, select the Logical Volumes option. When the entry is highlighted press **Return.** Wait for a short time while SAM retrieves the logical volume information.

After a few seconds you'll see several messages on the status line, including these:

> **Working ...**
> **Scanning the hardware ...**

5   Locate the Mbytes Available column and note the amount of swap space currently configured on the server. (For example, 512 MB.)

Note   If there is more than one swap space, make sure that the total of all of the swap spaces is equal to or greater than **1024 MB**, which is 2 times the 512 MB minimum amount of server memory.

6   Type **A** to select the Action option. From the Action menu, select the Create option and then press **Return**.

7   Press **Return** at the Select a Volume Group option, and then select the appropriate volume group (for example, **vg00**). Tab to **OK** and press **Return**.

8   Next, press **Return** at the Add New Logical Volumes option. Tab to the LV Name field and type in the name of your additional swap space logical volume (for example, **swap2**).

9   Tab to the LV Size: field and type the size of your logical volume. You can determine what number to enter into this field by completing the following formula:

  1024 MB - <current swap size> = # Mbytes

10   Next, tab to the Usage: field, press the **Space Bar**, select Swap Space and press **Return**. Then tab to the Swap Priority: field, press the **Space Bar**, select **1** and press **Return**. Tab to the **Add** button and press **Return**.

11   Tab to the **OK** button and press **Return** to create the logical volume.

12 When you're finished, press the **F8** key twice to exit SAM and return to the system prompt.

ERROR: New Oracle directory not yet defined.

The Wizard System Check reports an error if the server is lacking the specifically named /usr/ora/920 file system as the $ORACLE_HOME (i.e., location for the Oracle 9.2.0 software). This is not an error condition if you have a vacant file system dedicated for the Oracle 9.2.0 software (or if you already have Oracle 9.2.0 installed). You will indicate that file system's name during the Wizard Update.

If you already have a file system dedicated for Oracle 9.2.0, it should meet the following requirements:

• Total space must be at least:

   3.7 GB

• Usable free space must be at least:

   3.5 GB

- It must have the proper permissions (755) and ownerships (e.g., oracle:dba or equivalent).

- It must **not** also be the home directory ($HOME) for the Oracle user.

- It must **not** be the same file system as that which contains the current version of Oracle.

The following steps instruct you on creating a file system that meets the above criteria.

Check Available Free Space

Make sure you have enough extra disk space available in your volume group before adding the file system. Follow these steps:

1 Use the **vgdisplay** command to display file system space. Enter:

vgdisplay -v <volume_group_name> | more

where <volume_group_name> is the name of the volume group, such as vg00, where you're planning to create the new logical volume.

You will see a display similar to the following screen. (The screen shown below is an EXAMPLE screen only. Your screen contents will be different from the example shown.)

The first section of the display contains information about the entire volume group.

Multiply the physical extent size (PE Size) by the number of free physical extents (Free PE) to determine the amount of free space in the volume group.

In the following example, the PE Size is 4 MB and the number of Free PE is 820. The product of these numbers is 5376 MB, which is plenty of room for the new logical volume.

```
--- Volume groups ---
VG Name                   /dev/vg00
VG Write Access           read/write
VG Status                 available
Max LV                    255
Cur LV                    26
Open LV                   26
Max PV                    16
Cur PV                    1
Act PV                    1
Max PE per PV             2000
VGDA                      2
PE Size (Mbytes)          4
Total PE                  2047
Alloc PE                  703
Free PE                   1344
Total PVG                 0
Total Spare PVs           0
Total Spare PVs in use    0
...
```

Create a Logical Volume for Oracle 9.2.0 Software

In this section, you'll create the $ORACLE_HOME file system for the Oracle 9.2.0 software. It will be separate from the $ORACLE_HOME

you currently use, and it will also be separate from the Oracle user's home directory.

Note   For **HP ServiceGuard** users, the procedures in this section need to be done only on the production server(s), not the failover server(s). During the failover testing, the file systems will be reproduced on the failover server.

Note   The following procedure assumes these conventions:

> **/usr/ora/920** is the new Oracle software file system.
> **/usr/ora/806** or **/usr/ora/817** is the current Oracle software file system.
> **oracle** is the current Oracle user.
> **dba** is the current Oracle user's primary group.

/usr/ora/920 is the recommended mount point for Oracle 9.2.0.

1   Verify that you are logged on as **root** user, and start CDE or X Windows (if you have not already done so.)

2 Use SAM to create the file systems and logical volumes for the Oracle software and archive redo logs. Launch SAM by entering:

    sam

3 Select the Disks and File Systems option.

4 From the Disk and File Systems Manager menu of SAM, select the Logical Volumes option.

5 From the Action menu, select the Create option.

6 Select the appropriate volume group for the logical volume

For **MC/ServiceGuard** users, you need to select the volume group containing the disk array.

Press Define New Logical Volume(s).

7 In the LV Name field, type **ora920**.

Note HP-UX uses a certain amount of space in a logical volume for "overhead" for headers, tuning, and troubleshooting purposes, so the total size is always larger than the amount of free space available in the file system. In addition, Hierarchical File Systems and Journaled File Systems require different amounts of overhead. To make sure the file system has enough **free** space for the Oracle software, you need to make the **total** size of the logical volume large enough.

The minumum **free** space required for Oracle 9.2.0 server software is **3.5 GB** on HP-UX 11i. So when you create the logical volume, you need to use the following numbers, depending on the file system type:

                                                                HP-UX 11i
 Hierarchical File System (HFS) . . .. 4000 MB
 Journaled File System (VxFS) . . . . 3700 MB

in HP-UX 11i, the default file system type is Journaled (VxFS).

System Administrators of Full Use Oracle sites who are planning to

install all of the Oracle products, should consult the Oracle documenta-
tion for size requirements.

8   In the LV Size (Mbytes) field, type the appropriate size from the note
above.

9   Select the Modify FS Defaults button and then select either Hierar-
chical or Journaled File System.

10 Make sure the Usage: field is set to **File System**.

11 Type in the file system mount directory, **/usr/ora/920**, then click **add**.

12 If you wish to create a logical volume for archive redo logs, repeat
steps 5 through 11 using the following entries:

LV Name	arch920
LV Size (Mbytes)	100 *
Mount Directory	/usr/ora/arch920

* The size of the optional arch920 logical volume can be larger or

smaller, depending on the volume of system activity and on the frequency of backups.

13 When you're finished adding the /usr/ora/920 and optionally, the /usr/ora/arch920 file systems, tab to **OK** and press **Return**.

14 At the Create New Logical Volumes screen, tab to **OK** and press **Return**.

15 The new logical volume has been created, and you can exit SAM.

Note The Wizard will set the permissions of **/usr/ora/920** (and **/usr/ora/ arch920**, if necessary) as well as issue a message that the change was made.

Non-Production Mode Error Corrections

These steps cannot be performed during production mode. They will either degrade performance, can only be achieved while Image Services is in a down or backup state, or can only be performed just prior to starting the Wizard Update.

WARNING: System has only nn MB of RAM.

The server must have a minimum of **512 MB of memory**.

To see how much memory is currently installed in the server, enter the **getmem** command:

/usr/sam/lbin/getmem

The System Administrator should install additional memory according to HP specifications and run the System Check again.

ERROR: You must be running 64-bit HP-UX 11.11 or greater to continue.
ERROR: Cannot upgrade Oracle with Image Services for HP-UX 10.20.

The Pre-Update System Check will issue an error if the HP-UX version is less than HP-UX 11i (64 bit). Image Services 4.0.0 is not supported on any HP-UX version less than HP-UX 11i. Refer to for the recommended update paths for this release.

Before you update your FileNet Image Services software to release 4.0.0, your server must already be running:

HP-UX 11i (64 bit)

This procedure does **not** include an update for the HP-UX operating system.

ERROR: Libraries /usr/lib/libX<xx>.sl must exist.

HP-UX Patches

After installing 64-bit HP-UX 11i, go to the FileNet Web site **http://www.css.filenet.com** and log into Customer Service & Support. Click on:

> **Product Tech Info**
> **Image Services**
> **Compatibility & Dependency**
> **IS 4.0.x**

Select your operating system from the list, and review the patch recommendations and requirements. Make sure the most recent patch bundle has been installed.

HP-UX Bug

Due to a known HP bug (Doc. id: KBRC00003627), the default HP-UX 11i (64-bit) operating system installation does not create a few required

X library symbolic links. These links must be created manually before starting Oracle9i installation.

As **root** user, run the following commands to create the required links:

```
cd /usr/lib
ln -s /usr/lib/libX11.3 libX11.sl
ln -s /usr/lib/libXIE.2 libXIE.sl
ln -s /usr/lib/libXext.3 libXext.sl
ln -s /usr/lib/libXhp11.3 libXhp11.sl
ln -s /usr/lib/libXi.3 libXi.sl
ln -s /usr/lib/libXm.4 libXm.sl
ln -s /usr/lib/libXp.2 libXp.sl
ln -s /usr/lib/libXt.3 libXt.sl
ln -s /usr/lib/libXtst.2 libXtst.sl
```

ERROR: Unable to obtain release number of installed IS Software.
ERROR: Only Updates from Image Services 3.5.0, 3.6, or 4.0.0 are supported.

The Pre-Update System Check prevents any attempt to update from an unsupported version of Image Services; that is, any version less that IDMIS 3.5.0. You must update to a base version of Image Services (3.5.0 or later) in order to update to Image Services 4.0.0. Refer to **"Update Paths to Image Services 4.0.0" on page 25** for the recommended update paths for this release.

After you have updated to a base version of Image Services software, make sure it is fully operational. Running the Wizard Update with a faulty Image Services base version will yield more error conditions.

ERROR: Unsupported Oracle version for Image Services.
ERROR: Oracle must be release n.n.n to Upgrade to Image Services 4.0.0.
ERROR: Image Services must be release 4.0.0 to install Oracle only.

The only valid starting points for this update are:

> **Image Services 3.5.0 (SP1, SP2, or SP3) and Oracle 8.0.6**
> **Image Services 3.6 (SP1, SP2, or ESE) and Oracle 8.1.7**
> **Image Services 4.0.0 and Oracle 9.2.0**

Note Database Administrators of Site-controlled Oracle installations are responsible for updating their Oracle software. Refer to the *Guidelines for Installing and Updating Oracle Software for UNIX Servers*.

Oracle must be updated to a version that corresponds to the currently installed Image Services software. See **"Update Paths to Image Services 4.0.0" on page 25**.

ERROR: Only nn MB of free space is available on /, at least 1 MB is required.
ERROR: Only nn MB of free space is available on /tmp, at least 16 MB is required.
ERROR: Only nn MB of free space is available on /usr, at least 3 MB is required.

ERROR: Only nn MB of free space is available on /var, at least 20 MB is required.
ERROR: Only nn MB of space is allocated for /fnsw, at least 220 MB is required.
ERROR: Only nn MB of space on /fnsw is free, at least 40 MB of free space is required.
ERROR: Only nn MB of space is allocated for /fnsw/local. At least 200 MB is required.
ERROR: Only nn MB of space on /fnsw/local is free. At least 40 MB of free space is required.
ERROR: Only nn MB of space is allocated for /fnsw and /fnsw/local, at least 420 MB is required.
ERROR: Oracle 9.2.0 directory is only nn MB, requires 3700 MB.
ERROR: Oracle 9.2.0 parent directory of /usr/ora/920 has only nn MB free space, requires 50 MB.

The Pre-Update System Check displays an error message if a specific file system or logical volume is not large enough or requires additional free space.

Display the current file system space information by entering:

bdf

Make sure that / (root), /tmp, /usr, and /var have enough **free** space, using the sizes shown in this table:

File System	Required Free Space
/ (root)	1 MB
/tmp	16 MB The Wizard uses this space for copying files.
/usr	3 MB
/var	20 MB

To expand one of these file systems, skip to the section, **"Expand /tmp, /usr, or /var" on page 121**.

Make sure that /fnsw, /fnsw/local, and Oracle have enough **total** space, using the sizes shown in this table:

File System	Total Space	Free Space
/fnsw	220 MB	40 MB
/fnsw/local	200 MB	40 MB
The directory above the new $ORACLE_HOME (e.g., /usr)	50 MB	50 MB
/usr/ora/920	3.7 GB	3.5 GB

To expand a logical volume, follow these steps:

1   As **fnsw** user, make sure the Image Services software is stopped. Enter:

   initfnsw -y stop

2   Make sure that all processes have been stopped by entering:

whatsup

If the resulting display shows that any processes, such as TM_ daemon, are still active, enter:

killfnsw -DAy

The -D option kills FileNet daemons (e.g. Task Manager). It can be specified if the TM_daemon process is to be terminated. Normally, this process stays running across initfnsw stop cycles, but on occasion, it is necessary to terminate TM_daemon as well.

The -A option removes all IPC segments.

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

3   Logout completely, and then log back in as **root** user. (For the following steps to work, you cannot **su** from **fnsw** user to **root** user.)

4   Change to the root directory:

cd /

5 Again, as **root** user:

- Unmount the Oracle control files. For example:

    umount /fnsw/local/oracle/control0
    umount /fnsw/local/oracle/control1
    umount /usr/ora

Note If you receive a Device Busy message, the TM_daemon is probably still active. Go back to Step 2 and kill any active processes.

- Then unmount the other fnsw file systems. For example:

    umount /fnsw/local   (This file system may not exist
                               on your server)

    umount /fnsw

6 As **root** user, launch SAM by entering:

    sam

7   Select the Disks and File Systems option. When the option is high-lighted, press **Return**.

8   From the Disk and File Systems Manager menu of SAM, select the Logical Volumes option. When the entry is highlighted, press **Return.**

9   Press the **F4** key to access the menu bar.

10   Type **A** to select the Action option.

11   Select the Increase Size... option from the Actions menu, and press **Return**.

12   Tab to the Increase to New Size field. Then, depending on the type of file system, type the appropriate new fnsw logical volume size in the New Size (Mbytes): field.

Table 3-3: Logical Volume Sizes for /fnsw and /fnsw/local

File System	**Hierarchical (HFS)**	**Journaled (VxFS)**
/fnsw	252 MB	236 MB
/fnsw/local	232 MB	216 MB

Note   HP-UX uses a certain amount of space in a logical volume for "over-head" for headers, tuning, and troubleshooting purposes, so the total size is always larger than the amount of free space available in the file system. In addition, Hierarchical File Systems and Journaled File Systems require different amounts of overhead. To make sure the file system has enough **free** space, you need to make the **total** size of the logical volume large enough.

So if you need to expand /fnsw or /fnsw/local, use the numbers in Table 3-3, depending on the file system type.

Journaled (VxFS) is the default file system type for HP-UX 11i.

13   Tab to the OK button after you have typed the new size, and press **Return**.

14   Press **Return** again if a Messages menu displays.

Note   The file system mounted on this logical volume will be remounted to reflect its new size.

15 Repeat Steps 9 through 14 for the other logical volume, if necessary.

16 When you're finished, press the **F8** key twice to exit SAM and return to the system prompt.

Expand /tmp, /usr, or /var

If you need to expand one of these file systems, please consult with the System Administrator for advice and consent.

1 As **fnsw** user, make sure the Image Services software is stopped. Enter:

initfnsw stop

2 Make sure that all processes have been stopped by entering:

whatsup

If the resulting display shows that any processes, such as TM_ daemon, are still active, enter:

---

killfnsw -DAy

The -D option kills FileNet daemons (e.g. Task Manager). It can be specified if the TM_daemon process is to be terminated. Normally, this process stays running across initfnsw stop cycles, but on occasion, it is necessary to terminate TM_daemon as well.

The -A option removes all IPC segments.

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

3 The server needs to be in single-user mode to increase the size of /tmp, /usr, or /var, so reboot the server by entering:

shutdown -r 0

4 During the boot sequence you should see a prompt similar to this:

To override, press any key within 10 seconds.

Press any key.

5 Answer **Y** for Yes to the following prompts:

> Boot from primary? **Y**
>
> Interact with IPL? **Y**

At the **ISL** prompt, boot to single-user mode: **HPUX - is**

6 After a minute or so, press **Enter** to display the system prompt. (The server may still appear to be processing.)

7 Extend the logical volume by entering:

> **lvextend -L 60 /dev/vg00/lvol6**

where:

> **60** is the new total size of the logical volume in MB.
> **/dev/vg00/lvol6** is the logical volume path shown on the bdf display.

Note   This example shows how to increase **/tmp**. The commands are essen-
tially the same for expanding **/usr** and **/var**. Be sure to specify the
appropriate volume group and lvol for the volume you want to expand.

   8   Extend the file system by entering:

          extendfs /dev/vg00/rlvol6

          where:

                 /dev/vg00/rlvol6 is the raw logical volume path.

   9   After extending the logical volume and file system, mount it by
          entering:

          sync
          mount /tmp

Note   This example shows /tmp. Mount the volume you expanded.

  10   Display the new file system space information by entering:

bdf

Make sure that logical volume you expanded now has enough space to continue the System Check.

11   Reboot the server normally to return to multi-user mode.

shutdown -r 0

Note   If file systems are not shut down cleanly, you may need to **fsck** the logical volume.

ERROR: FileNet Image Services is up (n processes).

Ignore this error message if you ran the system check while your system was in production mode. You will be reminded to shut down Image Services prior to running the Wizard Update.

ERROR: nch_check failed to contact Image Services Root server.

The Wizard Update could not locate the Root server. Check to make sure the Root server is up and running.

ERROR: Oracle DB: xxx is up (n processes).

Ignore this error message if you ran the system check while your system was in production mode. You will be reminded to shut down Image Services (and Oracle) prior to running the Wizard Update.

ERROR: Database configuration is in error. Run /fnsw/bin/spacerpt for details.

The System Check has detected a serious database inconsistency related to coexistence mode. It's possible that duplicate RDB objects exist. Refer to the spacerpt output created in Chapter 2 (**"Run spacerpt" on page 53**), and contact the Upgrade/Install Assurance Team to resolve this problem.

ERROR: Duplicate RDB object found in CDB file at line *nn*. This must be resolved before the update can continue.

Contact the Upgrade/Install Assurance Team to resolve this problem. (For additional information refer to Release Note 193 and STR 48503.)

ERROR: Oracle user must have a unique home directory.

You will receive a System Check error message if the Oracle user home directory is the same as the current Oracle software executables directory. If /usr/ora/920 already contains Oracle software, it must not be the location for the oracle user when the oracle user logs in. You shouldn't use /usr/oracle for either function at the conclusion of this update.

If your oracle user's home directory is already separate from the Oracle executables directory, skip to .

The following procedure creates a new oracle user directory.

Note   The following example uses these conventions:

> **/usr/ora/806** or **/usr/ora/817** is the old Oracle software directory.
> **/usr/ora/920** is the new Oracle software directory.
> **/home/oracle** is the **oracle** user's home directory.
> **oracle** is the Oracle user.
> **dba** is the Oracle group.

If you have or will set up your own naming conventions for Oracle users and groups, you need to adhere to the following:

> Your Oracle RDBMS group must have **fnsw** as a member.
> The **fnusr** group most have the Oracle user as a member.

You can check group memberships by looking at the /etc/group file.

1   As **oracle** user, enter:

> **cd**
> **pwd**

If the oracle user's home directory is in the same directory path as the current Oracle RDBMS software, you need to create a separate, new home directory for the oracle user.

2 Log off as **oracle** user while you perform the next several steps.

3 As **root** user, create a new directory located outside the path of the Oracle software. You may wish to place the Oracle user's home directory in the same path as other users' home directories. For example:

usermod -d /home/oracle oracle

4 Then copy the hidden environment settings files from the old home directory to the new directory. For example, you might enter:

cp -p /usr/oracle/.??* /home/oracle

where /usr/oracle is the current home directory and /home/oracle is the new home directory. The -p option in the command shown above preserves the modification dates of the files being copied.

> **Note** The Database Administrator is responsible for copying any other non-Oracle software files to be kept from the old home directory to the new home directory.

   5   Log back on as **oracle** user, and check to see that the oracle user's home directory is in the new location:

   cd
   pwd

ERROR: Kernel Parameter (xxx:nnn) is yyy. It should be at least zzz.

1 As a precaution, make a copy of the current /stand/system and /stand/ vmunix files. For example, enter:

cp /stand/system /stand/system.00*n*
cp /stand/vmunix /stand/vmunix.00*n*

where the file extension .00*n* is a number greater than 001.

2 Using SAM, check the **Pending Value** for the parameters shown below.

a As **root** user, enter:

sam

b Select the Kernel Configuration option.

c Then select the Configurable Parameters option, and check the **Pending Value** for the kernel parameters in the following order:

Important! These specific parameter values reflect FileNet requirements only. If you receive a "dependency error" when changing any of these parameters, change the dependent parameter mentioned in the error first.

Note Several new kernel parameters have been added to 64-bit HP-UX 11i, such as maxdsiz_64bit, maxssiz_64bit, maxtsiz_64bit, etc. Refer to HP_UX documentation for optimum settings for these parameters.

Table 3-4: FileNet Recommended Kernel Parameter Settings

Kernel Parameters	Recommended Minimum Settings
maxdsiz	268435456 (256 MB) 0x10000000 hex
maxfiles	512 (1024 for RES)
nproc	1005
maxuprc	400

Table 3-4: FileNet Recommended Kernel Parameter Settings, Continued

Kernel Parameters	Recommended Minimum Settings
nfile	1024 (2048 for RES) Although the minimum value for nfile is 1024, you may wish to set this value much higher. A value of 5000, for example, would be acceptable.
ninode	1085
semmns	2000
semmni	2000
semmap	2002
shmmax	536870912 (512 MB) 0x20000000 hex
shmseg	120
semmnu	1000

Table 3-4: FileNet Recommended Kernel Parameter Settings, Continued

Kernel Parameters	Recommended Minimum Settings
semume	500
msgmni	2048
msgseg	6640
msgtql	6640
msgmap	6642

Table 3-5: Oracle Recommended Kernel Parameter Settings

Kernel Parameters	Recommended Minimum Settings
bufpages	0
dbc_max_pct	1 to 10 **
dbc_min_pct	5
fs_async	0

Table 3-5: Oracle Recommended Kernel Parameter Settings, Continued

Kernel Parameters	Recommended Minimum Settings
maxfiles_lim	1024
nflocks	200
npty	60
o_sync_is_o_dsync	0

**The dbc_max_pct kernel parameter must be set to no higher than 10. A value of 7 would be acceptable. (The other FileNet and Oracle recommended kernel parameter settings are minimum values.

   (For further information on Oracle-recommended kernel parameter settings, refer to the Oracle Server Release Notes for HP 9000.)

   If the values displayed by SAM are **smaller** than any of the recommended values shown above, you must increase them.

3   If you do not need to make any changes to these kernel parameters, exit SAM and continue correcting other possible System Check errors. You're finished with this section.

If you DO need to make kernel parameter changes, continue with the next step.

4   Change the kernel parameter values by following these sub-steps:

a   Select the parameter you wish to change (for example, **maxfiles**). The parameter will then be highlighted.

b   On the menu bar, select the Actions option.

c   From the Actions menu, select the Modify Configurable Parameter option and press **Return**.

d   In the popup window that displays, the Specify New Formula/Value option should already be selected.

e   In the Formula/Value field, type the new value.

f   Tab to **OK** and press **Return**. When the popup window disappears, you should see the new value in the Pending Value column.

g Repeat sub-steps b through f for each parameter you need to change.

5 Exit Sam. If you made any changes to static variables, SAM asks if you want to rebuild the kernel. You **must** rebuild the kernel and reboot the server for your changes to take effect.

Tip If you exit SAM without rebuilding the kernel, you need to enter:

mk_kernel -0 /stand/vmunix
shutdown -r -y

These commands rebuild the kernel and reboot the server.

ERROR: Oracle software location environment variable is inconsistent in user profiles.

The value of the $ORACLE_HOME environment variable (the variable that points to the location of the Oracle software) is not the same for

the root, fnsw, and oracle users. The following steps will fix the problem.

1   Display the .profile file for each of the users:

> **su - <user_name>**
> **more .profile**

Note the value of $ORACLE_HOME for each of the users.

At least one of the .profile files contains a different value for $ORACLE_HOME. This variable should point to the current, pre-update location of the Oracle software.

2   Use a text editor, such as **vi**, to edit the appropriate .profile file to change the value of $ORACLE_HOME.

Rerun the System Check

After you have made the changes required by the Wizard System Check, return to **"Run the Wizard System Check" on page 60** and run the System Check again.

Important!	**Make sure the System Check runs with absolutely NO ERRORS before you continue with the Wizard Update in Chapter 4.**

4

Updating Image Services and/or Oracle

In this chapter you will make final server preparations, terminate all FileNet and Oracle processes, and start the Wizard Update.

CAUTION　It's crucial that the Oracle rollback segments have been expanded before attempting to install Oracle9i. The steps for expanding the rollback segments are shown in the previous chapter under the heading, **"ERROR: Oracle rollback segments must be online and 1048576 bytes" on page 91**.

Prepare to Start the Wizard

Perform the preparation steps in this section when you are ready to start your update. Do **not** make these changes and then put the system back into production.

Back Up the System

You should make sure that you have a recent full back of the system before you proceed. This is especially important if you have made any changes to the system due to System Check errors.

Disable Oracle Archive Logging (if applicable)

Note   If this server has a Site-controlled Oracle instance, ask the Database Administrator to verify that Archive Logging has been disabled.

After Archive Logging has been successfully disabled, return to the section, **"Start the Image Services Software" on page 144**.

If Oracle is not installed on the server you are updating, skip to **"Make Additional Backups (if necessary)" on page 145**.

If Archive Logging is enabled on the server, you must disable it before you update the Oracle RDBMS software. Turning off Archive Logging will prevent non-essential records from being written to the log file and will speed the update.

1   As **fnsw** user, launch the FileNet System Configuration Editor by entering:

   fn_edit &

2   Click **OK** in the initial dialog box.

3   When the main System Configuration Editor window displays, click the Relational Databases tab.

   The Oracle sub-tab should be on top. If not, click the Oracle sub-tab to bring it to the front.

4 On the Oracle sub-tab, locate the **Log Archive Start** field. An **X** in this field indicates that Archive logging is turned off. If archive logging is already turned off, you may exit fn_edit (without saving changes) and skip to the section, **"Start the Image Services Software" on page 144**.

5 A check mark indicates that Archive logging is turned on. Turn archive logging off by clicking the field to place an **X** in it.

6 Exit the System Configuration Editor by selecting Exit from the File pulldown menu. Be sure to **save** your changes to the configuration database when you are prompted.

7 Rebuild the Oracle configuration files by entering:

    initfnsw -y stop
    killfnsw -DAy
    fn_build -a
    fn_util updaterdb

8 As **fnsw** user, start Oracle by entering:

fn_util startrdb

9   Make sure archive logging is turned off by entering as **fnsw** user:

sqlplus "/ as sysdba"

(The double-quotes are required; the space between **/** and **as** is optional.)

SQL> **archive log list;**

Database log mode should indicate "Archive Mode." Automatic archival should indicate "Disabled."

10   Exit from sqlplus by entering:

SQL> **exit**

Start the Image Services Software

As **fnsw** user, make sure the Image Services software is running by entering:

initfnsw restart

Make Additional Backups (if necessary)

This is your last opportunity to make a full system backup before the Wizard Update begins. You should consider performing a backup if the system has been placed in production mode during or after the Wizard preparation steps, or if you've made any changes to the Oracle configuration. You should also consider clearing cache objects as much as possible.

Refer to your *Image Services System Administrator's Companion for UNIX* for complete information on performing a system backup.

Disable FileNet-Related Cron Jobs

There may be some FileNet-related cron jobs that access the FileNet databases. You will need to disable these cron jobs for the duration of the update. You will re-enable the cron jobs after the update is complete.

The crontab files are located in /usr/spool/cron/crontabs.

Reboot the Server

Prior to starting the Wizard, you should reboot the server. This will ensure that all logical volumes are synchronized and any residual errors are identified.

1 As **root** user, move to the root directory and reboot the server by entering:

> **cd /**
> **initfnsw -y stop**
> **shutdown -ry 0**

2 If Image Services is not configured to start automatically when the server reboots, wait until the server is finished booting, then start Image Services manually by entering:

> **initfnsw start**

3   Read the messages in the Image Services event log after the server and the Image Services software are up. Correct any error conditions before proceeding. You can't proceed with the update if the base version of Image Services has errors.

Exit from FileNet Programs

Exit IS Toolkit (WAL) Applications

Exit from any Image Services Toolkit (WAL) applications currently running on the server. (Later in this procedure you will run the killfnsw command, which clears the Image Services shared memory.)

As **root** user, enter:

/fnsw/client/bin/wal_purge

Stop FileNet Software

Note   In a multi-server system, you must stop the FileNet software in the fol-
lowing order:

    1 - the application server(s)
    2 - the storage library server(s)
    3 - the root server

Startup should be in the opposite order with the root server first, fol-
lowed by the storage library server(s), and finally the application
server(s).

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

    initfnsw -y stop

2   To check what FileNet processes are currently running, enter:

    whatsup

Note   Running the whatsup command causes the TM_daemon to start.

3   Kill all remaining FileNet processes displayed by entering:

   killfnsw -DAy

4   To check that all the Image Services processes have been killed, enter:

   ps -ef | grep fnsw

Note   You can also use the grep command to check for the COR_Listen processes.

5   If any fnsw processes remain active, including TM_daemon, kill each one explicitly by entering:

   kill <process_id>

   where <process_id> is the process number shown in the display in step 4.

Upgrade the Operating System to HP-UX 11i (64-bit) (if necessary)

If the current operating system is HP-UX 10.20, HP-UX 11.0, or HP-UX 11i (32-bit), take this opportunity to upgrade to HP-UX 11i (64-bit). The System Administrator should contact the HP representative to assist with this task, if needed.

Important! Be sure to upgrade the debugging software to an HP-UX 11i-compatible version as described in the section, **"Wildebeest 3.1.x" on page 74**.

Due to a known HP bug (Doc. id: KBRC00003627), the default HP-UX (64-bit) operating system installation does not create a few required X library symbolic links. These links must be created manually before starting Oracle9i installation. To create these links, you must have superuser privileges, as the links are to be created in the /usr/lib directory. As **root** user, run the following commands to create the required links:

cd /usr/lib
ln -s /usr/lib/libX11.3 libX11.sl
ln -s /usr/lib/libXIE.2 libXIE.sl
ln -s /usr/lib/libXext.3 libXext.sl
ln -s /usr/lib/libXhp11.3 libXhp11.sl
ln -s /usr/lib/libXi.3 libXi.sl
ln -s /usr/lib/libXm.4 libXm.sl
ln -s /usr/lib/libXp.2 libXp.sl
ln -s /usr/lib/libXt.3 libXt.sl
ln -s /usr/lib/libXtst.2 libXtst.sl

Copy the Oracle Media

Server Types   Perform the procedures in this section on these servers:

Root/Index - (Multi-server installation)

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

Application - (Running WorkFlo Queue Services (WQS),
SQL Services, or VWServices)

Locate a directory that has enough space to hold the contents of all four Oracle CD-ROMs. You'll need a total of **3.0 GB**.

1 As **root** user, create four subdirectories in this directory and name them Disk1, Disk2, Disk3, and Disk4. For example, if you choose to use directory /ora_media, you would enter:

> **cd /ora_media**
> **mkdir Disk1**
> **mkdir Disk2**
> **mkdir Disk3**
> **mkdir Disk4**

Note Be sure to type the directory names exactly as shown! The Wizard is case-sensitive and looks for **Disk1**, **Disk2**, **Disk3**, and **Disk4**; not disk1, disk2, disk3, or disk4.

2 Mount the Oracle CD-ROM by completing the following sub-steps:

a   Using your preferred editor (for example, **vi**), edit the **/etc/pfs_ fstab** file by adding an entry similar to the following:

> **/dev/dsk/c2t2d0 /cdrom pfs-rrip xlat=unix 0 0**

where **/dev/dsk/c2t2d0** is the CD-ROM device file path and **/cdrom** is the mount point for the CD.

Note   If you're not sure of the CD-ROM device file path, use the command:

> **ioscan -fnC disk**

to display the system device information.

b   At the system prompt enter:

> **/usr/sbin/pfs_mountd &**
> **/usr/sbin/pfsd &**

c   Place the first Oracle CD (Disk 1) in the CD-ROM drive.

d   Enter the following command to mount the CD-ROM:

> **/usr/sbin/pfs_mount /cdrom**

3 To make sure the CD is mounted correctly, enter:

> **mount**

You should see the CD-ROM device listed.

4 Still as **root** user, copy the contents of this CD into the Disk1 directory you just created.

> **cd /ora_media**
> **cp -R /cdrom/* Disk1**

Note Depending on the speed of the CD-ROM device, copying the media can take up to an hour. Please be patient!

5 After the contents of the first CD have been copied, unmount the CD.

> **/usr/sbin/pfs_umount /cdrom**

6 Remove Oracle Disk 1 from the CD-ROM drive.

7   Insert Disk 2. Mount the second CD by entering:

   /usr/sbin/pfs_mount /cdrom

8   Copy the contents of the second Oracle CD to the Disk2 directory you just created:

   cp -R /cdrom/* Disk2

9   After the contents of Disk 2 have been copied, unmount the CD-ROM.

   /usr/sbin/pfs_umount /cdrom

10   Insert Disk 3. Mount the third CD by entering:

   /usr/sbin/pfs_mount /cdrom

11   Copy the contents of the second Oracle CD to the Disk3 directory.

   cp -R /cdrom/* /Disk3

12   After the contents of Disk 3 have been copied, unmount the CD-ROM.

/usr/sbin/pfs_umount /cdrom

13   Insert Disk 4. Mount the fourth CD by entering:

/usr/sbin/pfs_mount /cdrom

14   Copy the contents of the second Oracle CD to the Disk3 directory.

cp -R /cdrom/* /Disk4

15   After the contents of Disk 4 have been copied, unmount the CD-ROM.

/usr/sbin/pfs_umount /cdrom

16   Remove Oracle Disk 4 and insert the FileNet Image Services 4.0.0 for HP-UX media into the CD-ROM drive. Mount the CD by entering:

mount /dev/dsk/c2t2d0 /cdrom

17   To make sure the CD-ROM mounted successfully, enter:

mount

You should see the CD-ROM device listed.

18   You were instructed earlier to create an Oracle 9.2.0 file system if one did not already exist. If it **still** does not exist, quit the Wizard Update and follow the instructions for .

Run the Wizard

Server Types   Perform the procedures in this section on **all servers**.

Note   Be sure to update the Root/Index server before any other servers in the system.

Your server is now ready for the update. This section contains instructions for loading the current release of Image Services software on your server.

Start the Wizard

1 If you are running this program from a remote terminal, make sure you export the display from the server to your current terminal.

- For Bourne or Korn shell, enter:

   export DISPLAY=<host_identifier>:0

- For C shell, enter:

   setenv DISPLAY <host_identifier>:0

where <host_identifier> is the server identifier, either a name or IP address.

2 If you're using a remote terminal, also make sure you allow access to the host display by entering this command at the remote terminal and at the server:

   xhost +

Note	If you used the su command to switch from any user to **root** user, you must enter the xhost + command at the original CDE login window.

Tip	You can test your DISPLAY setting by entering:

> **xclock &**

If the clock appears on your terminal screen, the DISPLAY variable was exported correctly. If you don't see the clock, try the export or setenv command using the IP address instead of the server name.

3 As **root** user, make sure you're at the root directory, then launch the Wizard setup program.

> **cd /**

CAUTION	Do **NOT cd** to /cdrom to run the setup program. Run setup from the / (root) file system.

- For graphical mode, enter

/cdrom/setup

To run the Wizard on an ASCII terminal, you can use either TTY mode or Silent mode.

- **TTY mode** can be used on non-graphical terminals.

  For TTY mode (non-GUI), enter:

  /cdrom/setup -t

  You can use TTY mode for both the System Check and Setup.

- **Silent mode** can only be used for Installing Oracle and Image Services, not for running the System Check. It displays text output on the local terminal, and uses environment variables to determine the location of the software media.

  Then, as **root** user, set the following environment variables to the appropriate locations.

  For Korn or Bourne shell, enter:

export FN_CDROM_PATH=<path>
export ORA_CDROM_PATH=<path>
export ORACLE_NEW_HOME=<path>   (e.g., /usr/ora/920)
export ORA_TMP_PATH=<path>   (e.g., /oratmp)

For C-shell, enter:

setenv FN_CDROM_PATH <path>
setenv ORA_CDROM_PATH <path>
setenv ORACLE_NEW_HOME <path>   (e.g., /usr/ora/920)
setenv ORA_TMP_PATH <path>   (e.g., /oratmp)

To begin the Wizard Installation of both Oracle and Image Services in Silent mode, enter either:

$FN_CDROM_PATH/setup -s   (reboot when finished)
  - or -
$FN_CDROM_PATH/setup -S   (NO reboot when finished)

4   If you enter the setup command in graphical mode, you'll see the following Wizard screen:
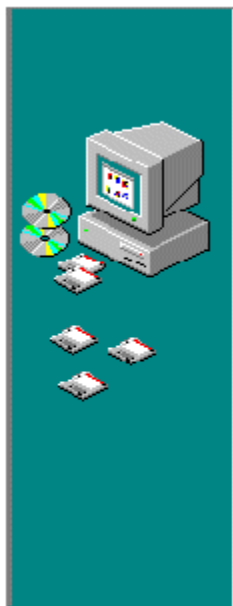
FileNET

* Welcome to Image Services Setup Wizard. This
  tool will guide you through the setup procedure.

| System Check | Verify system configuration only.
No system changes are made.

| Upgrade Image Services | Upgrade Image Services Only

| Upgrade Oracle | Upgrade Oracle Only

| Upgrade Oracle and Image Services | Upgrade Both

| Quit |

WARNING: This program is protected by copyright
law and international treaties.

You have the following choices:

Choice	Action
System Check	Checks the server for prerequisites. Exits the program. Outputs events to appropriate log: /fnsw/local/logs/wizard/SysChk_yyyymmdd_ hhmm.
Upgrade Image Services only Upgrade Oracle only * Upgrade Both	Choose one of these options to update the appropriate software. Each option performs preliminary Wizard system checks. Exits during the system check if the server prerequisites aren't met. Goes on to perform all requisite update operations depending on the server configuration. Outputs events to /fnsw/local/logs/wizard/yyyymmdd_ hhmm.
Quit	Exits the Wizard Update.

* The Upgrade Oracle Only option is designed to install subsequent versions of Oracle9i that are compatible with Image Services 4.0.0.

5 Select one of the three **Upgrade** options if you've passed the Wizard System Check in Chapter 2. (If you want to exit the Wizard at this point, select **Quit**.)

Note Read the screen instructions and online help for guidance throughout the Wizard Update process. From this point forward, this manual will only highlight the major points during the Wizard.

The buttons available on all Image Services Wizard Update dialog/ message boxes behave in the following manner:

- To store the choices made in the current step, click **Next**.

- To exit the Wizard Update immediately click **Quit**. If you have completed the update up to a specific checkpoint and you quit the update program, the Wizard will track that checkpoint. This will allow you to restart later.

- To access the on-line Wizard help, click **Help**.

6 If you are installing Image Services software or both Image Services and Oracle, the FileNet End User License Agreement displays. Please

take a few moments to read it. By installing the Image Services 4.0.0 software, the customer agrees to be bound by the terms of this agreement. Click **Next** when you're ready to continue.

```
╳ Install_IS                                                          ☒


   Click NEXT> if you agree to the End
   User License Agreement.

   ┌────────────────────────────────────────────────────────────────┐┌┐
   │              FileNET End User Software License                  ││↑│
   │                                                                 │└┘
   │ READ CAREFULLY BEFORE INSTALLING.  IF YOU DO NOT AGREE WITH     │
   │ THESE TERMS AND CONDITIONS, OR THE TERMS AND CONDITIONS IN      │
   │ YOUR SOFTWARE LICENSE AGREEMENT WITH FileNET, DO NOT INSTALL    │
   │ THE SOFTWARE.  BY INSTALLING THE SOFTWARE, YOU AGREE TO BE      │
   │ BOUND BY THE TERMS OF THIS LICENSE.                             │┌┐
   └────────────────────────────────────────────────────────────────┘└┘
   ┌┐────────────────────────────────────────────────────────────────┐
   └┘                                                                  ↗

         ┌─ < Back ─┐  ┌─ Help ─┐  ┌─ Quit ─┐  ┌┌─ Next > ─┐┐
         └──────────┘  └────────┘  └────────┘  └└──────────┘┘
```

7 If you are installing IS or both IS and Oracle, and if your server completed the pre-update requirements, you will be prompted if you wish to continue with the update. Select **Yes** and click **Next** to continue.
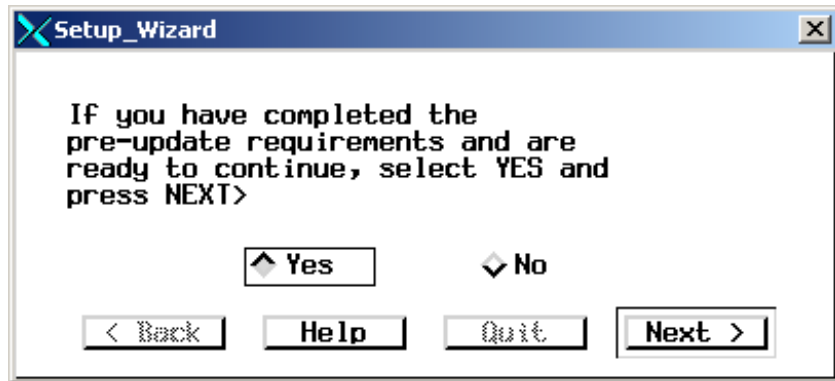
8 In the next screen, enter the directory where the Oracle CD contents are located and click **Next**. (If ORA_CDROM_PATH is not set.)

```
X System_Check                                        ×

        Enter complete path to directory
        where Oracle CD contents are
        located.

    ┌─────────────────────────────────────────┐
    │ /ora_media                               │
    └─────────────────────────────────────────┘

    ┌─ < Back ─┐  ┌─ Help ─┐  ┌─ Quit ─┐  ┌ Next > ┐
```
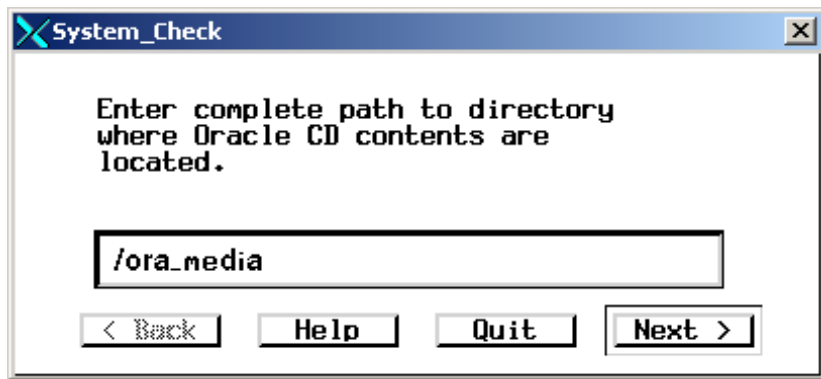
9 If you're installing both Image Services and Oracle, or just Oracle soft-ware, and the Wizard can't find the **specifically named /usr/ora/920 file system**, you will be prompted to specify the destination file system for Oracle 9.2.0.

Enter the file system where you want Oracle 9.2.0 to be installed. **It can't be the same location as your Oracle8 software (e.g., /usr/ora/806 or /usr/ora/817).**

10   You'll see a window similar to this:

```
X Setup_Wizard                                            x

    Setup Wizard detected the following
    parameters. Click NEXT> if you want
    the Setup Wizard to Install Oracle
    9.2.0 and Upgrade to Image Services 4.0.0

    ┌─────────────────────────────────────────────────┐
    │Existing System is: Image Services 3.5.0         │
    │Oracle Status:                                   │
    │Release: 8.0.6                                   │
    │    Home: /usr/ora/806                           │
    │     SID: IDB                                    │
    │    User: oracle                                 │
    │                                                 │
    └─────────────────────────────────────────────────┘

        < Back      Help      Quit      Next >
```

---
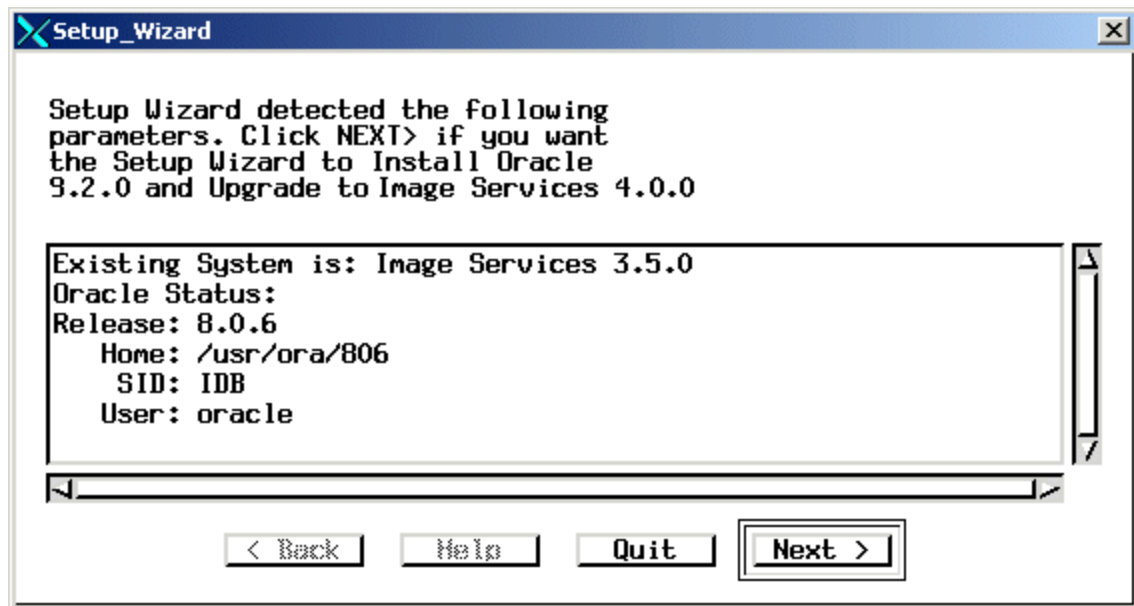
11   Take note of the listed parameters. If they are accurate and you wish to continue with the update, press **Next**.

Update to Oracle 9.2.0

If you selected **Install Oracle** or **Install Both**, and the Wizard detects that either Oracle 8.0.6 or 8.1.7 is on the server, the Wizard automatically installs Oracle 9.2.0.

The Wizard installs Oracle 9.2.0 in the file system you specified at the start of the update. This may take from **1 to 3 hours** depending on your server speed.

There is no operator intervention required.

Update to Image Services 4.0.0

If you selected **Install Image Services** or **Install Both**, the following will be executed during this phase of the Wizard:

- Loading FileNet software from the Image Services media.
  This may take from **5 to 20 minutes**.

- Installing Oracle patches from the Image Services media.
  This may take from **2 to 5 minutes**.

- Running Oracle catalog scripts.
  This may take from **30 to 90 minutes**.

Note If the Wizard displays this message:

    ORAUPGRADE failed, check the <log file> for errors

refer to **"Interpret Oracle Messages" on page 256**.

When the Image Services update is complete, you'll see the following screen. This signals the end of the update and asks you to reboot the server.
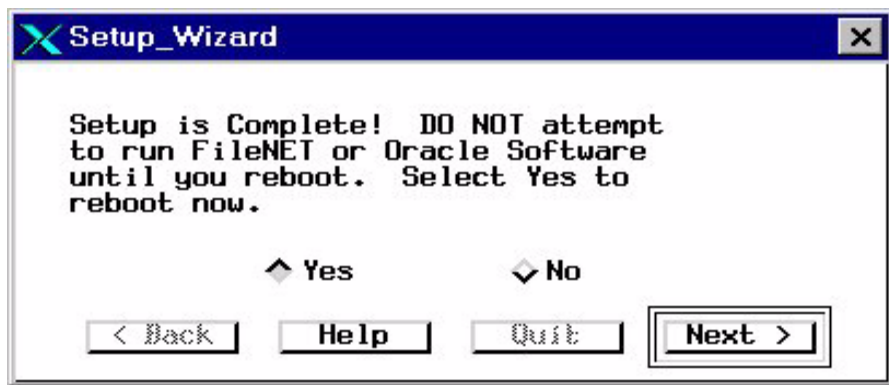
You must reboot the server in order to complete the update. Critical finishing processes will not complete unless a reboot occurs. Click **Yes** followed by **Next** to reboot.

Another Setup complete window displays. Click **Next** to continue.

CAUTION	Do not do anything pertaining to Image Services on your server until after the server completes rebooting.

Note	This is the first time you've restarted the FileNet software since updating to Image Services 4.0.0, so be on the alert for **cfg_verify** errors described in the section, **"Automatic HP-UX Kernel Parameter Checking" on page 176**.

Install Oracle Patches

If you have not already done so, install Oracle patch set 2 and Interim Patch #2645455 (for HP-UX) to complete the installation.

- To install Oracle Patch Set 2, see **"Appendix F – Installing Oracle Patch Set 9.2.0.2" on page 285**

- To install the Oracle Interim Patch, see **"Appendix G – Installing Oracle9i Data Server Interim Patch 2645455" on page 298**

After the server has rebooted and the Oracle patches have been successfully installed, continue with the next chapter.

5
Completing the Update

This is the final phase of the update procedure. In this chapter you will verify that the update was successful. You need to:

- Install the Required Pre-Startup Fixes

- Verify the Configuration Database and Other Files

- Perform Various System Tests

- Re-enable cron Jobs

Login and Set the Display Variable

1 Login as **fnsw** user.

2 If you are running this program from a remote terminal, make sure you export the display to your current terminal.

- For Bourne or Korn shell, enter:

  export DISPLAY=<host_identifier>:0

- For C shell, enter:

  setenv DISPLAY <host_identifier>:0

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

3 If you are running this program from a remote terminal, make sure you allow access to the host display by entering the following at the remote terminal and at the server:

xhost +

> **Note**   If you used the **su** command to switch from any user to **root** user, then you must enter **xhost +** in the original CDE login window.

Automatic HP-UX Kernel Parameter Checking

After you update to Image Services 4.0.0, the Image Services software automatically verifies the kernel parameter settings every time you start the FileNet software. The new **cfg_verify** program runs automatically during every Image Services start.

If it detects an invalid kernel parameter, **cfg_verify** logs an error for each incorrect parameter and shuts down the FileNet software. For example, you may see a message similar to this during Image Services startup:

Exec of 'cfg_verify' returned non-zero status of '0x1'.

To fix the error, read the system log to determine which kernel parameter is set incorrectly. Use the **vl** tool to find the cfg_verify errors.

From any directory, enter:

vl

The system log may contain an entry similar to this:

```
03/11/28 10:17:06.222 212,4,7 <root> cfg_verify (2958) ... [WARNING]
cfg_verify: HP.HPUX.MAXFILES (0x80 )
           must be greater than or equal to ( 0x100 )
```

In this case, the value of the maxfiles kernel parameter was set to an incorrect value of 0x80, the hexadecimal equivalent of 128 decimal. However, the value of the maxfiles parameter must be at least 256 decimal, or 100 hexadecimal. (Note that FileNet recommends a minimum value of 512 [200 hex]. The minimum value for remote entry servers is 1024 [400 hex].)

You would need to use SAM to modify the incorrect kernel parameter maxfiles to a recommended value of 0x100 (512 decimal) or 0x200 (1024 decimal) and reboot the server to make it take effect.

Note	Even though SAM displays the kernel parameters in decimal, you can enter modified values in hexadecimal, e.g.: 0x100 SAM automatically translates the hex value to decimal for you.

Exit SAM. If you made any changes to static variables, SAM asks if you want to rebuild the kernel. You **must** rebuild the kernel and reboot the server for your changes to take effect.

Fix all invalid kernel parameters before trying to start Image Services again.

Install the Oracle Patch Set

After the initial installation of Oracle 9.2.0, you need to install the appropriate Oracle Patch Set. If you have not already done so, install the Oracle Patch Set (see **"Appendix F – Installing Oracle Patch Set 9.2.0.2" on page 285**) and the Oracle Interim Patch (see **"Appendix G – Installing Oracle9i Data Server Interim Patch 2645455" on page 298**).

Install the Required Pre-Startup Fixes

Server Types   Perform the steps in this section on **all servers**.

At this time, install only the fixes that directly relate to Image Services 4.0.0 initial configuration issues. Search through the Release Notes file for the key words **PRE-STARTUP** and **REQUIRED**.

Note   These are only the fixes required to start the FileNet Image Services software successfully. Install any other fixes after the update has been successfully competed.

You can retrieve these fixes from the CSS Worldwide Customer Support Web site **www.css.filenet.com** or from the Tech Info CD.

Relink Client Shared Library (Site-Controlled Oracle Only)

Server Types   Perform the steps in this section only on servers with **Site-controlled Oracle when upgrading from HP-UX 10 or HP-UX 11 to HP-UX 11i**.

The link from FileNet Image Services to Oracle is controlled by the file /fnsw/lib/shobj/liboracle.sl. On Site-controlled servers that have just been upgraded to HP-UX 11i, this symbolic link still points to the former HP-UX 10.20 or 11.0 library.

Note   The Wizard automatically relinks the client shared library on FileNet-Controlled Oracle servers.

To reset this link on Site-controlled Oracle servers, enter the following series of commands. As **fnsw** user, enter:

> **cd /fnsw/lib/shobj**
> **rm liboracle.sl**
> **ln -s liboracle_dummy.sl liboracle.sl**
> **initfnsw start**

These commands remove the existing symbolic link to the HP-UX 10 version of Oracle's client shared library and temporarily create a dummy link. The **initfnsw start** command executes **fn_util**, which detects the dummy link file (liboracle_dummy.sl), automatically removes it, and recreates the correct symbolic link to the HP-UX 11i version of Oracle's client shared library.

Verify the Configuration Database

Server Types   Perform the steps in this section on **all servers**.

1   As **fnsw** user, enter:

       fn_edit &

2   Click **OK** in the initial dialog box.

3   The System Configuration Editor window displays.

Verify Oracle Version Number

Click the Relational Databases tab. The Oracle sub-tab should be on top. If not, click the Oracle sub-tab to bring it to the front.

Scroll to the right and locate the Version Number field. Verify that the Oracle version number is correct. This version number is updated automatically for FileNet-controlled installations, but may not be updated for Site-controlled installations.

If necessary, change the version number to reflect the version of Oracle currently installed. For example, after you've installed Oracle Patch Set 2, you would enter:

9.2.0.2.0

Verify the Language and Character Set

1 On the Relational Databases tab, Oracle subtab, locate the Language and Character Set fields.

2 The default language is English. Other valid languages are French and German. Choose the language in which you want FileNet system messages to appear.

3 The default character set is US7ASCII. Choose the character set that matches the operating system character set. This is the character set that will be used for indexing.

CAUTION **Do not** change the character set unless you are sure that no Oracle index values will be affected.

Other valid character sets are:

Western European	WE8ISO8859P1
Eastern European	EE8ISO8859P2
South European	SE8ISO8859P3
Northern & Northeastern European	NEE8ISO8859P4
Latin/Cyrillic	CL8ISO8859P5

Latin/Arabic	AR8ISO8859P6
Latin/Greek	EL8ISO8859P7
Latin/Hebrew	IW8ISO8859P8
Western European & Turkish	WE8ISO8859P9
North European	NE8ISO8859P10

The character set should match the operating system character set and the NLS native language you chose during the Oracle installation.

Note If you make a change, it will take effect the next time you start Image Services.

4 Remain in the Configuration Editor for the next step.

Re-enable Archive Logging (Optional)

Server Types	Perform the steps in this sub-section on servers with **Oracle**.

Note	If Oracle is Site-controlled, the Database Administrator is responsible for re-enabling Archive Logging.

If you disabled the Archive Logging feature on the server earlier in this procedure, now you re-enable it. If you do not need to enable this feature, skip to **"Exit the Configuration Editor" on page 186**.

1 Click the Relational Databases tab.

The Oracle sub-tab should be on top. If not, click the Oracle sub-tab to bring it to the front.

2 On the Oracle sub-tab, locate the Log Archive Start field. If an X appears in this field, Archive logging is turned off. A check mark indicates that Archive logging is turned on.

Click the field to place a check mark in the field.

3   Check the Archive Log Destination field. If it points to the old Oracle file system (e.g., /usr/ora/806 or /usr/ora/817), you should change it to the new file system (e.g., /usr/ora/920).

Exit the Configuration Editor

Now you can exit fn_edit by selecting Exit from the File pulldown menu. Be sure to save your changes to the configuration database when you are prompted.

Rebuild the System Configuration Files

If you made changes in fn_edit, rebuild the system configuration files.

1   Image Services should not be running yet. However, if you've already started it, make sure it's shut down by entering:

initfnsw -y stop
killfnsw -DAy

2   Now rebuild the configuration files:

fn_build -a

Add Stored Procedures to the Oracle Database

Image Services 4.0.0 requires that several new procedures be stored in the Oracle database. Ask the database administrator to start the Oracle software.

When Oracle is up and running, continue with the appropriate subsection:

On Servers with Local Oracle Databases

If the Oracle databases are located on the same server as the Image Services software, enter the following command as any user with database administration privileges, such as the Oracle Administrator user or the **fnsw** user:

oraupgrade_sp

The **oraupgrade_sp** utility runs very quickly. When the utility is finished, you return to the system prompt. Now skip to the section, **"Verify the /fnsw/etc/serverConfig File" on page 190**.

On Servers with Remote Oracle Databases

Important! Verify with the Database Administrator that the Oracle9i Client software has been successfully installed on the Image Services server.

    a Copy these four scripts from the /fnsw/oracle directory on the Image Services server to the /fnsw/oracle directory on the Oracle server:

        /fnsw/oracle/FileNet_site.sql
        /fnsw/oracle/fn_oraupgrade_sp.sql
        /fnsw/oracle/fn_CreateStoredProcedures.sql
        /fnsw/oracle/fn_GrantSPPermissions.sql

    b Ask the Database Administrator to run this script on the remote Oracle server:

fn_oraupgrade_sp.sql

(installs two stored procedures in the database)

(The fn_oraupgrade_sp.sql script calls the fn_CreateStoredProcedures.sql and fn_GrantSPPermissions.sql scripts.)

When you're prompted to enter a password, you can enter any password you wish, such as "noganap". (This password is only temporary and you will reset it when the fn_oraupgrade_sp.sql script is finished.) Enter the same password when you're asked to confirm it.

The **fn_oraupgrade_sp.sql** utility runs very quickly. When the utility is finished, you return to the system prompt.

Important! Reset the password by entering:

fndba -s f_sw

Verify the /fnsw/etc/serverConfig File

Server Types   Perform the steps in this section on **all servers**.

The Wizard handles the /fnsw/etc/serverConfig file differently in the Image Services 4.0.0 release. Also, the processes that use the serverConfig file have been designed to search for a file named serverConfig.custom first, and if it does not exist, to use the default serverConfig file.

When the Wizard updates the serverConfig file, it looks to see if you already have a customized file named serverConfig.custom.

• If the Wizard cannot find a serverConfig.custom file, it copies your existing serverConfig file to a temporary serverConfig_YYMMDD_ HHMM file (where YYMMDD are the year, month, and day; and HHMM are the hour and minute). Then the Wizard installs the new serverConfig file in its place.

- - If the contents of the two files are **different** (except for the file stamps), the Wizard renames the temporary date/time-stamped file to serverConfig.custom.

  - If the contents of the two files are **identical** (except for the file stamps), the Wizard removes the temporary serverConfig file, and the newly installed serverConfig file becomes the default.

- If the Wizard finds a serverConfig.custom file, or if the format of the new serverConfig file has changed from previous IS software releases, the existing serverConfig or serverConfig.custom file is copied to serverConfig.conflict, and the Wizard installs the new serverConfig file.

  In this situation, the System Administrator must compare the two files (serverConfig and serverConfig.conflict) to determine which one to keep (or edit) and rename to serverConfig.custom, and which one to remove.

  To compare the two files, you would enter, as **fnsw** user:

  cd /fnsw/etc
  diff serverConfig serverConfig.conflict | more

As long as a serverConfig.conflict file exists, the System Administrator will receive a warning message in the error log each time the serverConfig file is consulted as a reminder to resolve the conflict.

Verify the MasterSnmpd_start File

At the beginning of this update procedure, you made a backup copy the **/fnsw/bin/MasterSnmpd_start** file.

View the file you saved (/fnsw/bin/MasterSnmpd_save, for example) and check the destination (IP address or server name) of the System Administrator's SNMP Management station.

In the newly installed MasterSnmpd_start file, the destination address is set to "local" by default, so you may need to edit this file to insert the correct destination. For example, you would change:

trap_host="local"

to either:

trap_host="135.10.0.44"   -or-
trap_host="hyperbole"

where "135.10.0.44" is the IP address of SNMP Management station
          "hyperbole" is the DNS resolvable server name of the station.

If the destination address is not set correctly, the SNMP Management
station will no longer receive event notifications (traps).

Modify TCP/IP Port Setting

Server Types   Perform the steps in this section on **all servers**.

In this section you will make your FileNet system run more efficiently
by making changes to the **/etc/rc.initfnsw** file. The modification
expands the number of available ephemeral ports. These modifica-
tions are not required, but have been found to be optimal when running
FileNet software. So unless you have set these options for other
system reasons, we suggest you make these changes.

Ephemeral ports are temporary ports assigned by a server's IP stack, and are assigned from a designated range of ports for this purpose. When network traffic is extremely heavy, it's possible to run out of ephemeral ports unless you specify the high_port_enable option in /etc/rc.initfnsw.

1 Backup the **/etc/rc.initfnsw** file.

2 As **root** user, make sure you have write permission on the this file by entering:

   chmod 754 /etc/rc.initfnsw

3 Use your preferred text editor (such as **vi**) to modify the **/etc/rc.init-fnsw** file. Locate the following statement near the end of the file:

   # Set up network options HPUX (parameters in half-seconds)

4 Add the following line somewhere after that statement:

   /usr/contrib/bin/nettune -s tcp high_port_enable 1

5   Save your change and exit from the file. This change will go into effect the next time the server is rebooted.

Start the Image Services Software

Server Types   Perform the steps in this section on **all servers**.

1   As **fnsw** user, start the task manager by entering:

Xtaskman &

Check for Errors

1   Click on the Monitor pull-down menu, then select Event Logs. You will see a new window displaying event logs.

2   Click on the DISPLAY pull-down menu from the Event Log window, then select the option Dynamic. This allows the event window to be refreshed whenever messages are logged.

3   Click the Start or Restart button on the Task Manager window. This will start Image Services and dynamically display system events in the Event Log window.

4   View the Event Log window for possible error messages. Take any necessary corrective action.

5   Close the Event Log and Xtaskman windows.

Run Spacerpt

On Servers with Local Oracle Databases

If the Oracle databases, either Site-controlled or FileNet-controlled, are on the same server as Image Services, you can run **spacerpt** after the update and compare the results to the **spacerpt** you ran before the update.

1   Test the f_maint password by running **spacerpt**. At the system prompt, enter as **fnsw** user:

• In the Bourne or Korn shell:

    spacerpt > <output_file_name> 2&1

• In the C shell:

    spacerpt > & <output_file_name> &

where <output_file_name> can be any name you choose.

Spacerpt verifies that:

• the FileNet logon and security are intact

• the Advanced internal database structure is intact

• the FileNet metadata are intact

2 If **spacerpt** does not run, make sure the f_maint password has been set and exported correctly. See **"Run spacerpt" on page 53**.

3 Send the output file to the FileNet Upgrade/Install Assurance Team at upgrade@filenet.com. Compare the **spacerpt** output to the **spacerpt** output you ran prior to running the Wizard Update.

On Servers with Remote Oracle Databases

If the Oracle databases are located on a remote Oracle server, you cannot run **spacerpt** directly because Oracle OS authentication prevents it. Instead, you need to modify two script files and login to sqlplus to get space information. If necessary, ask the Database Administrator to perform these steps.

1 Copy the following two files from the /fnsw/oracle Image Services server to the /fnsw/oracle directory on the remote Oracle server:

/fnsw/oracle/spacerpt_summary.sql
/fnsw/oracle/spacerpt_extended.sql

2 On the remote Oracle server, use your preferred text editor, such as **vi**, to modify these two files. The first line of each file is:

/ as sysdba

(There are no quotation marks around this statement in the file.)

3 Remove this line from each file. Exit and save your changes.

Now you can run the **spacerpt** scripts successfully on the remote Oracle server.

4   On the remote Oracle server, login to sqlplus to run the scripts:

    sqlplus

5   When you're prompted, enter the user name f_maint and f_maint password.   See .

6   To run **spacerpt**, enter the following command at the sqlplus prompt:

    @/fnsw/oracle/spacerpt_summary.sql

7   For a more detailed report, enter:

    @/fnsw/oracle/spacerpt_extended.sql

8   Send the summary report to the FileNet Upgrade/Install Assurance Team at upgrade@filenet.com. Compare the **spacerpt** output to the **spacerpt** output you generated prior to running the Wizard Update.

Check Cache Partitions

Server Types   Perform the steps in this section on **each server that has a cache**.

The FileNet software must be running to use CSM_tool.

1   As **fnsw** user, run CSM_tool to determine the status of the cache partitions. Enter:

    CSM_tool

2   At the CSM_tool prompt, enter s to display the cache statistics:

    <CSM_tool> **s**

The resulting display should look similar to this:

Cache Id	Name	% locked	% full	% free
5	page_cache1:hpvenice:FileNet	0	0	100
6	sys_print_cache1:hpvenice:FileNet	0	0	100
7	fillin_cache1:hpvenice:FileNet	0	0	100
8	bes_cache1:hpvenice:FileNet	1	1	99
9	app_print_cache1:hpvenice:FileNet	1	1	99
10	folder_cache1:hpvenice:FileNet	29	29	71
*	Physical space summary	7	7	93

3 Again, the FileNet System Administrator can tell you if anything is not as it should be. Enter q at the CSM_tool prompt to quit.

<CSM_tool> **q**

4 If you need to import one or more caches that you exported to tape earlier in this procedure, continue with the next section. Otherwise, skip to the section, .

Test the Updated Image Services and User Applications

Verify the updated Image Services software is running properly by testing the system in native mode. Native mode is when FileNet products are tested with customer and vendor-written APIs disabled. Scanning, indexing, committing, faxing, and printing are achieved through the manual selection of these processes through FileNet Capture Professional or Workforce Desktop.

Native mode is preferred in this case for two reasons:

- Only Image Services errors will be displayed. API-oriented errors can be tested after after Image Services processes have been tested.

- Image Services errors will display during their specific stage of document entry or retrieval. This reduces your troubleshooting time.

If the optional COLD software is installed, test it by running the COLD preview.

Also test any user applications on the server to make sure they run successfully, too.

Re-enable Cron Jobs

Re-enable cron jobs if you disabled them prior to starting the Wizard Update.

Configure the System Information Messenger

Server Types   Perform the steps in this section on **all servers**.

The System Information Messenger is a utility that automatically collects performance statistics, license usage data, system configuration data, and software registration information from the server and sends the data to FileNet.

Determine if SIM is enabled by checking for an active entry for **/fnsw/ support/fnISSIM** in the root crontab file.

- If SIM is not enabled, follow the instructions in the ***System Infor-mation Messenger Manual*** to enable and configure the software.

- If SIM is already enabled, perform the following steps to update the configuration files to the latest release format:

  - As **root** user, enter:

    ISRegstr

    Follow the on-screen prompts to review and update all user settings. If user settings do not need modification, just press return to accept currently defined information.

    At the end, answer **Y** to the prompt "Would you like to update this information?". Answer **Y** even if no user settings were modified.

  - As **root** user, enter:

    ISSIMcfg

Follow the on-screen prompts to update all user settings. If user settings do not need modification, just press return to accept currently defined information.

At the end, answer **Y** to the prompt "Would you like to update this information?". Answer **Y** even if no user settings were modified.

Install Remaining Fixes

Now you can install the remaining fixes that apply to the Image Services 4.0.0 release. Be sure to read the README file on the Tech Info CD, which contains the fixes that were available when the CD was made. You can also retrieve the latest fixes from the FileNet Worldwide Customer Support Web site **www.css.filenet.com**.

Copy User Profile and Environment Files

If you use only **root**, **fnsw**, or **oracle** users to run Image Services, skip to the next section, **"Configure Font Server for COLD Preview" on page 208**.

The Wizard updates the profile and environment files in the applicable **root**, **fnsw**, and **oracle** home directories. You must set up the profile and environment files in any other user's home directory for any other operating system user who will be running Image Services. The **inst_templates** command does this for you.

The **inst_templates** command asks you if you want to replace the existing files, one by one.

- If you enter **y** for yes in response to each prompt, the existing files are renamed with a .old extension, and new files are created using the original file name. You will be prompted for each file and .old file, if it exists.

- If you enter **n** for no to any prompt, that file will not be installed.

The inst_templates command also prompts you for the:

- Oracle SID (for example, IDB)

- Relational database home directory (for example, /usr/ora/920)

Note   If you already have customized the environment settings files in a par-
ticular user's directory, answer **n** to each of the prompts. You should
merge the settings in the templates with your customized files. The
templates can be found in /fnsw/etc/*.template.

For each operating system user that runs Image Services, do the fol-
lowing:

1   Log out and log back in as the user whose environment settings files
you want to update.

2   Make sure you're in the user's home directory by entering:

   pwd

3   Install the new templates by entering:

/fnsw/etc/inst_templates

4   Enter **y** to proceed.

The new variables contained in the templates for a specific user will be enabled the next time that user logs in.

5   Exit from the user's login by entering:

exit

6   Repeat Steps 1 through 5 until the new templates have been installed for all FileNet Image Services users.

Configure Font Server for COLD Preview

Server Types   Perform the steps in this section on these servers:

Storage Library - (Multi-server update)

<u>**Root/Index/Storage Library** - (Combined server update)</u>

If you plan to run FileNet COLD Preview software from an Xstation, you must configure a Font Server to enable fonts to display and align correctly on the Xstation. The Font Server should be the same server on which the COLD software is installed, usually the Storage Library Server.

To configure the server on which you plan to run FileNet COLD software, go to **"Appendix E – Configuring a Font Server for COLD Preview" on page 277** now.

MSAR Systems

The Magnetic Storage and Retrieval (MSAR) storage library is a new feature that has been added to FileNet Image Services in this release. It provides high speed and high capacity storage libraries on magnetic disk media instead of using optical media or large magnetic disk caches (Cache-only systems).

If you will be configuring and setting up an MSAR System, refer to the ***MSAR Procedures and Guidelines*** document for information.

Back Up the System

Server Types   Perform the steps in this section on **all servers**.

You need to make backups of your system configuration in case something unforeseen occurs. For complete information on making system backups, refer to:

- ***Image Services System Administrator's Companion for UNIX***

- ***Image Services Enterprise Backup and Restore***

- ***Image Services Third-Party Backup/Restore Guidelines***

Return to Production Mode

The Image Services for HP-UX Software Update Procedure is finished, and you can return the server to normal operation.

Remove Oracle Media from Hard Drive (Optional)

If the Oracle media were copied onto the server's hard drive so the Wizard could install it automatically, it can now be deleted. The four directories, Disk1, Disk2, Disk3, and Disk4 are no longer needed.

Remove Previous Oracle File System (Optional)

After the updated FileNet Image Services and Oracle RDBMS software have been running successfully for several months, the **Database Administrator** or **FileNet Technical Consultant** may consider removing the old version of Oracle as long as no other applications are using it.

Appendix A – Wizard System Check Steps

The server items in this section are inspected by the Wizard system check in the order listed. The system check runs every time you start the wizard; however, the system check operates differently depending on how it is invoked:

- Selecting the **System Check** button from the Setup Wizard window invokes the system check to inspect the server, generates a report, and terminates normally, regardless of what is on the server. **No server modifications are made.**

- Selecting an **Upgrade** button from the Setup Wizard window invokes the system check to inspect the server, makes any necessary system modifications, and goes on to perform the update. The Wizard will abort if the server does not pass inspection during the system check. **The System Check must run without error before the Wizard Setup will run.**

You can take a look at your system check results by browsing the system check log file at:

/fnsw/local/logs/wizard/SysChk_yyyymmdd_hhmm

where yyyymmdd_hhmm is the date and time stamp for when the wizard system check was run.

The wizard system check events are as follows:

- Get hostname.

- Check that user is **root** (REQUIRED).

- Check that sh or ksh is used.

- Check for the correct HP-UX version (REQUIRED).

- Find the CD-ROM drive (REQUIRED).

- Check for minimum space requirements (REQUIRED):
    1 MB in / (root)
    20 MB in /tmp

> 3 MB in /usr
> 20 MB in /var
> 50 MB in directory above Oracle software directory
>   (e.g. /usr/ora)
> 3.5 GB for Oracle software (e.g., /usr/ora/920)

- Get the value for the DISPLAY environment variable.

- Check for the correct version of FileNet software (REQUIRED).

- Check for absence of /fnsw/local/sd/no_build.txt (REQUIRED).

- Check for **220 MB** total space on /fnsw (REQUIRED).

- Check for **200 MB** total space on /fnsw/local (REQUIRED).

- Check for **512 MB** physical memory. Issue warning if it's less (REQUIRED).

- Check SWAP Space (RECOMMENDED).

- Determine server type. Find the root server if this server is not the root server.

- Get number of CPUs.

- Check for correct Oracle version (8.0.6 or 8.1.7).

- Check for Site-controlled or FileNet-controlled databases.

- Check Oracle user, SID, and environment.

- Check location of SYSTEM tablespace.

- Check free space in SYSTEM tablespace and total space in FNTMP_TS tablespace.

- Check for multiple RDB objects in the CDB file.

Appendix B – Wizard Checkpoints

This appendix includes the following:

- A description of a checkpoint.

- A high level flowchart noting the area where the checkpoint activity occurs in the wizard.

- An exploded view of the flowchart displaying the specific checkpoints as they occur in the wizard.

- A description of the major steps in each checkpoint with restart recommendations per checkpoint.

Checkpoints Defined

Checkpoints are a method to track update progress. They divide the update into logical sections. Your primary reason for needing to know about checkpoints is if your wizard should terminate before completion.

You will, of course, have to restart your Wizard Update, but not until you have investigated the checkpoint status of your update and taken any recommended action based on that status.

Checkpoints are used as follows:

- Checkpoints are specific completion milestones to the update. A completed checkpoint tells you what was accomplished on your server. A checkpoint that did not complete tells you something about your server state.

- Checkpoints determine the restart-ability of the wizard. They will inform you of other actions you may have to take before you can restart the wizard.

- Checkpoints are logical re-entry points for resuming the wizard.

Restarting The Wizard

Checkpoints are covered extensively in this document due to how they assist you in restart scenarios. If you should have an error condition and was able to debug and fix the error (see **"Appendix D – Trouble-**

shooting the Wizard" on page 259) you can restart the wizard. Restarting the wizard simply requires you to redo the steps under **"Run the Wizard" on page 157**. You have two choices in how the wizard is restarted:

- Continue Previous Upgrade. This time-saving method will restart the wizard at the **beginning of the failed checkpoint**. Note that the system check will rerun when you restart the wizard.

- Start Upgrade from the Beginning. This is an entirely new update.

  If you do elect to start from the beginning, you must back out the changes that occurred during the previous wizard attempt.

CAUTION Before you restart the wizard, you must follow the restart recommendations listed under **"Specific Checkpoint Events" on page 222**.

High Level Flowchart

Recall the following high level flowchart on the Wizard Update steps. The area inside the dashed window represents the checkpoint activity.

Note that there are two primary tracks or pathways the wizard can take to complete an update. **These tracks are marked accordingly on the chart** as well as the table which follows.

Track	Wizard Actions
Track 1	Upgrade Image Services only
Track 2	Upgrade Oracle and Image Services
Track 3	Upgrade Oracle only
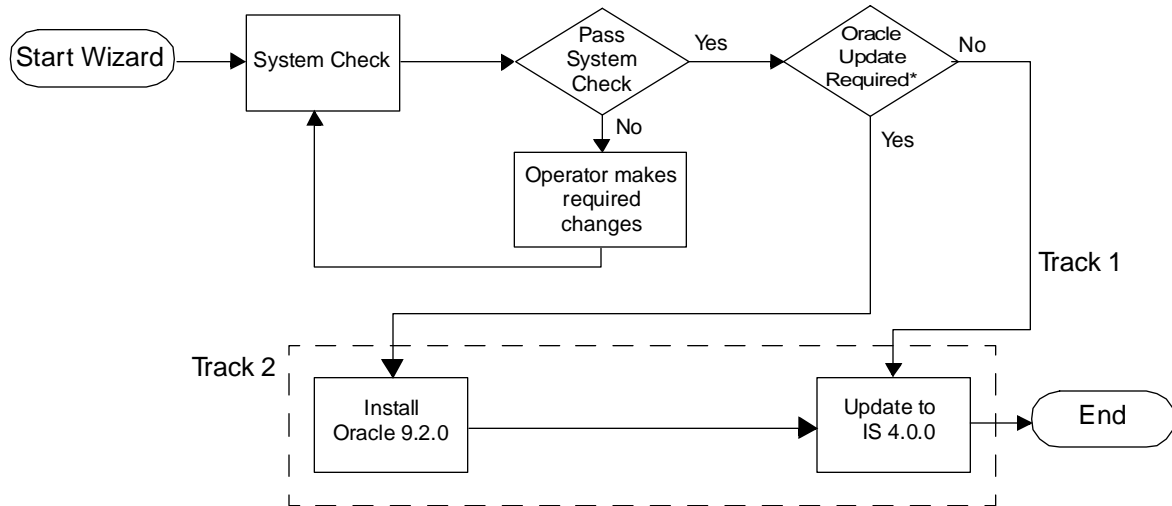
*If Oracle is Site-controlled,
the Oracle update must be
executed manually.

Wizard flowchart steps with checkpoint area highlighed. Exploded view follows.

Exploded View Checkpoint Flowchart

This exploded view corresponds to the outlined area in the previous figure.

Track 1 → Checkpoint / Update_IS → Checkpoint / Uninstall_Old_IS → Checkpoint / Ora_patches → Checkpoint / Post-Install (fn_migrate only) → **End Upgrade**

Track 2 → Checkpoint / Install_Ora → Checkpoint / Update_IS → Checkpoint / Uninstall_Old_IS → Checkpoint / Ora_patches → Checkpoint / Post-Install → **End Upgrade**

Track 3 → Checkpoint / Install_Ora → Checkpoint / Ora_patches → Checkpoint / Post-Install → **End Upgrade**
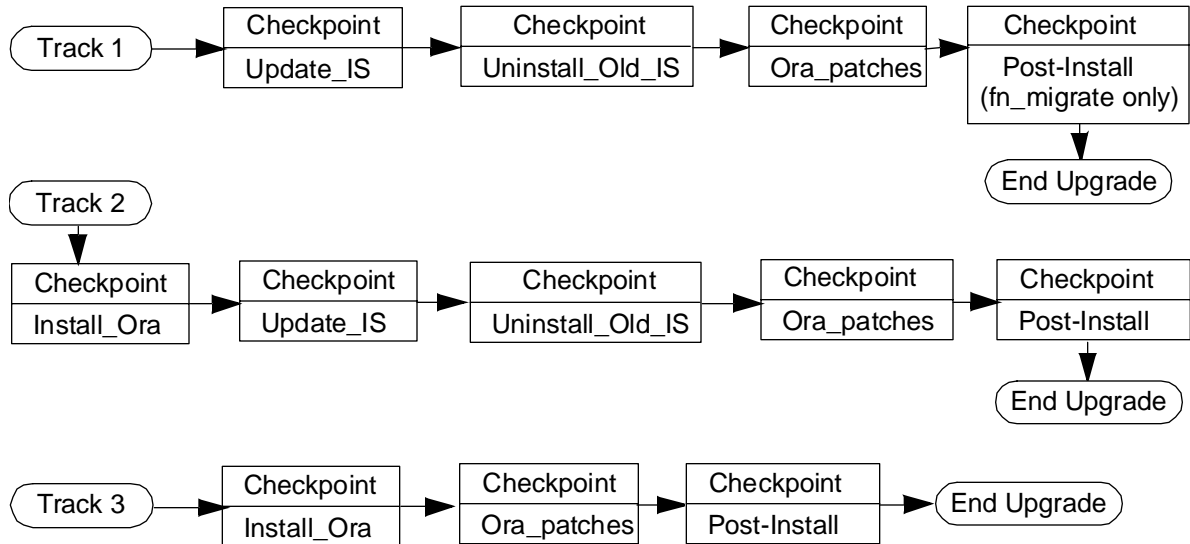
Specific Checkpoint Events

These are major steps for each checkpoint. Note that your update may not go through each checkpoints listed here. That will depend on the track your update takes.

Except where noted, you may restart the wizard from the indicated checkpoint once you have identified and fixed the error condition. Note that the checkpoint is not reached (or 'encountered' as the log will report it) until the successful completion of each event within the checkpoint.

Oracle 9.2.0 Installation completed (Track 2 or Track 3)

- Executes the Oracle rootpre.sh shell script on the Oracle Installation CD.

- Updates Oracle Response file to reflect system parameters.

- Runs the Oracle Installer to install Oracle 9.2.0. Relinks executables.

> **CAUTION** If this procedure should fail during the relinking of all executables phase, you have only one method for recovery: Address the problem, remove all the files in the new Oracle 9.2.0 software directory and rerun this step. The problem could be a host of issues: insufficient disk space, wrong permissions, etc.

- Updates .cshrc and .profile for root, fnsw and oracle user logins.

- Runs the Oracle root.sh shell script from the Oracle Installation CD.

Restart Recommendations for this checkpoint

- Continue Previous Upgrade: The Wizard Update can be resumed at this checkpoint (with the exception being the issue with relinking all executables).

- Start Update from the Beginning: If you want restart with a new update, you must first restore the system to its pre-update state.

Image Services Upgrade to 4.0.0 Completed (Track 1 or Track 2)

- Stops FileNet Software (initfnsw -y stop and killfnsw -DAy).

- Saves a copy of the Server Configuration file /fnsw/etc/serverConfig.

- Runs swinstall command to install Image Services and COLD software.

- Unmounts the CD-ROM

Restart Recommendations for this checkpoint

- Continue Previous Upgrade: The Wizard Update can be resumed at this checkpoint.

- Start Update from the Beginning: If you want restart with a new update, you must first restore the system to its pre-update state.

Removal of Old Image Services Completed (Track 1 or Track 2)

- Runs swremove command to remove previous versions of Image Services and COLD.

Restart Recommendations for this checkpoint

- Continue Previous Upgrade: The Wizard Update can be resumed at this checkpoint.

- Start Update from the Beginning: If you want restart with a new update, you must first restore the system to its pre-update state.

Oracle 9.2.0 patches and Client Shared Lib Completed (Track 1, Track 2 or Track 3)

- Executes shell script /fnsw/oracle/P9.2.0.sh to verify that required Oracle patches have been applied.

- Generates and relinks client shared libraries.

Restart Recommendations for this checkpoint

- Continue Previous Upgrade: The Wizard Update can be resumed at this checkpoint.

- Start Update from the Beginning: If you want restart with a new update, you must first restore the system to its pre-update state.

Post_install (Track 1, Track 2, or Track 3)

This is the final checkpoint.

- Executes fn_migrate. (Track 1 performs only this step.)

- nch_check modifies init.ora.

- Starts Oracle.

- Executes **oraupgrade 8.0.6** or **8.1.7**.

- Shuts down Oracle.

• Executes fn_build -f init.ora.

Restart Recommendations for this checkpoint

- Continue Previous Upgrade: The Wizard Update can be resumed at this checkpoint.

- Start Update from the Beginning: If you want restart with a new update, you must first restore the system to its pre-update state.

Final Steps (Track 1, Track 2, or Track 3)

These steps occur after the Post_Install checkpoint is reached.

• Replaces /etc/inittab with original /etc/inittab.

• Executes fn_setup to set directory permissions and update /fnsw/local/setup_config file.

• Reboots the system (or not depending on operator interaction).

Appendix C – Manually Expanding Tablespace

This appendix includes manual steps for expanding both the Oracle SYSTEM tablespace and the Oracle Temporary tablespace.

The **fn_dataset_config** tool is the recommended method to use for database expansion; however, this tool does not allow for the place-ment of a logical volume on specific disk within a volume group.

Tip
You can also accomplish some of these steps by using SAM. This example uses the command line utilities because it's easier to translate command line syntax into GUI parameters.

- To expand the Oracle SYSTEM tablespace, go to **"Create a New Volume for SYSTEM Tablespace" on page 229**.

- To expand the Oracle Temporary tablespace, go to **"Create a New Volume for Temporary Tablespace" on page 245**.

Create a New Volume for SYSTEM Tablespace

Select the Volume Group

1 Determine which volume group contains your dataset logical volumes. Enter:

vgdisplay -v <volume_group>

where <volume_group> is the name of the volume group you want to examine, such as **vg00** or **fnvg**.

Note For **MC/ServiceGuard** users, you need to select the volume group containing the disk array.

You can tell whether the volume group contains the FileNet datasets by looking at the Logical Volumes section of the display. If you see entries similar to those in the following partial display, then you've located the correct volume group.

The partial output in the following example displays Image Services datasets in the **fnvg** volume group.

```
   --- Logical volumes ---
...
  LV Name                    /dev/fnvg/fn_oracle_sys0
  LV Status                  available/syncd
  LV Size (Mbytes)           40
  Current LE                 10
  Allocated PE               10
  Used PV                    1

  LV Name                    /dev/fnvg/fn_oracle_db0
  LV Status                  available/syncd
  LV Size (Mbytes)           200
  Current LE                 50
  Allocated PE               50
  Used PV                    1
...
```

2   Next look at the Physical Volumes section of the vgdisplay output to determine the space available on each physical volume in the volume group.

Multiply the physical extent size (PE Size) by the number of free physical extents (Free PE) to determine the amount of free space on the physical volume.

You're going to need **at least 400MB** for either Coexistence mode, or Non-Coexistence mode

Choose a specific drive for the new logical volume.

In the following example, the PE Size is 4 MB and the number of Free PE on the volume /dev/dsk/c2t6d1 is 768. The product of these numbers is 3072 MB, which is plenty of room for the new logical volume.

If you wish, you could choose any other physical volume that has enough free space.

Write down the device name of the disk you choose:

_____

(for example, /dev/dsk/c2t6d1)

```
    --- Physical volumes ---
    PV Name                 /dev/dsk/c2t6d0
    PV Status               available
    Total PE                1023
    Free PE                 320

    PV Name                 /dev/dsk/c2t6d1
    PV Status               available
    Total PE                1023
    Free PE                 768

    PV Name                 /dev/dsk/c2t6d2
    PV Status               available
    Total PE                1023
    Free PE                 256

    PV Name                 /dev/dsk/c2t6d3
    PV Status               available
    Total PE                1023
    Free PE                 1023
```

Create the New Volume

Earlier, in Chapter 3, you determined whether the server was running in database coexistence mode or not. Check the table below to make sure you know the correct logical volume name and size to create.

Table D-1: Logical Volume Sizes for SYSTEM Tablespace

Logical Volume	Size	Mode
fn_oracle_sys(n)	200 MB	coexistence
fn_oracle_db(n)	200 MB	non-coexistence

Note The following example places a logical volume named fn_oracle_sys1 in the fnvg volume group. (Your system may require a higher numbered volume or a volume named fn_oracle_db(n) or a different volume group.)

1 As **root** user, use the lvcreate command to create the appropriate logical volume.

Remember that the final number of the logical volume name should be one number higher than the highest existing logical volume of that name.

> **lvcreate -n fn_oracle_sys1 /dev/fnvg**

where: **fn_oracle_sys1** is the name of the new logical volume,
     /dev/fnvg is the name of the volume group.

2 Then use the lvextend command to place the logical volume on a specific disk and set its size. For example:

> **lvextend -L 200 /dev/fnvg/fn_oracle_sys1 /dev/dsk/c2t6d1**

where: **200** is the dataset size in megabytes,
     /dev/fnvg/fn_oracle_sys1 is the name of the logical volume,
     /dev/dsk/c2t6d1 is the disk drive you chose in the previous section.

Note   The dataset size for fn_oracle_sys(n) must be entered in multiples of **at least 40MB**.

The dataset size for fn_oracle_db(n) must be entered in multiples of **at least 200MB**.

Multiples will depend on the physical extent (PE) size of your volume group. If you PE size is 64MB, then your minimum multiple is 64MB for fn_oracle_sys(n) and 256 for fn_oracle_db(n).

3   Backup the configuration of the volume group by entering:

      vgcfgbackup -u /dev/fnvg

4   Display the contents of the volume group to make sure the new logical volume appears. Enter:

      vgdisplay -v fnvg

Look at the Logical Volume section of the display, which should look something like this:

```
   --- Logical volumes ---
...
  LV Name                      /dev/fnvg/fn_oracle_sys0
  LV Status                    available/syncd
  LV Size (Mbytes)             40
  Current LE                   10
  Allocated PE                 10
  Used PV                      1

  LV Name                      /dev/fnvg/fn_oracle_sys1
  LV Status                    available/syncd
  LV Size (Mbytes)             40
  Current LE                   10
  Allocated PE                 10
  Used PV                      1
...
```

Create a Character Device for the Dataset

The database programs used by FileNet require the use of raw partitions instead of normal HP-UX data files. This generally allows the programs to optimize speed and efficiency. This section creates a device file for the oracle_sys or oracle_db partition.

1 Display the major and minor numbers for the logical volume and write down the numbers in the spaces provided below.

a As **root** user, change to the /dev/<volume group> directory; enter:

cd /dev/<volume group>

b List the contents of the directory by entering:

ls -l fn*

c A directory list displays the major and minor numbers for each logical volume. Write down the numbers for fn_oracle_sys*n* or fn_ oracle_db*n* in the spaces below, because you are going to be using

them in the next section of this procedure. The following is a sample line from the listing:

```
brw-rw---   1   root   sys   64,   0x01000a   nov 28 15:23 fn_oracle_sys1
```

The first number, 64, is the **major** number; the second number, 0x01000a, is the **minor** number.

fn_oracle_sys*n* _____

fn_oracle_db*n* _____

2 Then change to the /fnsw/dev/1 directory by entering:

   cd /fnsw/dev/1

3 Refer to the major and minor numbers you wrote down earlier.

   The general syntax for the command to create a character device is:

   mknod <dataset> c <major#> <minor#>

Note	When you enter the following commands, replace **X** with the appropriate major number; replace **Y** with the appropriate minor number for each dataset.

To create a character device for each dataset, enter:

> **mknod oracle_sys1 c <X> <Y>**
>   or
> **mknod oracle_db1 c <X> <Y>**

4 Set the ownership of oracle_sys1 or oracle_db1 by entering either:

> **chown oracle:dba oracle_sys1**
>   or
> **chown oracle:dba oracle_db1**

5 Set the access permissions of oracle_sys1 or oracle_db1 by entering:

> **chmod 664 fn_oracle_sys1**
>   or
> **chmod 664 fn_oracle_db1**

Configure a Tablespace Dataset Partition

1 As **fnsw** user, start the FileNet Configuration Editor by entering:

   fn_edit &

2 When the main Configuration Editor window displays, click on the Dataset tab to view a list of the datasets currently configured on your server.

3 Click on the Procedures tab, and select the Create an optional relational DB dataset option from the Procedure list box, and then click **Run**.

4 Depending on the logical volume you created in the previous section, select either:

- the Oracle System Space option and click the **Next** button. This will set up the **fn_oracle_sys***n* dataset, or ...

- the Oracle Database option and click the **Next** button. This will set up the **fn_oracle_db***n* dataset.

5 In the next window, verify that the drive and path where you want this dataset to be created are correct. Then click the **Next** button.

6 The default dataset size displays in the next window. The size you specify here must match the size of the logical volume you created in the previous section.

Note The size must be at least **200MB for oracle_sys**, or **200 MB for oracle_db**. Click the **Next** button when you're done.

7 Click on the Dataset tab in the main Configuration Editor window to view the list of currently configured datasets again. The new dataset should be listed with the others.

8 Exit the Configuration Editor and save your changes.

Initialize the New SYSTEM Tablespace

1 As **root** user, initialize the new oracle_sys1 or oracle_db1 partition by entering:

> **fn_build -a**
> **initfnsw -y stop**
> **fn_util updaterdb**
> **fn_util stoprdb**
> **initfnsw start**

2 As **oracle** user, enter this series of sql commands to verify the new SYSTEM tablespace configuration:

> **svrmgrl**
> SVRMGR>**connect internal**
> SVRMGR>**select tablespace_name, file_name from dba_ data_files;**

The output should look similar to the following:

```
FILE_NAME
 FILE_ID    TABLESPACE_NAME                      BYTES      BLOCKS     STATUS
------------------------------------------------------------------------
 ---------- ----------------------------- ---------- ---------- --------
/fnsw/dev/1/oracle_sys0
         1 SYSTEM                            41936896    20477 AVAILABLE
/fnsw/dev/1/oracle_db0
         2 FNSYS_TS                         209709056   102397 AVAILABLE
/fnsw/dev/1/oracle_tr0
         3 FNTMP_TS                          25159680    12285 AVAILABLE
/fnsw/dev/1/oracle_sys1
         4 SYSTEM                            41936896    20477 AVAILABLE
4 rows selected.
```

3 Check the list of data files displayed to make sure a new SYSTEM tablespace dataset has been created; for example, **oracle_sys1** or **oracle_db1**.

SVRMGR>**shutdown normal**

Note	Use the shutdown normal command. **Do not** use shutdown abort.

SVRMGR>**disconnect**
SVRMGR>**exit**

Return to the Main Procedure

Continue with the update by returning to the section, **"Make Additional Backups (if necessary)" on page 145**.

Create a New Volume for Temporary Tablespace

Select the Volume Group

1 Determine which volume group contains your dataset logical volumes. Enter:

> **vgdisplay -v <volume_group>**

where <volume_group> is the name of the volume group you want to examine, such as **vg00** or **fnvg**.

Note For **MC/ServiceGuard** users, you need to select the volume group containing the disk array.

You can tell whether the volume group contains the FileNet datasets by looking at the Logical Volumes section of the display.   If you see entries similar to those in the following partial display, then you've located the correct volume group.

The partial output in the following example displays Image Services datasets in the **fnvg** volume group.

```
   --- Logical volumes ---
...
  LV Name                    /dev/fnvg/fn_oracle_tr0
  LV Status                  available/syncd
  LV Size (Mbytes)           40
  Current LE                 10
  Allocated PE               10
  Used PV                    1

  LV Name                    /dev/fnvg/fn_oracle_udb0
  LV Status                  available/syncd
  LV Size (Mbytes)           200
  Current LE                 50
  Allocated PE               50
  Used PV                    1
...
```

2 Next look at the Physical Volumes section of the vgdisplay output to determine the space available on each physical volume in the volume group.

Multiply the physical extent size (PE Size) by the number of free physical extents (Free PE) to determine the amount of free space on the physical volume.

Important! FileNet recommends that you have a **at least 400 MB** for temporary data and rollback segments. Your system may require more.

So if oracle_tr0 is currently 40 MB, you need **at least 360 MB more**.

Choose a specific drive for the new logical volume.

In the following example, the PE Size is 4 MB and the number of Free PE on the volume /dev/dsk/c2t6d1 is 768. The product of these numbers is 3072 MB, which is plenty of room for the new logical volume.

If you wish, you could choose any other physical volume that has enough free space.

Write down the device name of the disk you choose:

_____

(for example, /dev/dsk/c2t6d1)

```
    --- Physical volumes ---
    PV Name                 /dev/dsk/c2t6d0
    PV Status               available
    Total PE                1023
    Free PE                 320

    PV Name                 /dev/dsk/c2t6d1
    PV Status               available
    Total PE                1023
    Free PE                 768

    PV Name                 /dev/dsk/c2t6d2
    PV Status               available
    Total PE                1023
    Free PE                 256

    PV Name                 /dev/dsk/c2t6d3
    PV Status               available
    Total PE                1023
    Free PE                 1023
```

Create the New Volume

> **Note** The following example places a logical volume named **fn_oracle_tr1**
> in the fnvg volume group. (Your system may require a higher numbered
> volume or a different volume group.)

1 As **root** user, use the lvcreate command to create the new logical
volume.

Remember that the final number of the logical volume name should be
one number higher than the highest existing logical volume of that
name.

   lvcreate -n fn_oracle_tr1 /dev/fnvg

where: **fn_oracle_tr1** is the name of the new logical volume,
       /dev/fnvg is the name of the volume group.

2 Then use the lvextend command to place the logical volume on a spe-
cific disk and set its size. For example:

   lvextend -L 360 /dev/fnvg/fn_oracle_tr1 /dev/dsk/c2t6d1

where: **360** is the dataset size in megabytes,

/dev/fnvg/fn_oracle_tr1 is the name of the logical volume,

/dev/dsk/c2t6d1 is the disk drive you chose in the previous section.

Note   The dataset size for fn_oracle_tr(n) must be entered in multiples of **at least 35 MB**.

Multiples will depend on the physical extent (PE) size of your volume group. If you PE size is 64MB, then your minimum multiple is 64MB for fn_oracle_tr(n).

In the previous example, the multiple is **40 MB**.

3   Backup the configuration of the volume group by entering:

vgcfgbackup -u /dev/fnvg

4   Display the contents of the volume group to make sure the new logical volume appears. Enter:

vgdisplay -v fnvg

Look at the Logical Volume section of the display, which should look
something like this:

```
   --- Logical volumes ---
...
  LV Name                  /dev/fnvg/fn_oracle_tr0
  LV Status                available/syncd
  LV Size (Mbytes)         40
  Current LE               10
  Allocated PE             10
  Used PV                  1

  LV Name                  /dev/fnvg/fn_oracle_tr1
  LV Status                available/syncd
  LV Size (Mbytes)         360
  Current LE               10
  Allocated PE             10
  Used PV                  1
...
```

Create a Character Device for the Dataset

The database programs used by FileNet require the use of raw partitions instead of normal HP-UX data files. This generally allows the programs to optimize speed and efficiency. This section creates a device file for the oracle_tr partition.

1 Display the major and minor numbers for the logical volume and write down the numbers in the spaces provided below.

a As **root** user, change to the /dev/<volume group> directory; enter:

cd /dev/<volume group>

b List the contents of the directory by entering:

ls -l fn*

c A directory list displays the major and minor numbers for each logical volume. Write down the numbers for fn_oracle_tr*n* in the space below, because you are going to be using them in the next

section of this procedure. The following is a sample line from the listing:

```
brw-rw---   1  root  sys  64,  0x01000a  Sep 7 15:23 fn_oracle_tr1
```

The first number, 64, is the **major** number; the second number, 0x01000a, is the **minor** number.

fn_oracle_tr*n*   _____

2 Then change to the /fnsw/dev/1 directory by entering:

cd /fnsw/dev/1

3 Refer to the major and minor numbers you wrote down earlier.

The general syntax for the command to create a character device is:

mknod <dataset> c <major#> <minor#>

Note   When you enter the following commands, replace **X** with the appropriate major number; replace **Y** with the appropriate minor number for each dataset.

To create a character device for each dataset, enter:

mknod oracle_tr1 c <X> <Y>

4   Set the ownership and access permissions of oracle_tr1 by entering:

chown oracle:dba oracle_tr1
chmod 664 oracle_tr1

Configure a Tablespace Dataset Partition

1   As **fnsw** user, start the FileNet Configuration Editor by entering:

fn_edit &

2   When the main Configuration Editor window displays, click on the Dataset tab to view a list of the datasets currently configured on your server.

3 Click on the Procedures tab, and select the Create an optional relational DB dataset option from the Procedure list box, and then click **Run**.

4 Select the Oracle temporary data and rollback segments option and click the **Next** button. This will set up the **oracle_tr***n* dataset.

5 In the next window, verify that the drive and path where you want this dataset to be created are correct. Then click the **Next** button.

6 The default dataset size displays in the next window. The size you specify here must match the size of the logical volume you created in the previous section (360 MB, for example).

Note The size must be at least **40 MB for oracle_tr**. Click the **Next** button when you're done.

7 Click on the Dataset tab in the main Configuration Editor window to view the list of currently configured datasets again. The new dataset should be listed with the others.

8   Exit the Configuration Editor and save your changes.

Initialize the New SYSTEM Tablespace

As **fnsw** user, initialize the new fn_oracle_tr1 partition by entering:

fn_build -a
initfnsw -y stop
fn_util updaterdb
fn_util stoprdb
initfnsw start

Verify New FNTMP_TS Tablespace Size

As **fnsw** user, enter this series of sql commands to verify the new FNTMP_TS tablespace size and properly shutdown the Oracle database:

svrmgrl

SVRMGR> **connect internal**

SVRMGR> **select * from dba_data_files;**

The output should look similar to the following:

```
FILE_NAME
 FILE_ID    TABLESPACE_NAME                    BYTES      BLOCKS     STATUS
----------------------------------------------------------------------
 ----------  ------------------------------ ---------- ---------- --------
/fnsw/dev/1/oracle_sys0
         1 SYSTEM                           209715200   102400 AVAILABLE
/fnsw/dev/1/oracle_db0
         2 FNSYS_TS                         209715200   102400 AVAILABLE
/fnsw/dev/1/oracle_tr0
         3 FNTMP_TS                          41943040    20480 AVAILABLE
/fnsw/dev/1/oracle_tr1
         4 FNTMP_TS                         377487360   184320 AVAILABLE
4 rows selected.
```

Check the list of data files displayed to make sure a new FNTMP_TS
tablespace dataset has been created; for example, **oracle_tr1**.

SVRMGR> **disconnect**
SVRMGR> **exit**

Return to the Main Procedure

Continue with the update by returning to the section, **"Make Additional Backups (if necessary)" on page 145**.

Appendix D – Troubleshooting the Wizard

The following steps should be taken if the Wizard should fail:

- Check for a core file, and run a debugging tool on the file.

- Read the Wizard log file. Isolate and correct the error. Contact your Upgrade/Install Assurance Team if necessary.

- Determine the last **checkpoint encountered** (i.e, successful checkpoint completion) reached by the Wizard before the error occurred.

- Take any other corrective action required by the **incomplete** check-point.

- Restart the Wizard.

A description of each step follows.

Check for a Core File

If the Wizard should fail, a core file will be generated. You can find a file named 'core' in /tmp/setup_dir.

Run the FileNet debugging tool **cstat** on the core file by entering:

   cstat -n /tmp/setup_dir/core

The cstat command should determine if the core file was caused by a FileNet process.

Run a standard HP debugger, such as **dde** or **gdb**, on the core file. For example, if you're using the Wildebeest debugger, enter:

   /opt/langtools/bin/gdb /tmp/setup_dir/core

For a brief summary of Wildebeest debugger options, enter:

   /opt/langtools/bin/gdb -help

Interpret Oracle Messages

If the Wizard displays this message:

ORAUPGRADE failed, check the <log file> for errors.

review the output files **/fnsw/local/oracle/conv920.err** and **/fnsw/local/oracle/conv920.out** to determine the cause of the problem. The conv920.err file contains errors you need to look up in the conv920.out file.

You can ignore the following Oracle errors:

ORA-**00001**: unique constraint (*<table_name>*) violated
ORA-**00604**: error occurred at recursive SQL level *<level_number>*
ORA-**00904**: *<identifier>* invalid identifier
ORA-**00942**: table or view does not exist
ORA-**00943**: cluster does not exist
ORA-**00944**: insufficient number of clustered columns
ORA-**00955**: name is already used by an existing object
ORA-**01418**: specified index does not exist

ORA-**01430**: column being added already exists in table

ORA-**01432**: public synonym to be dropped does not exist

ORA-**01434**: private synonym to be dropped does not exist

ORA-**01442**: column to be modified to NOT NULL is already NOT NULL

ORA-**01451**: column to be modified to NULL cannot be modified to NULL

ORA-**01452**: cannot CREATE UNIQUE INDEX; duplicate keys found

ORA-**01918**: user '*<user_name>*' does not exit

ORA-**01919**: role '*<role_name>*' does not exist

ORA-**01921**: role name '*<role_name>*' conflicts with another user or role name

ORA-**02264**: name already used by an existing constraint

ORA-**02275**: such a referential constraint already exists in the table

ORA-**02289**: sequence does not exist

ORA-**02443**: Cannot drop constraint - nonexistent contstraint

ORA-**04043**: object *<object_name>* does not exist

ORA-**04080**: trigger *<trigger_name>* does not exist

ORA-**06512**: at "*<table_name>*", line 2012

ORA-**06550**: line 8, column 47:

ORA-**06554**: package DBMS_STANDARD must be created before using PL/SQL

ORA-**24001**: cannot create *<queue_name, table_name>* already exists

ORA-**24002**: QUEUE_TABLE *<queue_table_name>* does not exist

ORA-**24010**: QUEUE <*queue_name*> does not exist

ORA-**24006**: cannot create <*queue_name, table_name*> already exists

After you have corrected the problem, be sure to rename the output files so they're not overwritten. Saving the output files will make problem resolution easier in case you need to contact the FileNet Upgrade/Install Assurance Team for support.

For example, you might enter a command similar to the following:

cp /fnsw/local/oracle/conv920.out /fnsw/local/oracle/conv920.sav

Then run the **Wizard Upgrade** again. The Wizard will automatically start at the appropriate checkpoint. See **"Restart the Wizard (If Permissible)" on page 275** for more information on checkpoints and restarting the Wizard.

Read the Wizard Log

The Wizard log file is found in /fnsw/local/logs/wizard and has the name format: yyyymmdd_hhmm.log. A new log file is generated each

time you run the Wizard. Several other related files are created in this directory as well when the Wizard is executed.

The log file is built dynamically; it includes the executed lines from the Wizard script, displayed values of checked variables and the names of all the input and output files used (as well as created in the process).

The Wizard is executed using a scripting language. The log file contents are technical, so having some experience in programming and debugging is beneficial when interpreting the log file. You may have to send the log file to the Upgrade/Install Assurance Team for further assistance.

The source of the error may not be obvious. It may be where the Wizard terminated or it may be from a previous step. You may have to examine the Wizard's input and output files as well as **previous** variable settings to find out why the Wizard terminated.

Since you are looking for an error in a large text file, it is best to search the file for any occurrence of 'ERROR.' Use your preferred UNIX text editor.

Interpreting the Wizard Log

A sample section from the log file appears below. Following the sample section is a description of the various activities performed by the lines of code in the sample. The intention is to give you a high level understanding of how to interpret the Wizard log.

> **Note:** This is one screen from a large log file.

```
08750 (Fri Nov 28 11:33:59 2003)
***** Check on existence of clntsh.o file too
      Expression (ora_patch_err_count=0) is TRUE
      Condition (ora_patch_err_count=0) is TRUE
       SYSTEM: Cmd:[ls -l //usr/ora/804/lib/clntsh.o | wc -l >/fnsw/local/
logs/
          wizard/20010514_1112/tmp.204 2>&1]
      Contents of file: /fnsw/local/logs/wizard/20010514_1112/tmp.204
         1
      End of Contents.
      Set "clntsh_o_file_exists" to "1"
      System():0  Output:"1"
      Set "fnsw_system_return" to "0"
08755 (Mon May 14 11:33:59 2001)
      Expression (ora_patch_err_count>0) is FALSE
      Expression (clntsh_o_file_exists=0) is FALSE
      Condition (ora_patch_err_count>0|clntsh_o_file_exists=0) is FALSE
```

Line Description of the Wizard Log Sample

This sample section of code does the following:

- Starts at program location 08750. The lines of code that follow are part of this location. Note that a **"Description of the Wizard Program Location Numbers** follows this section.

- Comments on the purpose of this program location. Comment lines are denoted by *********

- Tests for current Oracle patch errors by checking the status of an internal variable (ora_patch_err_count=0). Two evaluative lines test this variable (**Expression** and **Condition**). If there are no Oracle patch errors it goes to the next line of code. If there are Oracle patch errors, it goes to the next program location. In this case, the next location is 08755.

- Looks for the presence of the clntsh.o file. It executes UNIX commands to check for the file. The UNIX command is prefaced by **SYSTEM: Cmd:**. Commands can also be prefaced by **FORK**. The UNIX commands are **ls -l** and **wc -l**.

- The output of the UNIX commands is sent to a temporary file: /fnsw/local/logs/wizard/20010514_1112/tmp.204.

Note	The execution of the Wizard creates several of these temporary (.tmp.nnn) files. You may have to view the contents of a temporary file to determine how a command executed if an error prevented the Wizard from displaying the contents.

- The contents of the temporary file are displayed.
  The contents in this case is **1** which implies that there is a clntsh.o file because there was **1** line of output found in the temporary file. Note that **End of Contents** indicates that there is no more contents from the temporary file to display.

- Since there is a clntsh.o file, an internal variable is set to reflect that fact (clntsh_o_file_exists=1).

- SYSTEM ():0 means the SYSTEM command was successfully executed. No trouble was encountered.

- fnsw_system_return is set to "0" due to the success of this operation. If it was set to any of the following values, something went wrong: 1, -1 or 2. The variable fnsw_system_return is set at every SYSTEM() call.

- Section 08755 proceeds if there were oracle patch errors discovered at the first condition tested in the example.

As you can see, the Wizard log file is rich with information. It must be carefully parsed in order to isolate the source of trouble.

Description of the Wizard Program Location Numbers

As you have seen, the Wizard log has several program location numbers. The following will give you an understanding of which general Wizard activity is associated with program locations.

Table D -1: Wizard Program Location Numbers

Program Location	Wizard Activity
0000 - 1000	Top level program activity which drives the Wizard.
1000 - 3000	System check for UNIX items common to AIX and HP-UX.
3000 - 4000	System check for UNIX items unique to AIX and HP-UX.
5000 - 6000	Unused.
6000 - 7000	Pre-install, install and post-install of IS software.
7000 - 8000	Miscellaneous Oracle functions.
8000 - 9000	Install Oracle, Oracle patches and post install of Oracle.

Determine the Failed Checkpoint

Once you have isolated and fixed the error, you will be tempted to restart the Wizard Update. Before you can restart the Wizard, you need to know the last **checkpoint encountered** before the Wizard failed. This is reported in the Wizard log file.

Checkpoints are used as follows:

- Checkpoints are specific completion milestones to the update. A completed checkpoint tells you what was accomplished on your server. A checkpoint that did not complete tells you something about your server state.

- Checkpoints determine the restart-ability of the Wizard. They will inform you of other actions you may have to take before you can restart the Wizard.

- Checkpoints are logical re-entry points for resuming the Wizard.

There are **up to** four checkpoints in the upgrade process. The state of your server will determine which update track the Wizard will take. This update track determines the series of checkpoints the Wizard will

encounter. This is further described in **"Wizard Update Overview" on page 19** and the **"Exploded View Checkpoint Flowchart" on page 221**.

The four checkpoints are:

- Oracle 9.2.0 installation completed.

- Image Services Upgrade to 4.0.0 completed.

- Removal of old Images Services completed.

- Oracle 9.2.0 patches client shared library completed.

- Post_Install.

A high level illustration of how the checkpoints are found in the Wizard log file is as follows:

```
wizard script output
wizard script output
Program location and time stamp
=====   CHECKPOINT Encountered
        INFO: Checkpoint Completed
wizard script output (this is actually the start of next checkpoint)
wizard script output
        .
        .
        .
=====   CHECKPOINT Encountered
        INFO:Checkpoint Completed
```

When you see **CHECKPOINT Encountered** and the '=====', you know that the checkpoint completed successfully. The Wizard goes on to perform the steps in the following checkpoint.

These checkpoints are discussed in more detail under **"Specific Checkpoint Events" on page 222**.

Search for the Failed Checkpoint

You will need to search the Wizard log file for the checkpoint status. As you read earlier, the log file is sizeable. The fastest method is to use a UNIX text editor and search for the word 'CHECKPOINT.'

This sample output from the Wizard log displays a successful checkpoint:

```
***** Checkpoint IDMIS Upgrade complete.
===== CHECKPOINT Encountered: IS Upgrade to 4.0.0 Completed  At: 780
      INFO: Checkpoint: IS Upgrade to 4.0.0 Completed
00785 (Fri Nov 28 11:33:05 2003)
***** Apply necessary Oracle patches & create clntsh.o
      Expression (!which_path=right) is TRUE
      Condition (!which_path=right) is TRUE
>>1>> Calling procedure: "ORA_Patches"
```

Note the bold line with the equal signs in the above sample output. **Checkpoint Encountered: IS Upgrade to 4.0.0** gives the name of the checkpoint. The '=====' and the message that the checkpoint is com-

pleted tells you that this checkpoint was successful. The Wizard goes on to perform the steps in the following checkpoint.

You must search the entire Wizard log file for all instances of 'CHECK-POINT' until you find the last successful checkpoint (i.e., last checkpoint encountered). This will tell you that **the error occurred before the next checkpoint could be completed.** In the above example, if IMS Upgrade is the final instance of a **CHECKPOINT Encountered** in the Wizard log, then Oracle 9.2.0 patches is the incomplete checkpoint if your update is using Track 2. See the for an illustration of the update tracks.

Once you make note of the failed checkpoint, take the appropriate corrective action.

Take Other Corrective Actions Required by the Failed Checkpoint

Now that you know that the Wizard failed prior to completing a certain checkpoint, you must research that checkpoint and perform any other

corrective action required by that checkpoint (e.g., restoring data). Read the specifics on that checkpoint in **"Appendix B – Wizard Checkpoints" on page 216** for more information.

Restart the Wizard (If Permissible)

Restarting the Wizard simply requires you to redo the steps under **"Run the Wizard" on page 157**. The Wizard will give you the following two choices when you restart:

• Continue Previous Upgrade. This time-saving method will restart the Wizard at the beginning of the checkpoint which failed. You will not need to execute any of the pre-Wizard preparation steps but you will need to manually "back out" the changes brought about by the Wizard during the course of the failed checkpoint.

  Note that the system check will rerun when you restart the Wizard.

CAUTION	Do not select **System Check** if you are re-running the Wizard after a failed update.

- Start Upgrade from the Beginning. This is an entirely new update.

  If you do elect to start from the beginning, you must first restore your server to its pre-update state and execute the Wizard preparation steps starting in **Chapter 2, "Preparing for the Update," on page 47**.

CAUTION   If some crucial routines are aborted during the database upgrade, database corruption may result! In these cases, **you must restore your server to its pre-update state** and re-start the Wizard. Make sure you have read the relevant data on your checkpoints under **"Appendix B – Wizard Checkpoints" on page 216** and have contacted the FileNet Upgrade/Install Assurance Team at updgrade@filenet.com before restarting the Wizard.

Appendix E – Configuring a Font Server for COLD Preview

This appendix contains instructions for setting up and testing a Font Server on an existing HP 9000 Storage Library server that will be running FileNet COLD Preview software.

Note These instructions are adapted from Hewlett-Packard procedures, and are designed to be run by an HP professional. For further information on configuring and testing the Font Server, contact HP.

Configure the Font Server

The Common Desktop Environment (CDE) includes a small set of fonts and font aliases that are not part of the standard distribution of X Windows. For CDE to function correctly, these fonts need to be available to the X-servers (X-terminals) displaying CDE.

The Font Server needs to include the CDE fonts in its catalog. You can do this by editing the following files:

Edit the /etc/X11/fs/config File

As **root** user, use your favorite text editor, such as vi, to edit the /etc/X11/fs/config file.

1   Locate the "catalogue = ..." line.

2   Make sure the first item in the catalogue list is:

> **/usr/lib/X11/fonts/type1.st**

3   At the end of the catalogue line append the following phrase:

> **,/usr/dt/config/xfonts/C**

4   Save your changes and exit the file.

Edit the /etc/rc.config.d/xfs File

As **root** user, you also need to edit the /etc/rc.config.d/xfs file.

Add or modify the line for the following variable:

RUN_X_FONT_SERVER=1

Start the Font Server

As **root** user, start the Font Server by entering:

/sbin/init.d/xfs start

If the Font Server is already running, kill it and repeat the xfs start command.

Edit the /etc/dt/config/Xsetup File

Before you edit this file, you need to copy it from the /usr/config directory.

As **root** user, enter:

cp /usr/config/Xsetup /etc/dt/config/Xsetup

Edit the /etc/dt/config/Xsetup file you just copied. Add this line at the end of the file:

$XDIR/xset fp+ tcp/<server_id>:7000 1>/dev/null

where <server_id> is either the **server name** as found in the /etc/ hosts file, or the **TCP/IP address** of the server. If you need to find out the TCP/IP address, enter:

nslookup 'hostname'

Install HP-UX Patches, if necessary

Depending on the version of HP-UX operating system installed on your server, you may need to install patches from Hewlett-Packard.

Go to the FileNet Web site **www.css.filenet.com** and log into World-wide Customer Support. Click on:

Install/Upgrade
   1. Begin Here (Introduction)
      2. Upgrade/Install General Overview
         5. Review the Operating System/RDBMS Notes

Select your version of the HP-UX operating system from the list, and review the patch recommendations and requirements.

Reboot the Server

Reboot the server by entering:

shutdown -ry 0

Verify the Font Server

After the server reboots, log in as **root** user and verify that the Font Server is working properly.

1   Verify that the Font Server has started by entering:

> **ps -ef | grep xfs**

If the Font Server has started successfully, the process status information displays.

2 Verify that the Font Server is at the head of the Xserver's font path by entering:

> **xset -q**

You should see a section that says, "Font Path:", then an entry similar to this:

> tcp/:7000

This entry should appear before you see any specific font directory path names.

3 Verify that your Xserver can find scalable fonts by entering:

> **xlsfonts -fn "*-0-0-0-0-*"**

You should see a list of fonts. The first fonts on the list should be from Adobe.

Verify the Xstation

Note   Perform the steps in this section on the Xstation you will be using to run the COLD Preview application.

If you are not already running COLD software on the server, you may have to postpone this test until after you have completed the rest of the Image Services update procedure.

To verify that the Xstation is selecting the correct font, run the Xstation's Configuration Diagnostics (for example, hold down the F12 key and select the Diagnostics icon. You should see a button to display font logging.)

Then run COLD Preview. The font logging will show whether font selections are coming from the Font Server or the Xserver, and it will also show you which specific font is being selected.

Return to the Main Procedure

After you have finished configuring and verifying the Font Server, you can return to of the main procedure.

Appendix F – Installing Oracle Patch Set 9.2.0.2

Prepare to Install the Patch Set

1   Insert the FileNet CD containing the Oracle Patch Set 9.2.0.2 for HP-UX Operating System.

2   As **root** user, mount the CD-ROM device on the /cdrom directory by entering a command similar to the following:

      mount /dev/dsk/c2t2d0 /cdrom

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

3   Use SAM to create a temporary file system named /ora9202. This file system should be 500 MB or larger.

4   Give this new file system universal access privileges by entering:

      chmod 777 /ora9202

5 Change to the new file system and expand the contents of the Patch Set tar file from the CD. Enter:

> **cd /ora9202**
> **tar -xvf /cdrom/hp64.tar**

6 As **fnsw** user, make sure the Image Services and Oracle software is stopped. Enter:

> **initfnsw -y stop**

7 Make sure that all processes have been stopped by entering:

> **whatsup**

If the resulting display shows that any processes, such as TM_ daemon, are still active, enter:

> **killfnsw -DAy**

8 As the **oracle** user, make sure the environment variables ORACLE_ HOME and ORACLE_SID are set correctly.

echo $ORACLE_HOME
echo $ORACLE_SID

ORACLE_HOME should point to the location of the Oracle 9.2.0 software, and ORACE_SID should be unchanged, e.g., 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>

9 Cd to the $ORACLE_HOME/bin directory where the Oracle Universal Installer is located.

For example:

cd /usr/ora/920/bin

10 Make sure 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 the server identifier, either a name or IP address.

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

Launch Oracle Installer

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

./runInstaller

2   On the Welcome screen, click the **Next** button to display the File Locations screen.
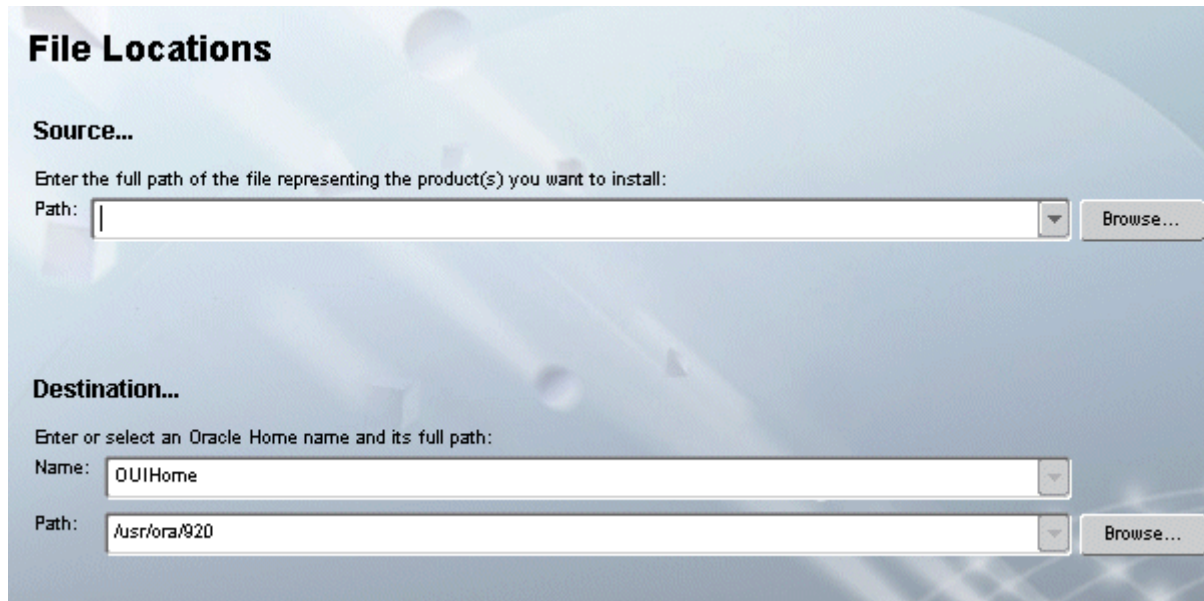
Welcome

The Oracle Universal Installer guides you through the installation and configuration of your Oracle products.

Click "Installed Products..." to see all installed products.

> **3** 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.

File Locations

Source...

Enter the full path of the file representing the product(s) you want to install:

Path: [▼] Browse...

Destination...

Enter or select an Oracle Home name and its full path:

Name: [OUIHome   ▼]

Path: [/usr/ora/920   ▼] Browse...

4 Select the products.jar file. Click the **Next** button.
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.

Enter path or folder name:

/ora9202/stage/

Filter   Files

[^.]*   install1.jar
                                products.jar

Folders

.
Actions
Dialogs
Patch Sets

Enter file name:

products.jar

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.

Summary
Oracle9iR2 Patchset 9.2.0.2.0

```
─ Global Settings
    ─ Source : /cdrom/stage/products.jar
    ─ Oracle Home : /usr/ora/920 (OUIHome)
─ Product Languages
    ─ English
─ Space Requirements
    ─ /usr/ Required 131KB : Available 266MB
    ─ /usr/ora/920/ Required 1.12GB : Available 858MB
    ─ /tmp/ Required 59MB (only as temporary space) : Available 170MB
```

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

7 If you encounter problems writing to a file during the installation process, as shown in the Error message below, change the permissions for the Oracle libraries and binaries.
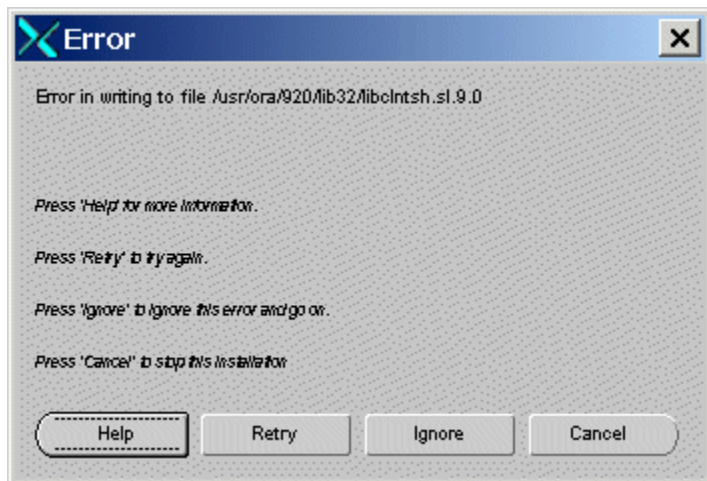
You may need to take one of these actions:

- 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:

    cp <filename> <newfilename>

After you've 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 **root** user to run $ORACLE_HOME/root.sh.

9 After the installation has completed successfully, the installer displays:

End of Installation

Click **Exit** and confirm to exit the installer.

After Installing the Patch Set

After the Patch Set has been successfully installed, you need to run the following SQL*PLUS commands on each database associated with this Oracle 9.2.0.2 instance.

1   As the **oracle** user, launch SQL*PLUS by entering:

   sqlplus "/ as sysdba"

2   Start the database in migrate mode.

   SQL> **startup migrate pfile = /fnsw/local/oracle/init.ora**

3   Begin spooling the output to a log file, and execute the catpatch.sql script to update the database with the newly patched software. This step will also take about an hour.

   SQL> **spool patch.log**
   SQL> **@$ORACLE_HOME/rdbms/admin/catpatch.sql**
   SQL> **spool off**

4   Review the patch.log file for errors and correct any problems. If neces-
     sary, run the catpatch script again until no errors are reported.

5   Shutdown the database and then restart it to take it out of migrate
     mode.

     SQL> **shutdown**
     SQL> **startup pfile= /fnsw/local/oracle/init.ora**

6   This step is optional. It recompiles all invalid PL/SQL packages now
     rather than when accessed for the first time. Expect this step to take
     just a minute or so.

     SQL> **@$ORACLE_HOME/rdbms/admin/utlrp.sql**

7   Shutdown the database and exit from sqlplus by entering:

     SQL> **shutdown**
     SQL> **exit**

Important! FileNet Image Services system and Oracle that use the US7ASCII character set also need to install Oracle Interim Patch 2645455 as described in **"Appendix G – Installing Oracle9i Data Server Interim Patch 2645455" on page 298**. You may want to leave Oracle and Image Services shutdown until you've finished installing the interim patch.

Oracle Interim Patch 2645455 is not required for systems using a character set such as WE8ISO8859P1.

Appendix G – Installing Oracle9i Data Server Interim Patch 2645455

Oracle Interim Patch 2645455 corrects a problem with the US7ASCII character set. If you plan to use a different character set, such as WE8ISO8859P1, this patch is not required.

Note   **At the time this document was published, Oracle Patch Set 3 (9.2.0.3) did not include the fix for the US7ASCII problem, and no equivalent Interim Patch for Patch Set 3 was available. However, Oracle may include this patch in subsequent Patch Sets. Check the Image Services 4.0.0 Release Notes on FileNet's Web site http://www.css.filenet.com for the latest news.**

Prepare to Install the Interim Patch

1 Make sure that Perl 5.5 (also known as Perl 5.00503 – Tar 3016460.999) or greater version of Perl is installed on the server. Enter:

/usr/sbin/swlist -l product | grep perl

Perl is supplied with the HP-UX operating system software and is also available for download from HP's Web site.

2 Verify that Perl is in your directory path by entering:

which perl

If you need to add perl to your path, enter:

- In the Bourne or Korn shell:

    export PATH=$PATH:\<full path to the directory containing perl\>

- In the C shell:

    setenv PATH $PATH:\<full path to the directory containing perl\>

To verify the PATH variable is set correctly, enter:

echo $PATH

3 Make sure that Oracle Patch Set 2 (9.2.0.2) has been sucessfully installed on the server. Refer to **"Appendix F – Installing Oracle Patch Set 9.2.0.2" on page 285**.

4 Create a temporary directory for the interim patch. For example, enter:

mkdir /2754483

5 And then add this new directory to your path:

- In the Bourne or Korn shell:

  export PATH=$PATH:/2754483

- In the C shell:

  setenv PATH $PATH:/2754483

To verify that the PATH variable is set correctly, enter:

echo $PATH

6   Have the FileNet CD for Oracle Interim Patch 2645455 available.

7   Make sure the Image Services and Oracle software is stopped.

If the software is still shutdown after the Oracle Patch Set 9.2.0.2 installation, skip to the next section, **"Installing the Interim Patch" on page 303**.

Otherwise, as **fnsw** user, enter:

initfnsw -y stop

8   Make sure that all processes have been stopped by entering:

whatsup

If the resulting display shows that any processes, such as TM_ daemon, are still active, enter:

killfnsw -DAy

Installing the Interim Patch

1 Insert the FileNet CD for Oracle Interim Patch 2645455 into the CD-ROM drive.

2 As **root** user, mount the CD-ROM device on the /cdrom directory by entering a command similar to the following:

mount /dev/dsk/c2t2d0 /cdrom

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

3 As **root** user, cd into the HPUX directory on the CD-ROM:

cd /cdrom/HPUX/2754483

4 Copy the contents of the patch directory on the CD to the temporary directory on your server. Enter:

cp -r * /2754483

5   Give the new directory universal access privileges by entering:

    chmod -R 777 /2754483

6   Return to the root directory and eject the Interim Patch CD-ROM by entering:

    cd /
    umount /cdrom

    Remove the CD from the CD-ROM drive and store it in a safe place.

7   Then apply the patch by entering:

    cd /2754483
    perl OPatch/opatch.pl apply

After Installing the Interim Patch

Check to see if the patch has been successfully installed on the server. The following steps list what is Currently Installed on the server, including Interim Patch Id Numbers:

cd /2754483
perl OPatch/opatch.pl lsinventory

The report lists all installed items in alphabetical order, along with the corresponding version number. The installed interim patches and their associated base-bug are listed at the end of the report.

The product names shown in the example are shown as an example only:

```
PRODUCT NAME                            VERSION
============                            =======
Advanced Queueing (AQ) API              9.2.0.1.0
Advanced Replication                    9.2.0.1.0
Agent Required Support Files            9.2.0.1.0
.
.
.
XML Transx                              9.2.0.1.0
XSQL Servlet                            9.2.0.1.0

Installed Patch List:
[ Base Bug(s): 2645455 ] )
```

Restart your database instance to ensure that it comes up successfully.

Removing the Patch, if necessary

If you need to remove the patch for any reason, follow these steps:

cd /2754483
perl OPatch/opatch.pl rollback -id 2645455

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