FILENET

Image Services

Update Procedure for AIX/6000

Release 4.0.0

9844075-001

May 2003

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Getting Started

This procedure explains how to update an AIX RISC Series 6000 System from:

- Image Services 3.6.10 (sp2 or ESE)

to Image Services 4.0.0.

Note If your server has a release of FileNet software prior to Image Services 3.5.0, you must update to one of the above releases before continuing with this procedure.

Required Skills

Please read the entire procedure from start to finish before performing the actual update. This procedure assumes that the operator has knowledge of:

- UNIX
- A text editor such as **vi**
- AIX logical volume management
- System Management Interface Tool - SMIT (this document uses the command line version of SMIT known as **smitty**)
- 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 documentation CD.

End User License Agreement

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New Features of the Image Services 4.0.0 Installation

This release of Image Services includes some changes you need to be aware of when updating the new software. Some of these changes were incorporated in the 3.5.0 release of Image Services.

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 (OSAR-less systems).

If you will be configuring and setting up an MSAR System, refer to the ***MSAR Procedures and Guidelines for Image Services*** document for information.

Automated Wizard Update

The Update Wizard automates the update process. The Update Wizard:

- Updates both Oracle and Image Services software depending on the server configuration. The Update Wizard will not make changes to Oracle if your installation is site-owned.
- Installs Oracle patches.

- Upgrades the database.

Wizard System Check Software

The Update Wizard has a system check feature which can and will inspect your server for the prerequisites listed in this manual. The Wizard system check runs in one of the following two cases:

- As a selectable option, the Wizard system check can run separately from the actual update steps performed by the Wizard. No other update actions take place following the Wizard system check. Warnings and errors will be displayed on the console, all inspected item status will be output to an event log and the program will terminate. You will see the option of running the Wizard system check when you start the Wizard.

  FileNet **requires** you to rerun the Wizard system check this way until you have identified and fixed all the errors. Note that you may run the Wizard system check software in **production mode,** that is, while the Image Services software is doing its normal daily tasks. There is no need to disrupt the current operation while you

evaluate the server for prerequisites. Steps for this operation are covered in **“Run the Wizard System Check” on page 75**.

- The Wizard system check will also occur by default when you begin your update. The Wizard will go on to update the Image Services and Oracle software (if necessary) after the server prerequisites have successfully passed. The Wizard system check status reports will be output to an event log. The Wizard will **not** proceed to any update actions if the server prerequisites are not met.

A list of the Wizard system check activities can be found in **“Appendix A – Wizard System Check Steps” on page 195**.

Oracle9i RDBMS Software

Oracle9i Release 2 (9.2.0.1) with patch set 2 and interim patch set 2645455 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 GB** of free space for installation.

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

Remote Oracle Server Compatibility

For customers with remote Site-controlled Oracle databases, Image Services 4.0.0 is compatible with either Oracle 8.1.7 or 9.2.0 databases on the remote server, as long as Oracle 9.2.0 client software has been installed on the Image Services server.

Oracle9i Media Must Be Copied onto the Server

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

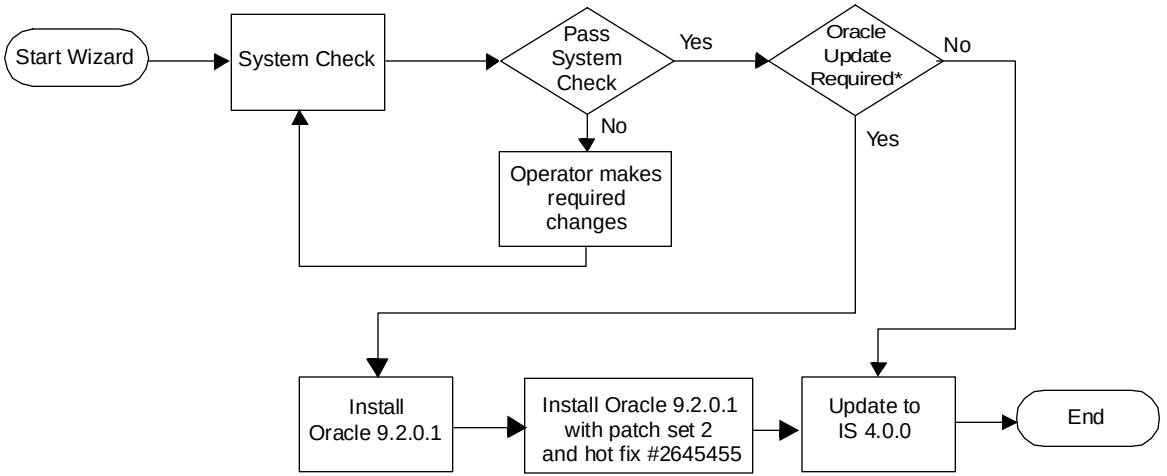
Update Wizard Overview

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



Update Event Logs

Wizard event logs

Events specific to the Wizard will be sent to /fnsw/local/logs/wizard/yyyymmdd_hhmm.log. Events specific to the system check will be sent to /fnsw/local/logs/wizard/SysChk_yyyymmdd_hhmm and to /fnsw/local/logs/wizard/yyyymmdd_hhmm.log.

Troubleshooting The Wizard

The Wizard event log provides robust information on how the Wizard progressed. Instructions on how to read the event log as well as general troubleshooting is found in **"Appendix D – Troubleshooting The Wizard" on page 242**

Restarting The Wizard

The Wizard tracks checkpoints throughout the update process. If you should exit the update due to an error condition, the Wizard will remember the last checkpoint you reached. This allows you to resume the update from that checkpoint once you have properly addressed the

error condition. For more instructions on restarting the Wizard see **“Appendix D – Troubleshooting The Wizard” on page 242**

Operating System Files Changed By The Wizard

The following AIX OS files are changed by the Wizard. In each case, the original file is copied and renamed. The new name is simply the oldname with an extension. The extension is of the following format: yyyymmdd_hhmm.

/etc/rc.net

/etc/inittab

/etc/pse.conf

/etc/rc.tcpip

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

In order to use the wizard, you must start with the following configuration:

- IS 3.6.10, Oracle 8.1.7 and AIX 5L

After the wizard completes, you will have:

- Image Services 4.0.0, Oracle 9.2.0.1 (with patch set 2 and hot fix) and AIX 5L.

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 138** on each Image Services server on the domain.

These preparation steps include:

- Run the system check (Chapter 2).
- Fix any problems noted by the system check (Chapter 3).
- Prepare server - check system table space, make backups, evaluate cache (Chapter 4).
- Reboot the server, check for errors (Chapter 4).

Once you have performed these preparation steps on each server, you can then perform the actual update. **You must perform the Update on 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. Run System Checks and fix errors on all servers.
3. Update the Root server (The Root server may be a Combined server or Root/Index server)
4. Start the FileNet and Oracle software on the Root server.
5. Update the Storage Library server(s).
6. Start the FileNet software on the Storage Library server(s).
7. Update the Application server(s).
8. 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 installation. 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** contain valuable information you need to install and configure Image Services software. Do not start the update without first reading the **Release Notes**.

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 AIX** in two formats: **/relnote.htm** and **/relnotes.txt**

Pay special attention to the **"Patches"** mentioned in the Release Notes. (Search for the keywords **PRE-UPDATE** and **REQUIRED** to

locate information about AIX, 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 AIX to determine if any 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 located on the FileNet Web site **www.css.filenet.com**.

Release Dependency Spreadsheet

Review the 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. The Release Dependency spreadsheet is located on the FileNet Web site **www.css.filenet.com**.

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

Note Version 3.6.0 or higher of the Image Services Toolkit (formerly known as WAL) is required when running Image Services 4.0.0 and the IS Toolkit on the same server. Make sure any IIS Toolkit SCRs listed in the Release Dependency spreadsheet have been downloaded and installed.

Update Requirements

Hardware Requirements

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

Server Architecture

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

Note Oracle9i software is not compatible with 32-bit AIX 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

- **512 MB** memory. To see the amount of usable memory, enter:

  lsattr -E -l sys0 -F 'description value' -a 'realmem'

- **256 MB** for Application server without Oracle or OSAR.

Paging Space

- Oracle recommends that paging space be **2 times** the amount of server memory. For example, a server with 512 MB of memory would require 1 GB of paging space.

Note On systems with more than 2 GB of physical RAM memory, the requirements for paging space can be lowered, but it should never be less than the amount of physical RAM memory.

Note For more information on IBM's recommendations on paging space, see IBM's AIX Web site at **http://www.rs6000.ibm.com/doc_link/en_US/a_doc_lib/aixbman/baseadmn/pg_space_vm.htm#pagingsp**

Disk Space for Software

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

- **7.0 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*	**4.0 GB**	**-**
Temporary space for Oracle9i Media** (FileNet-controlled Oracle only)	**3.0 GB**	**-**
Free space in **/** (root)	**1 MB**	**1 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**
Free space in directory above $ORACLE_HOME (e.g., /usr/ora)	**50 MB**	**-**
Oracle temp directory	**400MB**	**-**
Total	**6.49 GB**	**40 MB**

* The space required for installing the Oracle 9.2 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.

Disk Space for Datasets

The Oracle and FileNet dataset sizes shown here are the minimums. The datasets on the server you're updating may be larger. For future reference, you can record the actual sizes of each dataset.

Dataset	Minimum Size (MB)	Actual Size (MB)	Volume Group
oracle_db0	200		
oracle_rl0	20		
oracle_rl1	20		
oracle_sys0	200		
oracle_tr0 *	400		
oracle_udb0	200		

Dataset	Minimum Size (MB)	Actual Size (MB)	Volume Group
cache0	100		
permanent_db0	100		
permanent_rl0	40		
transient_db0	20		
transient_rl0	40		
sec_db0	12		
sec_rl0	4		

* FileNet recommends a minimum of 400MB for oracle_tr. Your system may require more.

X Terminal or Equivalent

You must use an X-station, or a workstation that supports X Windows or Common Desktop Environment (CDE), or a PC with an X Windows emulator when running the Wizard.

Software Requirements

To perform the update to Oracle 9.2 and Image Services 4.0.0, you'll need these media:

FileNet Image Services Software

- **Image Services 4.0.0 for AIX/6000** (CD-ROM). This media contains the Image Services 4.0.0 software including COLD 4.0.0 software.

Oracle RDBMS Software

Note Oracle 9i software media are not supplied by FileNet.

- **Oracle9i Database Release 2 Enterprise/Standard Edition for AIX/6000 (64-bit)**. The compact disks contain all the Oracle 9i RDBMS software products.
- **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 261**. For Interim Patch installation instructions, see **"Appendix G – Installing Oracle9i Data Server Interim Patch 2645455" on page 275**.

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.

Prerequisite Activities

The following table lists the steps, media and server resources that are required to successfully update your Image Services to 4.0.0. Each requirement is described in detail later in the document.

Prerequisite	Comments
Run the Wizard system check software.	Reference **“Appendix A – Wizard System Check Steps” on page 195** for specific server items inspected by the Wizard system check.
Update to AIX OS 5.1 Maint. level 2.	See **“Update Paths” on page 26** for OS update specifics.
Install AIX APARs and PTFs.	Reference www.css.filenet.com for the currently required APARs and PTFs.

Prerequisite	Comments
Read FileNet Release Notes.	Available on the Image Services update CD at /setup_dir/relnotes.html or on FileNet's Web site at www.css.filenet.com.
Install the Pre-Update Show Stopper fixes that were identified in the Release Notes.	It is mandatory to have the appropriate show stopper 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. You can search the Tech Info CD for files labelled as PRE-UPDATE and REQUIRED.
Backup the system.	Includes FileNet datasets, cache, Capture settings (if Capture Professional is used) and OS.
Evaluate cache. Back it up if necessary.	
Obtain proper CD-ROMs for Image Services and Oracle	
For servers with Oracle:	

Prerequisite	Comments
Create a 3.9 GB file system for Oracle 9.2	Do not use your current Oracle executables file system.
Create a home directory for the **oracle** user, if necessary.	It cannot be the same directory where your Oracle executables are stored. FileNet recommends creating a directory named /home/oracle.
Create a directory (e.g., /ora_media) to copy the contents of the Oracle CD-ROM media into.	The Oracle media requires 3 GB of free space on the server's hard drive. This space can be reused after the Wizard update is finished.
Add sufficient contiguous Oracle SYSTEM Tablespace.	Do this immediately prior to running the Update Wizard.
Add sufficient contiguous Oracle FNTMP_TS Tablespace.	Do this immediately prior to running the Update Wizard.

Related Documentation

As you read this procedure, you may see references to other documents you may need to review. They are included on the following list. 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***
- ***Image Services Installation and Configuration Procedures for AIX/6000***
- ***Enterprise Backup and Restore User's Guide***
- ***Third-Party Backup/Restore Guidelines***

2

Preparing for the Update

At least 4 weeks prior to the update, the FileNet Technical Consultant or the ValueNET Partner **must** do the following:

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

- Run the Wizard System Check and make as many corrections as possible. Rerun the System Check. Send the results to the Upgrade/Install Assurance Team.

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

- FTP the file from the server to a client PC, copy the file to a diskette and forward it on to the Upgrade/Install Assurance Team.
- Send the file to the Upgrade/Install Assurance Team via e-mail at upgrade@filenet.com.

Copy The Image Services .CDB File

The 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 may 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 Upgrade/Install Assurance Team at upgrade@filenet.com.

Run spacerpt

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

Image Services needs to be running and you will need to know the f_maint password in order to run spacerpt.

1 As **fnsw** user, make sure Oracle is running 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 Export the f_maint password (if your logon profile does not do this).

- In the Bourne or Korn shell, enter:

  export F_MAINT_PW=<your f_maint_pw>

- In the C shell, enter:

  setenv F_MAINT_PW <your f_maint_pw>

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

spacerpt > <output file name> &

where <output_file_name> can be any name you choose. Make note of the full path name of the output file so you can refer to it later.

4 If you want to stop Oracle:

- For FileNet-controlled Oracle, enter:

  fn_util stoprdb

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

Note The Site-controlled steps above are for **example** purposes only. Your Site-controlled update may require the shutdown of other processes.

5 Send the output file to the Upgrade/Install team. Print a copy and store in a safe place. You will compare this copy with a spacerpt run at the end of the 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.

Update Your System

Before you can use the Wizard to Update Image Services, you will need to update your system. This section describes software and operating system updates as well as transitioning to 64 bit server operation.

Software Upgrade

Before updating to IS 4.0.0 you must complete the following steps in order.

Update Image Services

Update Image Services to:

- 3.6 sp1 and patches or
- 3.6 sp2

Update AIX

Update to AIX 5L 32-bit.

Note Oracle does not support a direct update from AIX 4.3.3 32-bit to AIX 5L 64-bit. To avoid data corruption you must first update to AIX 5L 32-bit.

Oracle 8.1.7 must be running on an AIX 5L 32-bit system before you can update to Oracle 9.2.

Update the Rollback Segments

Note If you have a Site-controlled Oracle system, the DBA should consult the Oracle documentation for information on updating rollback segments.

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.

1 To update the rollback segments, contact the FileNet Upgrade/Install Assurance Team to download the following files:

Note If your current release of Image Services software is:
IS 3.6 SP2
these files are already on your server.

- 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 produce an error message. An offline production rollback 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 Update the rollback segments by entering:

/fnsw/bin/oraaltrbs8

Oraaltrbs8 calls the fn_oraaltrbs8.sql SQL script to update the rollback segments.

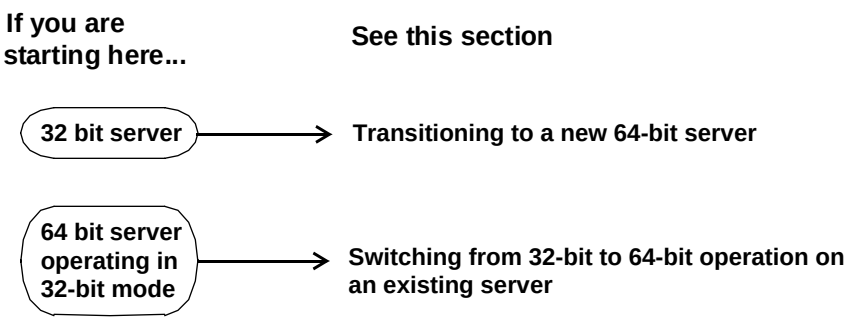
Run a System Check

Perform a system check on the running AIX 5L 32-bit/Oracle 8.1.7/IS 3.6 SP 2 system to verify your rollback segments.

CAUTION **Do not skip this step!** Later in this procedure, the Wizard will check previous system check files to verify that you had a running system under the AIX 5L 32-bit/Oracle 8.1.7/IS 3.6 SP 2 configuration. If you try and run the Wizard after you update to the AIX 64-bit system, but have not run the system check described at this point, the Wizard will not let you proceed.

Server Upgrade

If you plan on upgrading to Oracle 9i, you must upgrade to an AIX 5L 64 bit server. If you currently use a 32-bit AIX server or a 64-bit AIX server operating in 32-bit mode, you must upgrade as shown below:



Note If you are using a 64 bit server, ensure that it is configured for 32 bit operation before attempting to upgrade.

Transitioning to a new 64-bit server

On the new server, install your current version of 32-bit AIX, 32-bit Oracle 8.1.7 and 32-bit Image Services 3.6. Refer to the ***Image Services Installation and Configuration Procedures for AIX***.

You can name the new system anything you wish (within the standard guidelines described in the installation procedure).

Install 64-bit AIX

Update your operating system to AIX 5.1L 32-bit.

Install Oracle and Image Services

Install the Oracle9i software and the Image Services 4.0.0 software according to the ***Image Services Installation and Configuration Procedures for AIX***.

Make sure the new server is attached to the network.

Copy Configuration Files from the Current Root Server

On the Root server, use **ftp** (file transfer protocol) binary transfer to copy the following configuration files from the 32-bit Root server to the new 64-bit Root server:

- The most recent CDB file (/fnsw/local/sd/conf_db/IMSxxx.cdb)
- The Server Configuration file (/fnsw/etc/serverConfig)
- The EBR backup datafile and Oracle signature file
- To prepare for the migration from Oracle8 to Oracle9i, copy the Oracle initialization file (init.ora)...
  - From: /fnsw/local/oracle on the 32-bit server
  - To: /fnsw/local/tmp on the 64-bit server

Manually Edit the Configuration Database File

Use your preferred text editor, such as **vi**, to edit the Configuration Database.

CAUTION The Configuration Database file is normally edited only by using the **fn_edit** tool. This is probably the only time you'll ever have to modify the CDB file by hand! Please be extremely careful!

- Locate the server name in the CDB file and change it to the name of the new 64-bit server.
- Locate the IP address in the CDB file and change it to the IP address of the new 64-bit server.

Exit from the text editor and save your changes.

Important! Make sure the name of the newly edited CDB file has the highest sequence number of any other CDB files that may already be on this server. If necessary, rename the file.

The **fn_build** tool will use the highest numbered CDB file to rebuild the configuration files on the server.

Update Configuration Database Format

1 As **fnsw** user, make sure the Oracle version number is correct in the Configuration Database (CDB file) by entering:

fn_oracle version

This command locates the Oracle version number in the Oracle initialization file (init.ora) and places it in the CDB file.

2 Update the configuration database format by entering:

fn_migrate 4

The fn_migrate command also moves FileNet-related files from /fnsw/local/tmp to fnsw/local/logs.

3 Rebuild the system configuration files by entering:

fn_build -a

Initialize FileNet Databases on the Root Server

As **root** user, initialize the index database and all the MKF databases (includes permanent, transient, and security databases) by entering the following command:

fn_dataset_config -i

This process may take a while (sometimes up to 30 minutes without any feedback to the user); the larger the datasets, the longer the wait. After the initialization process finishes, the prompt returns.

Note View the **/fnsw/local/logs/fn_util/fn_util.log** file to make sure that there were no errors in the database initialization process.

4 When you receive the following prompt, Initialization will remove all FileNet logical volumes, type **Y** (Yes) and press **Return**.

5 In the FileNet Dataset Configuration Box window, verify that the datasets are shown correctly with accurate sizes.

Click the up and down arrows in the Modified Size columns to adjust the dataset sizes, if necessary. Click the **OK** button to create and initialize the datasets. The initialization of the FileNet databases on the server will take about 20 minutes. You should see a screen with information similar to the following when the tool is finished:

```
Increasing Mirror copies Phase
Initializing Databases
Initializing Transient Database

fn_dataset_config:Finished successfully Mon Apr 16
15:05:03 2003
```

6 Make sure this command runs successfully by checking the log file and other files in /fnsw/local/logs to see that no errors have occurred. Do not accept the “Finished successfully . . .” message alone. Also check the log files.

Set the f_maint Password

Note The FileNet and Oracle software must be up and running in order to change the f_maint password.

Change the default password of f_maint, so each site will have a site-specific password. The default setting for the f_maint password is:

change$this_obnoxiou$_passwrd.

1. Log on as **fnsw** user.
2. At the system prompt, enter the following command:

   set_f_maint_pw

3. You need to press **Return** at the current password prompt.
4. When you are prompted to enter a new password:

   Enter new password for f_maint:

... enter a new password, between 6 and 30 characters long.

5 When you are prompted:

Confirm (re-enter) new password:

... enter the same password a second time.

Note If you don't see an error message, the password was changed successfully.

6 You return to the system prompt.

Perform a Full EBR Backup on the 32-bit System

When you're ready to make the transition to the new 64-bit system, use FileNet's Enterprise Backup and Restore program to make a full backup of the 32-bit system.

Refer to the ***Image Services Enterprise Backup and Restore User's Guide*** for complete information on using EBR.

Restore the EBR Backup onto the 64-bit System

Restore the data from the 32-bit system onto the 64-bit system. Again, refer to the ***Enterprise Backup and Restore User's Guide*** for full information.

- In the EBR dataset definition file (.ddf) and the device definition file (.dev), make sure the location parameters are set to the name of the new 64-bit server.
- In the EBR restore script (.res), add the following statement under the **restore_option** heading for the Oracle index database:

  rollforward = false;

Update and Verify the Oracle9i Version

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 Version field. The Oracle version should be **9.2.0**.

- If the version is not 9.2.0, you need to install the correct version of Oracle on the server.
- If the version is correct, continue with the next step.

5 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.

6 Rebuild the Oracle configuration files by entering:

fn_build -a

7 Make sure the Image Services software is shutdown by entering:

initfnsw -y stop

Run Post-Installation Scripts

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

fn_oracle start_migrate

2 Use the oraupgrade command to upgrade the database objects:

- If you're upgrading from Oracle 8.0.6, enter:
  oraupgrade 8.0.6 | tee /fnsw/local/oracle/conv920.err
- If you're upgrading from Oracle 8.1.7, enter:
  oraupgrade 8.1.7 | tee /fnsw/local/oracle/conv920.err

The **oraupgrade** utility takes several minutes to run.

This script upgrades your Oracle datasets to the current Oracle release level. It also stores its output in /fnsw/local/oracle/conv920.out as it creates directories and updates Oracle dataset information.

Note There is no progress indication on the screen. When the script finishes, the server returns to the system prompt.

To monitor the output of oraupgrade, you can open another X window and enter the following tail command:

```
tail -f /fnsw/local/oracle/conv920.out
```

When **oraupgrade** finishes, you can press **ctrl-c** to terminate the tail command.

You will see progress messages similar to these:

```
Starting oraupgrade
Upgrading the Oracle database from 8.1.7 to 9.2.0
oraupgrade  complete
```

When **oraupgrade** is finished, you return to the system prompt.

3 As **fnsw** user, stop Oracle by entering:

fn_util stoprdb

Stopping Oracle at this point takes it out of migration mode.

Note If **oraupgrade** fails, 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**: insuffucient 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-**01918**: user '<*user_name*>' does not exist
ORA-**01919**: role '<*role_name*>' does not exist
ORA-**01921**: role name '<*role_name*>' conflicts with another user or role name
ORA-**02275**: such a referential constraint already exists in the table
ORA-**02289**: sequence does not exist
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_tablename*> 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. For example, you might enter a command similar to the following:

cp /fnsw/local/oracle/conv920.out /fnsw/local/oracle/conv920.sav

Then run **oraupgrade** again. (Saving the output files will make problem resolution easier in case you need to contact the FileNet Upgrade/Install Assurance Team for support.)

4 As **fnsw** user, rebuild the configuration files and start Oracle again by entering:

fn_build -a
fn_util startrdb

Note Stopping the database as you did in the previous step and then starting it again takes it out of migrate mode.

5 Then run the following command to add new stored procedures to the Oracle database:

oraupgrade_sp

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

6 Stop Oracle by entering:

fn_util stoprdb

Start the Image Services Software

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

Xtaskman &

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

3 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.

4 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.

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

6 Close the Event Log and Xtaskman windows.

Backup the System

Now that all the configuration changes have been made successfully, this would be a good time to make a system backup. 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

Image Services 4.0.0 and Oracle 9i are successfully installed on your 64-bit AIX system, and your datasets have been successfully transferred. You can start FileNet Image Services and place the system in normal operation.

Continue with the Image Services 4.0.0 Update

When you're ready to update to Oracle9i and Image Services 4.0.0, continue with **"Disable the Screensaver" on page 75**.

Switching from 32-bit to 64-bit Operation on an Existing Server

If your system is already running on a 64-bit server running in 32-bit mode, you simply have to upgrade the operating system kernel.

Use the following commands to make the 64-bit kernel the running kernel:

ln -fs /usr/lib/boot/unix_64 /unix

ln -fs /usr/lib/boot/unix_64 /usr/lib/boot/unix

bosboot -ad/dev/ipldevice

Reboot your system after running these commands.

Continue with the Image Services 4.0.0 Update

When you're ready to update to Oracle9i and Image Services 4.0.0, continue with **"Disable the Screensaver" on page 75**.

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 the terminal before you run the Wizard.

Run the Wizard System Check

You can run the Wizard System Check while the Images Services system is in production mode. **It will not disrupt the operation and it will not change any files.** The Wizard System Check allows you and the 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 FileNet software is up and running.

Run the System Check while the current Image Services and Oracle software is running. (You'll get unavoidable "errors" stating that the FileNet software is running, but that's okay for now.) See **Chapter 3, "Resolving Wizard System Check Prerequisites," on page 88**.

- Next while the FileNet software is shut down.

  After you've resolved as many of the errors as possible, make sure the FileNet and Oracle software are shut down, and run the System Check again. If you still receive errors, correct them and rerun the System Check. You may need to run the System Check several times to identify and resolve any remaining issues.

Important! Run System Checks on all servers before you continue with the Wizard Update in Chapter 4.

The Wizard System Check inspects the server for prerequisites and lists any warnings 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 specific to your Image Services and/or Oracle being up during the Wizard System Check. You don't have to shut down Image Services until you are ready to run the actual update.

Mount the Image Services CD-ROM

1. Load the Image Services 4.0.0 media into the CD-ROM drive. Wait for the light to stop flashing.

2. As **root** user, type the following command at the prompt:

   lsdev -C | grep cd

   A message similar to the following will display. Make sure the CD-ROM drive is **available**:

```
cd0 Available 00-08-00-3,0 CD-ROM drive
```

3 Create a directory for mounting the CD-ROM drive if that directory does not exist:

mkdir /cdrom

4 Mount the CD-ROM drive to the directory you just created:

mount -rv cdrfs /dev/cd0 /cdrom

where /dev/cd0 is the appropriate device name. Note that cd0 was used in this command because cd0 is the available device.

5 To make sure the CD-ROM mounted successfully, type:

mount

You should see the CD-ROM device listed.

Start 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.

- For the Bourne or Korn shell, enter:

  export DISPLAY=<host_identifier>:0.0

- For the C shell, enter:

  setenv DISPLAY <host_identifier>:0.0

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

3 If you're running the Wizard from a remote terminal or from an X console at the server, allow access to the host display by entering this command at the remote terminal:

xhost +

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

Tip You can test the DISPLAY setting by entering the following:

```
xclock &
```

If the clock appears on the 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, start the Wizard by entering:

```
cd /
/cdrom/setup
```

CAUTION Do not **cd** to /cdrom to run the Wizard. Run this from the / (root) directory.

- 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:

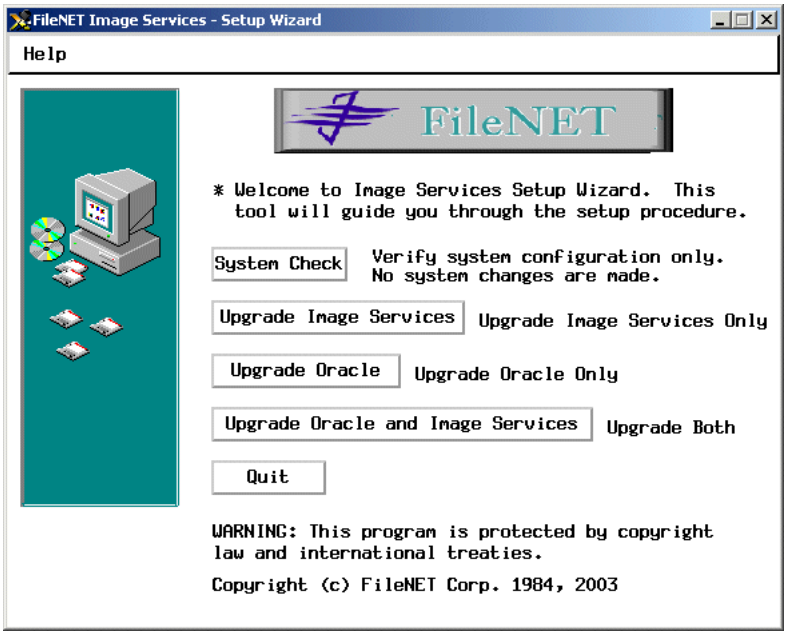
  /cdrom/setup -v

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

- For TTY mode (non-GUI), enter:

  /cdrom/setup -t

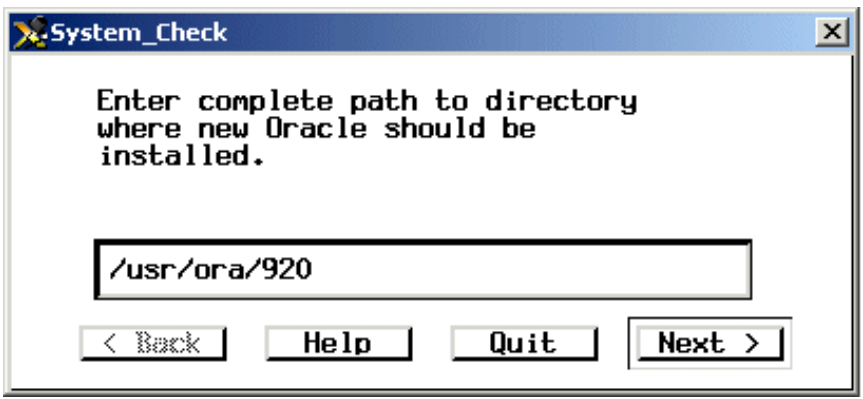
5 In graphical mode, you'll see the following screen. It'll take a few minutes to display.


FileNET Image Services - Setup Wizard
Help
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.
Copyright (c) FileNET Corp. 1984, 2003

6 Select System Check.

Tip Online Help is available.

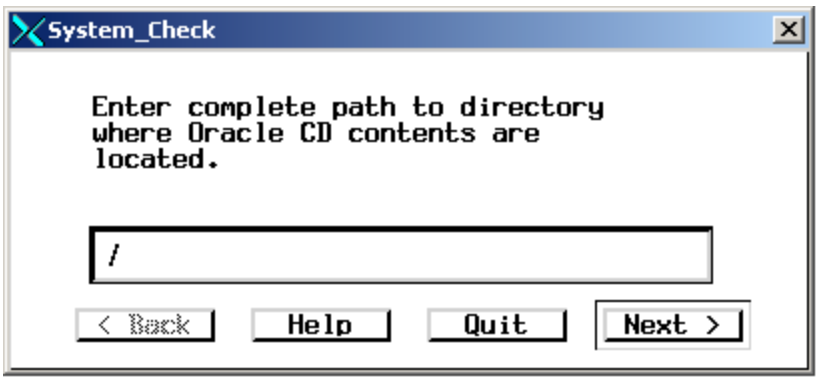
7 The System Check looks for a default file system named /usr/ora/920 for the new Oracle software. If it does not find this file system, you will see this dialog box:



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.

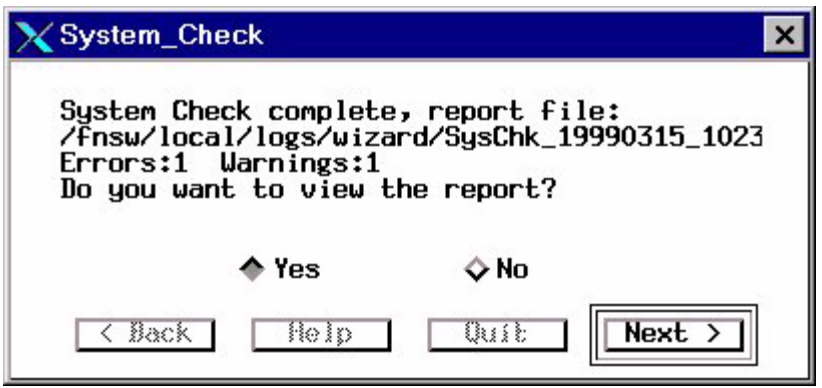
8 In the next screen, enter the directory where the Oracle CD contents are located. The Wizard verifies that you have the correct version of Oracle.



If you haven't copied the contents of the 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 steps are completed. You will be asked if you want to display a report of errors and warnings found by the System Check:



Select the **Yes** option and click the **Next** button. You can also see the report at:

/fnsw/local/logs/wizard/SysChk_yyyymmdd_hhmm and

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

where yyyymmdd_hhmm is the date and time stamp for when the Wizard System Check was run.

The Wizard System Check will also create several temporary files (.tmp) and place them in a **tar** file. For more information on how to use these .tmp files, see **“Appendix D – Troubleshooting The Wizard” on page 242**.

10 Take note of the errors and warnings. Exit 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 88** for instructions.

12 After you have resolved as many error conditions as possible, send a copy of these reports to the Upgrade/Install Assurance Team at upgrade@filenet.com.

13 If **no errors** were flagged by the Wizard System Check, proceed to **"Update Image Services and/or Oracle" on page 131**.

3

Resolving Wizard System Check Prerequisites

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

Using This Chapter

This chapter is primarily a reference chapter. Each section in this chapter corresponds with a Wizard system check error or warning (the exception is the system backup recommendation). Read and perform the steps in a section **only** if you received an applicable 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 pro-

duction mode error conditions while your Image Services system is up and running. Non-production mode corrections can't be made while your system is in production. Non-production mode changes must be made just prior to running the update Wizard.

Perform Necessary Backups

This chapter involves changes to your operating system. You must have a full backup of your system before making the changes specified in this chapter.

Your backup must include:

- File Systems. Use the AIX file system backup utility or third party backup programs.
- FileNet Datasets. Use the Enterprise Backup/Restore (EBR) or third party backup programs.
- Capture settings if Capture Professional is used. Refer to the Capture documentation for more information on this procedure.

For more information, refer to the following manuals:

- ***Image Services System Administrator's Companion for UNIX***
- ***Third-Party Backup/Restore Guidelines***
- ***Image Services System Administrator's Handbook***
- ***Enterprise Backup/Restore User's Guide***

Production Mode Error Corrections

The error corrections in this section can be made while the system is in production mode without degrading performance or affecting other files.

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 **co-existence mode** or **non-coexistence mode**. This will determine how much SYSTEM tablespace expansion is required.

- **Co-existence** 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 will be 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. Export the f_maint password (if your logon profile does not do this).

   - In the Bourne or Korn shell, enter:

     export F_MAINT_PW=<your f_maint_pw>

- In the C shell, enter:

  setenv F_MAINT_PW <your f_maint_pw>

4 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 the following:

```
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 the following:

```
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**.

5 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 99**.

6 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-co-existence 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.

7 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 **"Appendix C – Manually Expand Tablespace" on page 211**.

- **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.

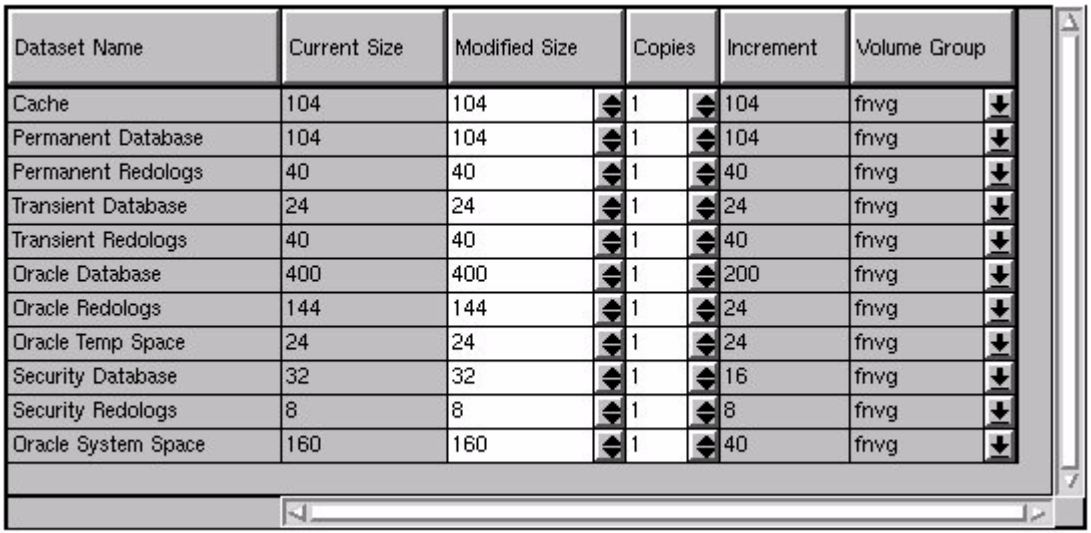
Tip Test your remote terminal environment with **xclock &**

3 As **root** user, use the fn_dataset_config command to begin the 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 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 at least **one increment**.

6 Click OK to accept the new size. This will run the processes necessary to commit the 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 shut down the Oracle database, enter the following as **fnsw** user:

fn_util startrdb

ERROR: 400 MB 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 total 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-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. Export the f_maint password (if your logon profile does not do this).

   - In the Bourne or Korn shell, enter:

export F_MAINT_PW=<your f_maint_pw>

- In the C shell, enter:

setenv F_MAINT_PW <your f_maint_pw>

4 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.

5 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.

6 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 Expand Tablespace" on page 211**.

- **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.

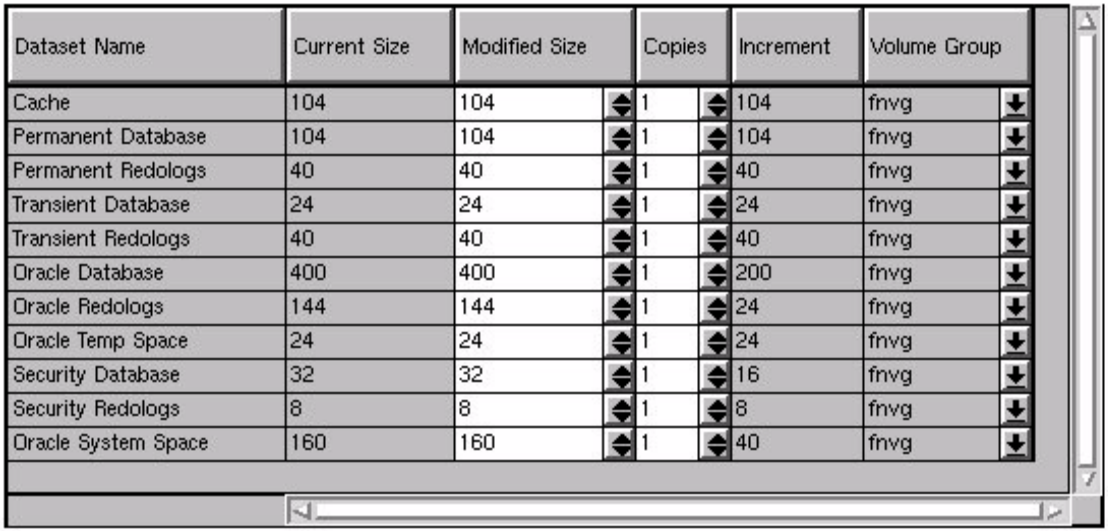
Tip Test your remote terminal environment with **xclock &**

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 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 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 earlier.

9 To shut down the Oracle database, enter the following as **fnsw** user:

```
fn_util  startrdb
```

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

If the Wizard 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 the Upgrade/Install Assurance Team for further instructions.

ERROR: Paging Space nnMB is less than the required amount yyMB.

Do the steps in this section if the Wizard system check issued any errors or warnings on your current paging space size.

Note For more information on IBM's recommendations on paging space, see IBM's AIX Web site.

1 Determine the size of the physical partitions used by the appropriate volume group which contains the paging space (rootvg, for this example). Enter:

lsvg rootvg

Your output should look similar to the following:

```
VOLUME GROUP:   rootvg     VG IDENTIFIER:  00001497c7c29c8a
VG STATE:       active     PP SIZE:        4 megabyte(s)
MAX LVs:        256        TOTAL PPs:      976 (3904 megabytes)
LVs:            31         FREE PPs:       473 (1892 megabytes)
TOTAL PVs:      3          USED PPs:       503 (2012 megabytes)
STALE PVs:      0          QUORUM:         2
VG STATE:       active     G DESCRIPTORS:  3
MAX LVs:        256        STALE PPs:      0
ACTIVE PVs:     3          AUTO ON:        yes
MAX PPs per PV: 1016       MAX PVs:        32
```

2 Note that the PP size is 4 MB in the above example. You will use 4 as a multiplier when you increase the paging space.

3 As **root** user, enter:

smitty pgsp

4 Use the down arrow key to toggle to the option: Change / Show Characteristics of a Paging Space.

5 Select the paging space you wish to increase and press the return key.

6 Use the Down Arrow key to go to the option: NUMBER of additional logical partitions entry field. Enter the number of partitions that will increase the current paging space to the recommended size.

CAUTION Note the volume group PP size from Step 2 in this procedure. The number of logical partitions will be in increased in physical partition sizes. If your volume group is in 4 MB PPs, each logical partition you add will be a 4MB increase to the already existing paging space.

7 Use the Down Arrow key to the Use this paging space each time the system is RESTARTED. Use your tab key to indicate a setting of **yes.**

8 Press the Enter key to execute your changes.

9 Exit smitty.

ERROR: Asynchronous I/O must be installed.
ERROR: Asynchronous I/O fastpath must be enabled.

Under normal conditions, you should never see these messages in the wizard, since the wizard only supports upgrades and this should have been set for a previous release. However, if this setting has been changed manually, you will get this error. To correct it:

1 Enter the following at the command prompt:

smitty aio

2 Select Change / Show Characteristics of Asynchronous I/O.

- “STATE to be configured at system restart" should be set to available.
- “State of fast path” should be set to enable.

Error: AIX package bos.adt.libm must be installed
Error: AIX package bos.adt.lib must be installed
Error: AIX package bos.adt.base must be installed
Error: AIX package bos.perf.perfstat must be installed
Error: AIX package bos.perf.libperfstat must be installed
Warning: AIX package bos.debug base must be installed

The Wizard System Check issues an error message if bos.adt.base or bos.adt.libm are not found or are not working correctly on the server. A warning is issued if bos.adt.debug is not found.

These programs are available on the AIX operating system install media. The ***Image Services Installation and Configuration Procedures for AIX/6000*** has specific instructions on how to install these products using the smitty install_latest command.

ERROR: New Oracle directory not yet defined.

The Wizard System Check reported this error if the server is lacking a file system for Oracle 9.2 software (or if you did not indicate a file system during the system check). This is not an error condition if you

have a vacant file system dedicated for the Oracle 9.2 software (or if you already have Oracle 9.2 installed). You will indicate the actual file system's name during the Wizard Update.

If you already have a file system dedicated for Oracle 9.2, it should meet the following requirements:

- It needs to have a minimum 4 GB of free space.
- It must have the proper permissions (755) and ownerships (e.g, oracle:dba or equivalent).
- It **must not** be the home directory for the Oracle user, i.e., it should not be the default login directory for the Oracle user.
- It **must not** be the same file system as that which contains the current version of Oracle.

If you have a file system allotted for Oracle 9.2 and it meets the above criteria, you may skip to**"Non-Production Mode Error Corrections" on page 118**.

To create a new logical volume for the Oracle 9.2 software, continue with the following steps.

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. Determine which volume group will hold your new Oracle 9.2 file system (for example rootvg or fnvg). Check the free space available in the volume group you are going to use (in this example, rootvg) by entering:

   lsvg rootvg

Your output should look similar to the following:

```
VOLUME GROUP:   rootvg     VG IDENTIFIER:  00001497c7c29c8a
VG STATE:       active     PP SIZE:        4 megabyte(s)
MAX LVs:        256        TOTAL PPs:      976 (3904 megabytes)
LVs:            31         FREE PPs:     473 (1892 megabytes)
TOTAL PVs:      3          USED PPs:       503 (2012 megabytes)
STALE PVs:      0          QUORUM:         2
VG STATE:       active     G DESCRIPTORS:  3
MAX LVs:        256        STALE PPs:      0
ACTIVE PVs:     3          AUTO ON:        yes
MAX PPs per PV: 1016       MAX PVs:        32
```

2 Notice the number associated with FREE PPs. If it is less than 3.5 GB, you should add another physical disk to that volume group or choose a different volume group.

Create File System /usr/ora/920

In this section, you will create the file system for the Oracle 9.2 software. It will be separate from the Oracle software file system you cur-

rently use. It will also be separate from the Oracle user's home directory.

Note The following procedure assumes the following:

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

/usr/ora/920 is the recommended mount point for Oracle 9.2. FileNet assumes the use of this name throughout this document, but you can use other mount points.

1 As **root** user, enter the following command:

smitty jfs

2 Select the smitty choices: Add a Journaled File System --> Add a Standard Journaled File System.

3 Select the volume group where you want to place the file system and then press the Enter key.

4 Use the following values for the entry fields:

- SIZE of file system (in 512-byte blocks), enter **8290304**
- MOUNT POINT, enter **/usr/ora/920**
- Mount AUTOMATICALLY at system restart, use your tab key to indicate a setting of **yes**
- PERMISSIONS, set to **read/write**

Create the file system by pressing the Enter key.

5 Exit smitty.

6 Mount the new file system by entering the following at the command line:

mount /usr/ora/920

7 Verify the mounting and the size by entering:

df -k /usr/ora/920

Note The Wizard will change the permission of the **/usr/ora/920** directory as well as issue a warning that the change was made.

ERROR: You must be logged on as root to run Setup of Image Services.

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

Error: Oracle rollback segments must be online and 1048576 bytes

During the upgrade procedure you were asked to expand the rollback segments using the fn_oraaltrbs.sql script. This error message is generated when this procedure was not completed successfully. Return to **"Update the Rollback Segments" on page 50** to expand the rollback segments.

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 Update Wizard.

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 on /fnsw is free. At least 80 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 is allocated for /fnsw and /fnsw/local. At least 420 MB is required.
ERROR: Only nn MB of space on /fnsw/local is free. At least 40 MB of free space is required.
ERROR: Oracle 9.2.0 directory is only nn MB, requires 4000 MB.
ERROR: Oracle 9.2.0 parent directory of /usr/ora/920 has only nn MB free space, requires 50MB.

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

To make sure that / (root), /tmp, /usr, and /var have enough **free** space, use the sizes shown in **"Table 1.1 Disk Space Requirements" on page 34**.

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

File System	Total Space	Free Space
/fnsw	220MB	40MB
/fnsw/local	200MB	40MB
The directory above the new $ORACLE_HOME (e.g., /usr/ora)	400 MB	400 MB
/usr/ora/920	At least 4.0 GB	At least 4.0 GB

Steps To Increase File System Size

1 As **root** user, enter:

smitty chjfs

2 Use the arrow keys to select the file system to be increased and press the Enter key.

3 Use the arrow key to toggle down to the SIZE of file system field. Enter the new size in 512 byte blocks.

Note The Wizard system check noted the required size in megabytes. Smitty is requesting the size in 512 byte blocks.

4 Press the **Enter key** to execute the changes.

5 Exit smitty.

ERROR: You must be running AIX 5.1 to continue

The Wizard System Check will issue an error if the AIX version is less than 5.1. Refer to **“Update Paths” on page 26** of this manual and your AIX documentation for more information.

After you update to AIX 5L you must make sure your system is fully operational.

ERROR: Oracle must be 8.1.7

The Wizard system check detected a version of Oracle that was not release 8.1.7. You must update to Oracle 8.1.7 before running the Wizard.

ERROR: Only updates from Image Services 3.6.10 are supported.

The Wizard System Check prevents any attempt to update from an unsupported version of Image Services; that is, any version less than 3.6.10. You must update to Image Services 3.6.0 before updating to Image Services 4.0.0. Refer to **“Update Paths” on page 26** and the appropriate FileNet documentation on performing those updates.

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

ERROR: FileNet Image Services is up.

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

Note You need to run the Wizard System Check at least once while the IS and Oracle software are running so the Wizard can run several database tests.

ERROR: Cannot contact Image Services root server.

The Wizard Update could not find the root server. Check to make sure that the root server is up and running.

ERROR: Oracle DB: IDB 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.

Note You need to run the Wizard System Check at least once while the IS and Oracle software are running so the Wizard can run several database tests.

ERROR: Database configuration is in error.See the CDB file for details.

The System Check has detected a serious database inconsistently related to coexistence mode. It's possible that duplicate RDB objects exist. Contact the Upgrade/Install Assurance Team to resolve this problem.

ERROR: Multiple RDB configuration objects found in CDB file. 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 needs a unique home directory

You will receive a Wizard System Check error message if the Oracle user home directory is the **same** as the current Oracle software 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/ora for either function at the conclusion of this update.

If your Oracle user home directory is already separate from the Oracle software directory, you can skip to **"Rerun System Check" on page 130**.

The following procedure creates a new home directory for the Oracle user.

Note The following example uses the following conventions:

/usr/oracle is the old oracle user home directory.
/home/oracle is the new oracle user home directory.
oracle is the Oracle user.

dba is the Oracle group.

If you have or are planning to 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 must have the Oracle user as a member.

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

1 As **root** user, enter the following at the command line:

```
cd /
mkdir -p /home/oracle
```

2 Change the permissions on the new home directory by entering:

```
chown -R oracle:dba /home/oracle
chmod 775 /home/oracle
```

3 Change the home directory for the oracle user using smitty.

a At the command line enter:

smitty chuser

b You will be prompted to enter the user name. Enter **oracle** and press the Enter key.

c Use the arrow keys to toggle down to the HOME directory field. Enter **/home/oracle**.

d Press the **Enter** key to execute.

e Exit smitty.

4 Copy the hidden environment settings files from the old oracle user 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.

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

The value of the $ORACLE_HOME environment variable (the variable which 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 List the .profile for each of these users:

```
su - <username>
more .profile
```

Take note of the value for $ORACLE_HOME for root, fnsw and oracle users.

2 At least one of the user profiles has the wrong value for $ORACLE_HOME. The value should be the directory location for the current, pre-upgrade, Oracle software.

3 Edit and correct the .profile that contains the incorrect value. Use a text editor such as **vi**.

ERROR: XNS protocol must be reconfigured for TCP.

XNS protocol is no longer supported. You must reconfigure both your servers AND clients for TCP/IP. It is recommended that you do this well in advance of your update so that all the clients may be converted and tested in production mode.

Rerun System Check

After you have made the corrections required by the Wizard system check, return to **“Run the Wizard System Check” on page 75** and run the Wizard 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

Update Image Services and/or Oracle

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

Important!

If you choose to let the Wizard install Oracle9i, the Wizard will automatically run Oracle's catalog.sql and catproc.sql scripts, which update the format of the database. This may be very time consuming on large databases, and will have to be repeated when the Oracle Patch Set is installed.

For this reason, FileNet-controlled sites may want to manually install Oracle9i and the Patch Set, and then run the catalog.sql and catproc.sql scripts just once.

When Oracle has been updated to the appropriate release level, the Wizard can be used to update Image Services.

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 118**.

Note Before continuing, be sure to make a backup copy of the server configuration files and the Oracle control files (FileNet-controlled updates only).

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 your server back into production mode.

Back Up the System

You should make sure that you made a recent full backup of your server before you proceed. This especially applies if you made changes to your 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 **“Make Additional Backups (if necessary)” on page 136**.

If Oracle is not on the server you will be updating, skip to **“Make Additional Backups (if necessary)” on page 136**.

If Archive Logging is enabled, you must **disable** it before updating 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, start fn_edit. Click OK in the initial dialog box. Click the Relational Databases tab.

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

3 Locate the **Log Archive Start** field in the Oracle sub-tab. If an **X** appears in this field, Archive logging is turned off. If archive logging is turned off, you may exit fn_edit (without saving changes) and skip to **“Make Additional Backups (if necessary)” on page 136**.

4 A check mark indicates that Archive logging is turned on. Turn logging off by clicking the field. The field should change from a check mark to an **X**.

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

6 Rebuild the Oracle configuration files by entering:

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

7 Make sure archive logging is turned off by entering the following as **fnsw** user:

```
sqlplus "/as sysdba"
SQLPLUS> connect internal
SQLPLUS>startup pfile=/fnsw/local/oracle/init.ora
SQLPLUS> archive log list;
```

Database log mode should indicate 'No Archive Mode.' Automatic archival should indicate 'Disabled.'

8 Exit from SQLPLUS by entering:

```
SQLPLUS> exit
```

Make Additional Backups (if necessary)

This is your last opportunity to make a system backup before the wizard begins. You should consider performing a backup if you altered your index database or if your system has been placed in production mode during the course of the wizard preparation steps.

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 found in /usr/spool/cron/crontabs.

Reboot Your Servers

Rebooting the servers will ensure that all logical volumes are synchronized and residual errors are known.

1. As **root** user, enter the following at the system prompt:

   shutdown -Fr

2. Your inittab might not be set to start Image Services upon rebooting. If this is the case, start Image Services manually once your server is finished rebooting. Enter the following as **fnsw** user:

   initfnsw start

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

CAUTION If your FileNet domain has more than one server, you must repeat all the steps in this manual up to this point on the remaining servers before proceeding.

Exit from FileNet Programs

Exit Image Services Toolkit Applications

Exit from any Image Services Toolkit 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 the following:

/fnsw/client/bin/wal_purge

Stop FileNet Software

Note In a multi-server system, you must stop the FileNet software in the following 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, followed by the storage library server(s) and finally the application server(s).

1 As **root** user, shut down the FileNet software by entering:

initfnsw -y stop

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

whatsup

Note Running the **whatsup** command causes the TM_daemon to start up.

3 Kill all remaining FileNet processes displayed by entering:

killfnsw -DAy

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

```
ps -ef | grep fnsw
```

5 If any processes remain active, including TM_daemon, kill each one explicitly; enter:

```
kill -9 <process id>
```

where <process id> is the displayed process number.

Copy the Oracle Media

Server Types

Perform the steps in this section on these servers:

Root/Index server during a Dual server installation.

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

Application server with WorkFlo Queue services, SQL services, or VWServices.

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

1 As **root** user, create a subdirectory for each disk and name them Disk1, Disk2, etc. For example if you choose to use directory /ora_media you can enter:

```
cd  /ora_media
mkdir Disk1
mkdir Disk2
...
mkdir Disk4
```

Note Be sure to type directory names exactly as shown! The Wizard is case-sensitive and looks for **Disk1**, **Disk2**, etc. not disk1, disk2, etc.

2 Load the first Oracle CD-ROM into the CD-ROM drive. Wait for the light to stop flashing.

3 As **root** user, type the following command at the prompt:

lsdev -C l grep cd

A message similar to the following will display. Make sure the CD-ROM drive is available:

```
cd0 Available 00-08-00-3,0 CD-ROM drive
```

4 Create a directory for mounting the CD-ROM drive if that directory does not exist:

mkdir /cdrom

5 Mount the CD-ROM drive to the directory you just created:

mount -rv cdrfs /dev/cd0 /cdrom

where /dev/cd0 is the appropriate device name.

6 To make sure the CD-ROM mounted correctly, type:

mount

You should see the CD-ROM device listed.

7 Copy the contents of this CD into the Disk1 directory you just created.

cp -R /cdrom/* Disk1

8 After the content has been copied, unmount the CD.

umount /cdrom

9 Remove Oracle Disk 1 and insert Disk 2.

mount -rv cdrfs /dev/cd0 /cdrom

10 Copy the contents of the second Oracle CD to the Disk 2 directory you just created.

cp -R /cdrom/* Disk2

11 After the content of Disk 2 has been copied, unmount the CD-ROM.

umount /cdrom

12 Repeat steps 9-11 to copy the remaining Oracle CDs into the appropriate directories on your hard drive.

13 Remove Oracle Disk 4 and insert the Image Services 4.0.0 for AIX media into the CD-ROM drive. Wait for the light to stop flashing.

mount -rv cdrfs /dev/cd0 /cdrom

14 To make sure the CD-ROM mounted correctly, type:

mount

You should see the CD-ROM device listed.

15 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, follow the instructions for **“ERROR: New Oracle directory not yet defined.” on page 111.**

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.

Start the Wizard

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

3 As **root** user, move to the root directory, and launch the Wizard Update.

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 both 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, so you don't have to change CDs.

  You start by copying the entire contents of the Oracle 9.2 media onto your hard drive. This is discussed in **"Disable the Screen-saver" on page 75**. 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> (e.g., /ora_cd)

If other than /usr/ora/920,
export ORACLE_NEW_HOME=<path> (e.g., /usr/ora/920)
export ORA_TMP_PATH=<path> (e.g., /oratmp)

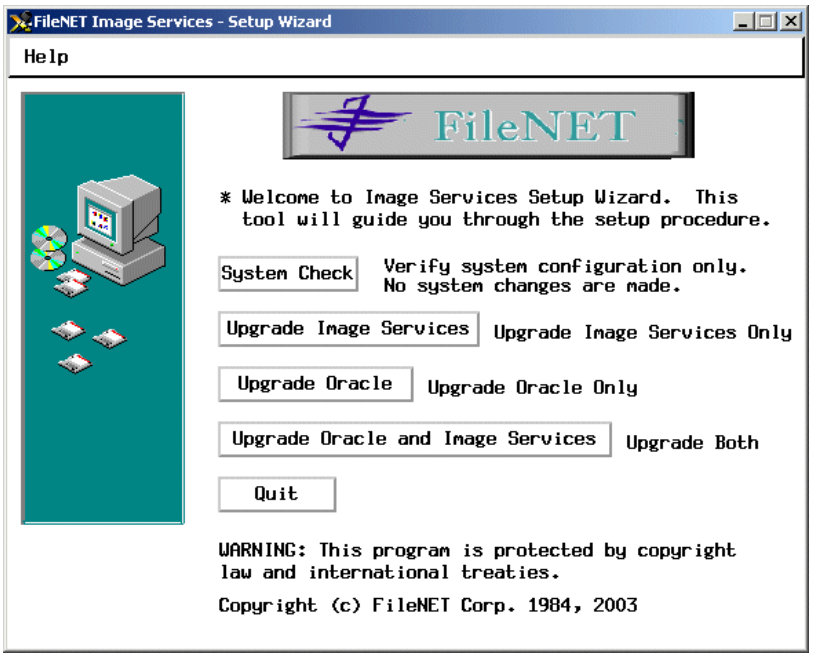
For C-shell, enter:

setenv FN_CDROM_PATH <path>
setenv ORA_CDROM_PATH <path>
setenv ORACLE_NEW_HOME <path> (e.g., /usr/ora/92)
setenv ORA_TMP_PATH

To begin the installation of 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:



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 wizard system check if the server prerequisites aren't met. Goes on to perform all requisite upgrade operations depending on the server configuration. Outputs events to /fnsw/local/wizard/yyyymmdd_hhmm.log.
Quit	Exits the update wizard.

* 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 time, select **Quit**.)

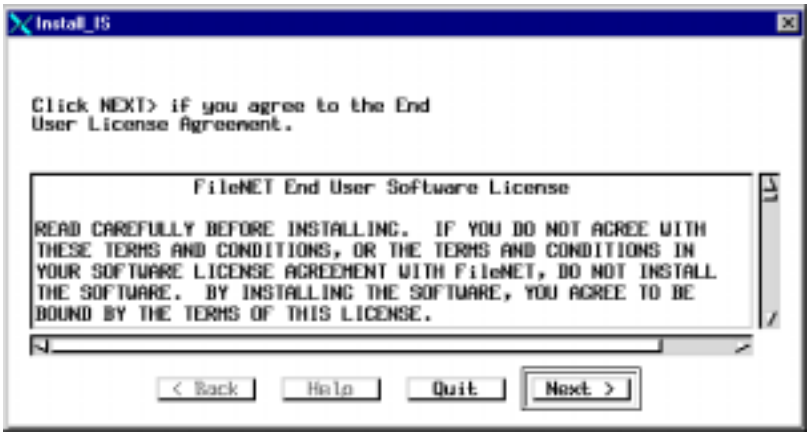
CAUTION Do not select System Check if you are re-running the wizard after a failed update wizard attempt. This is due to partial system changes which may have occurred during the previous update.

Note You should reference 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 of the wizard process.

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

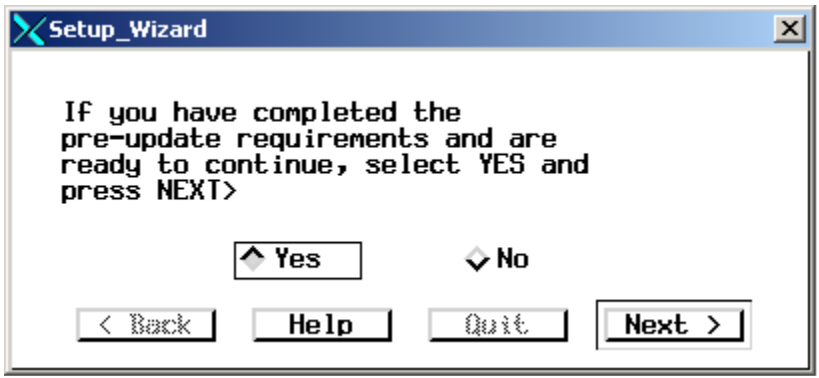
- To store the choices made in the current step, click **Next**.
- To exit the Update Wizard immediately, click **Quit**. If you have completed the update up to a specific checkpoint and you quit the update program, the wizard will track that checkpoint. This will allow you to restart later.
- To access 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.

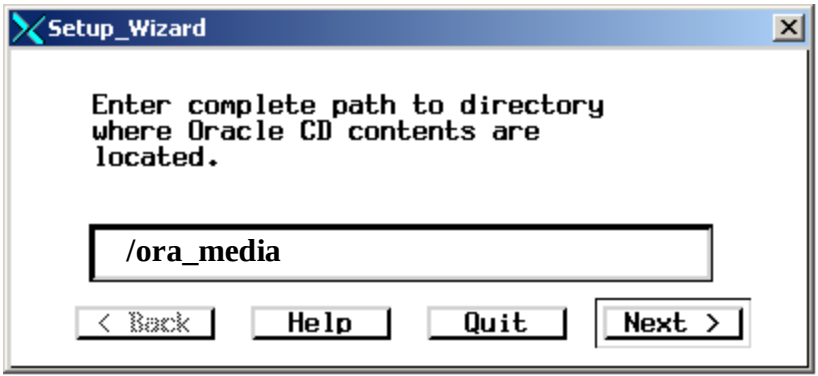


7 If you are installing only IS or both IS and Oracle, and if your server completed the pre-update requirements, you will be prompted if you

wish to continue with the update. Click the **Yes** button and click on **Next** to continue.



8 In the next screen, enter the directory where the Oracle CD contents



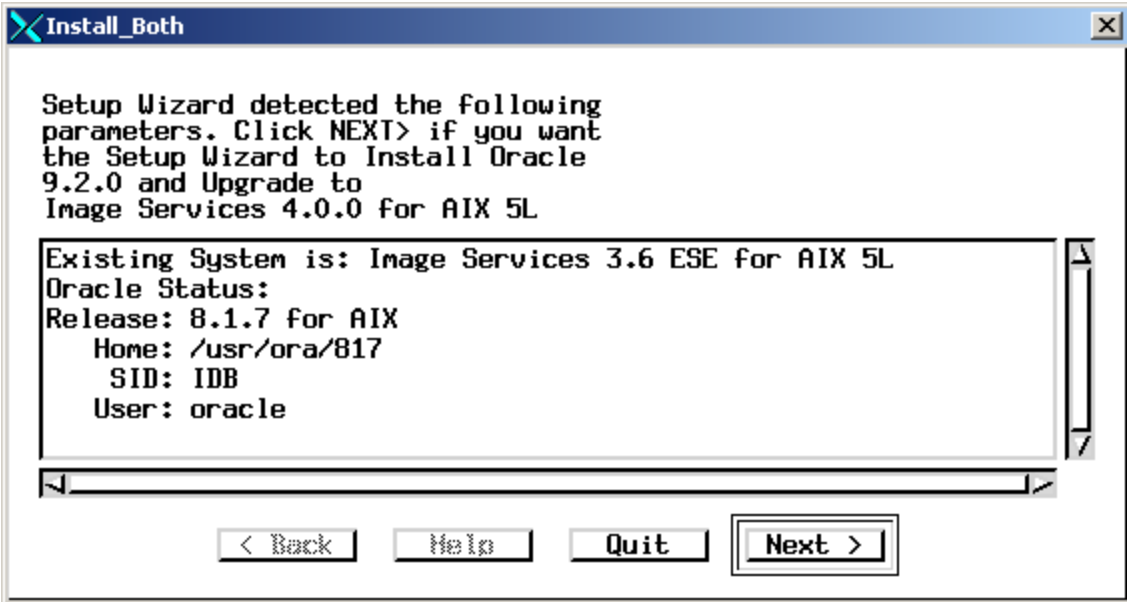
are located and click Next. (If ORA_CDROM_PATH is not set.)

9 If you are installing both Image Services and Oracle, or just Oracle software, and the wizard can't find the **specifically named /usr/ora/920 file system**, you will be asked to specify the destination file system for Oracle 9.2.

Enter the file system where you want Oracle 9.2 to be installed. **It can't be the same location as your Oracle8 software (e.g., /usr/ora/817)**.

Note You were instructed earlier to create an Oracle 9.2 file system if one did not already exist. If it still does not exist, quit the Wizard update program, and follow the instructions for **"ERROR: New Oracle directory not yet defined." on page 111.**

You'll see a window similar to the following:



10 Verify the accuracy of the listed parameters. To continue with the update, click **Next**.

Update to Oracle 9.2.0.1

If you selected **Install Oracle** or **Install Both**, and the Wizard detects Oracle or 8.1.7 is on this server, the Wizard automatically installs Oracle 9.2.0.1 in the file system you specified at the start of the update. This will take **approximately 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 Wizard performs the following tasks during this phase:

- Load Image Services executables from the Image Services media. Time required: **5 to 20 minutes**.
- Install Oracle patches from the Image Services media. Time required: **2 to 5 minutes**.

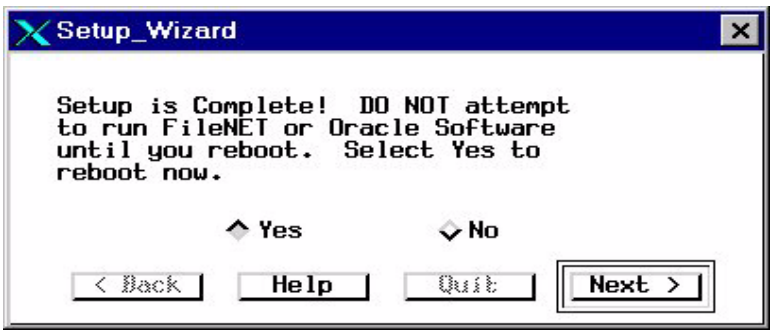
- Run Oracle catalog scripts.
  Time required: **30 to 90 minutes**.

Note If the Wizard displays this message:

ORAUPGRADE failed, check the <log file> for errors

refer to **“Interpreting Oracle Messages” on page 244**.

When the Image Services update is complete, you will see the following screen. This signals the end of the update and requests a server reboot.



You must reboot the server in order to complete the update. Critical finishing processes will not complete unless a reboot occurs. Select **Yes** and click on **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 finishes rebooting.

Install Oracle Patches

If you have not already done so, install Oracle patch set 2 and hot fix #2645455 (for AIX/6000) to complete the installation.

- To install Oracle Patch Set 2, see **“Appendix F – Installing Oracle Patch Set 9.2.0.2” on page 261**
- To install the Oracle Interim Patch, see **“Appendix G – Installing Oracle9i Data Server Interim Patch 2645455” on page 275**

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 Pre-Startup Show Stopper 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 Korn shell, enter:

   export DISPLAY=<your hostname:0.0>

   For C-shell, enter:

   setenv DISPLAY <your hostname:0.0>

3. 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.

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 startup and configuration issues. You will install the general Image Services 4.0.0 patches later. Search through the Release Notes file for the keywords **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.

Verify Configuration Database

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

1 If you are running this program from a remote terminal, make sure you export the display to your current terminal. For Korn 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, make sure you allow access to the host display by entering the following at the remote terminal:

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.

3 As **fnsw** user, open an X window and start the FileNet configuration editor by entering the following:

fn_edit &

4 Click OK in the initial dialog box.

5 The System Configuration Editor window displays.

Reconfigure Optical Devices

In this release the optical device file names may have changed due to the change in one of the numbers that make up the device file name. This change requires you to reconfigure the optical devices on your system.

On the Procedures Tab in the System Configuration Editor window, select the Automatically Configure a Storage Library option and Click Run.

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, enter:

Oracle 9.2.0.1.

Verify the Language and Character Set

1 On the Relational Database tab, Oracle subtab, locate the Languages and Character Set fields.

2 The default language is American 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

Note The change 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 section on all servers with **Oracle**.

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

If you disabled the archive logging feature earlier in this procedure, you must enable it now that you have updated the Oracle software. If you do not need to enable this feature, go to **"Exit the Configuration Editor" on page 169** to continue.

1. Click the Relational Databases tab if you aren't currently in that function.

   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/oracle), you should change it to the new file system (e.g. /usr/ora/920).

Exit the Configuration Editor

Now you can exit the Configuration Editor 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

Rebuild the configuration files **if any changes were made in fn_edit** by entering:

```
initfnsw -y stop
killfnsw -DAy
fn_build -a
```

Update the Oracle Database Parameters

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

1 If you re-enabled Archive Logging in fn_edit, you must update the relational database parameters. Enter:

fn_util updaterdb

Note fn_util updaterdb starts Image Services as well as **Oracle.**

2 Bring down FileNet Image Services by entering the following:

initfnsw -y stop
killfnsw -DAy

Add Stored Procedures to the Oracle Database (Site-Controlled Oracle)

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, do the following:

- Start the Oracle software.

  fn_oracle_start

- 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 174**.

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 server-Config file have been designed to search for a file named server-Config.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 server-Config file is consulted as a reminder to resolve the conflict.

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 the following:

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 event logs 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>

- 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 45**.

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.

1 Use your preferred text editor, such as **vi**, to modify these two files:

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

The first line of each of these two files is:

/ as sysdba

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

Now you can run the **spacerpt** scripts successfully on the Image Services system with remote Oracle databases.

3 Login to sqlplus to run the scripts:

sqlplus

4 When you're prompted, enter the user name f_maint and f_maint password. See **"Run spacerpt" on page 45**.

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

@/fnsw/oracle/spacerpt_summary.sql

6 If you want to get a more detailed report, enter:

@/fnsw/oracle/spacerpt_extended.sql

7 Send the summary 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.

Import Caches (if necessary)

Server Types

Do this section for each server where you had previously exported cache.

Repeat the steps in this section for each cache that you need to restore from tape.

If you did not export any caches using the CSM_exim tool earlier in this procedure, skip this section and go to **"Check Cache Partitions" on page 184**.

1 As **fnsw** user, make sure you're in the location you exported from, for example:

cd /fnsw/local/tmp

2 Load the tape containing the cache you wish to import into the tape drive.

3 To import a cache, use the following syntax:

CSM_exim -ird <tape> -c <cache_name>

where <tape> is the name of the tape drive you want to use (the name specified in fn_edit), and <cache_name> is the name of the cache you want to import.

For example, if you are importing the FolderView cache, the command you enter would look similar to this:

CSM_exim -ird tape -c folder_cache

4 The CSM_exim tool then selects the cache objects to import from the tape. For example:

```
CSM_exim: number of objects selected from
<cache>:<server> print = nnn.
```

Verify that the number of objects selected matches the number of objects exported earlier.

5 After CSM_exim selects the objects to import, the transfer takes place, and the following messages display:

Importing objects...

CSM_exim completed: Thursday, Aug 28, 1997 16:43:27
See report file csm_ei_rpt.a23546 for details.

6 Look at the report file to make sure the import was successful. For example:

more csm_ei_rpt.a23546

The csm_ei_rpt.* files are located in the current directory /fnsw/local/tmp.

7 When the import is successfully completed, remove the tape.

8 Repeat Steps 2 through 7 for each cache that you need to import.

9 After the caches have been imported successfully, list the contents of the /fnsw/local/tmp directory, and remove all the report files:

rm csm_ei_rpt.*

Check Cache Partitions

Server Type Do this section on servers with Cache.
Image Services must be running for CSM_tool to work.

To check Cache partitions:

1 As **fnsw** user, enter:

CSM_tool

2 To display the cache partition status enter the following at the **CSM_tool** prompt:

s

The display should look similar to:

```
Cache Id  Name                           % locked  % full  % free
--------  -----------------------------   --------  ------  ----
 0        page_cache1:eastwood:FileNet     0         0       100
 1        print_cache1:eastwood:FileNet    0         0       100
 2        fillin_cache1:eastwood:FileNet   0         0       100
 3        bes_cache1:eastwood:FileNet      0         0        99
 4        folder_cache1:eastwood:FileNet   1         1        99
 *        Physical space summary           1         1        99
```

3 Ask the local System Administrator if values in the display are correct for the system.

4 To quit the CSM_tool enter:

q

Test The Updated Image Services and User Applications

Native Mode

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 are disabled. Scanning, indexing, committing, faxing and printing are achieved through the manual selection of these processes through Capture 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 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.

Production Mode

Once you're satisfied that the system works error free in native mode, you should activate the APIs and test the system further.

Re-enable Cron Jobs

Re-enable cron jobs if you disabled them prior to starting the update wizard.

Configure the System Information Messenger

Server Types Perform the steps in this section on the **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 Information 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

You may now install the fixes that pertain to regular Image Services operations. 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, **"Back Up the System" on page 193**.

The wizard will update 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 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 prompts you, one by one, if you want to replace existing files in the applicable home directory.

- If you enter **y** for yes in response to each prompt, the existing files are renamed with a **.old.n** extension where **n** represents the version of the changed file. The new files are created using the original file name.
- If you enter **n** for no to any prompt, that file will not be installed.
- You will be prompted for the Oracle SID (for example, **IDB**)

- You will also be prompted for the relational database home directory. This is the directory where the Oracle software resides (for example, **/usr/ora/920**), not the user directory you just created.

Note If you already have customized the environment settings files in a particular 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 following:

1 Switch to the user you are going to alter. Use the '**su -**' command**:**

su - <username>

CAUTION Do not neglect to use the dash in the **su** command. Otherwise, the inst_templates command will not make the changes you want.

2 Make sure you are in the user's home directory by entering the **pwd** command.

3 Bring in the new templates by entering:

/fnsw/etc/inst_templates

Answer all the prompts appropriately.

Install MSAR

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 on installing and configuring an MSAR System, refer to the ***MSAR Procedures and Guidelines for Image Services*** document for information.

Back Up the System

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 User's Guide***
- ***Image Services Third-Party Backup/Restore Guidelines***

Return to Production Mode

The Image Services for AIX/6000 Software Update Procedure, Release 4.0.0 is completed.

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 the **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 Upgrade 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 AIX version (REQUIRED).
- Find the CD-ROM drive (REQUIRED).
- Check for minimum space requirements (REQUIRED): see **“Table 1.1 Disk Space Requirements” on page 34**.

- Get the value for the DISPLAY environment variable.
- Check for the correct Image Services version (REQUIRED).
- Check for absence of /fnsw/local/sd/no_build.txt (REQUIRED).
- To check the space requirements for /fnsw and Oracle see **page 34**.
- Check Max Number of user processes (400). Modify to the minimum amount if necessary.
- Check Max amount of real memory for MBUFs. Set to zero.
- Check Page Space (RECOMMENDED).
- Checks IP Packet size. Modify to correct size.
- Check rc.net file for correct TCP/UDP settings.
- Check rc.net file for EPHEMERAL settings. Adjust to proper setting.

- Check pse.conf for correct settings.
- Check if bos.adt.libm, bos.adt.lib, bos.perf.perfstat, bos.perf.lib-perfstat, and bos.adt.base are present (REQUIRED).
- Check if bos.adt.debug is present (RECOMMENDED).
- Check if snmpd is enabled to start running.
- Discover server type. Find the root server if this server is not the root server.
- Get number of CPUs.
- Check for correct Oracle version (9.2.0).
- Check for Site-controlled or FileNet-controlled databases.
- Check Oracle user, SID, and environment.
- Check location of SYSTEM tablespace.
- Check free space in SYSTEM and total space in FNTMP_TS tablespaces.
- Check for multiple RDB objects in the CDB file.

Appendix B – Wizard Checkpoints

This chapter 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 update wizard, 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 were able to debug and fix the error (see **“Appendix D – Trouble-shooting The Wizard” on page 242**) you can restart the wizard. Restarting the wizard simply requires you to redo the steps under **“Run the Wizard” on page 145**. You have two choices in how the wizard is restarted:

- Continue Previous Update. 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.

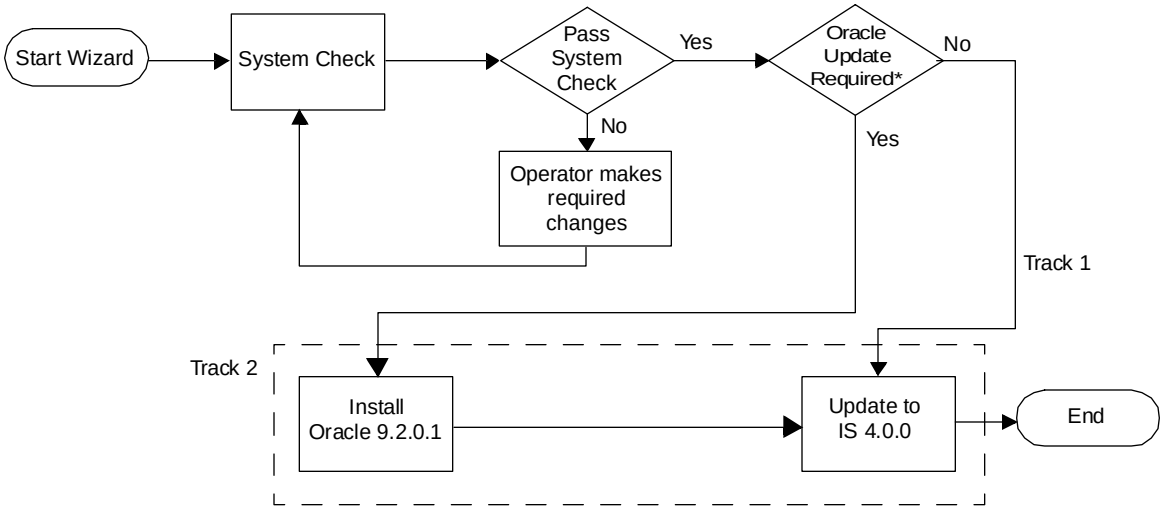
CAUTION Before you restart the wizard, you must follow the restart recommendations listed under **“Specific Checkpoint Events” on page 205**.

High Level Flowchart

In the following high level flowchart on the update wizard 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.

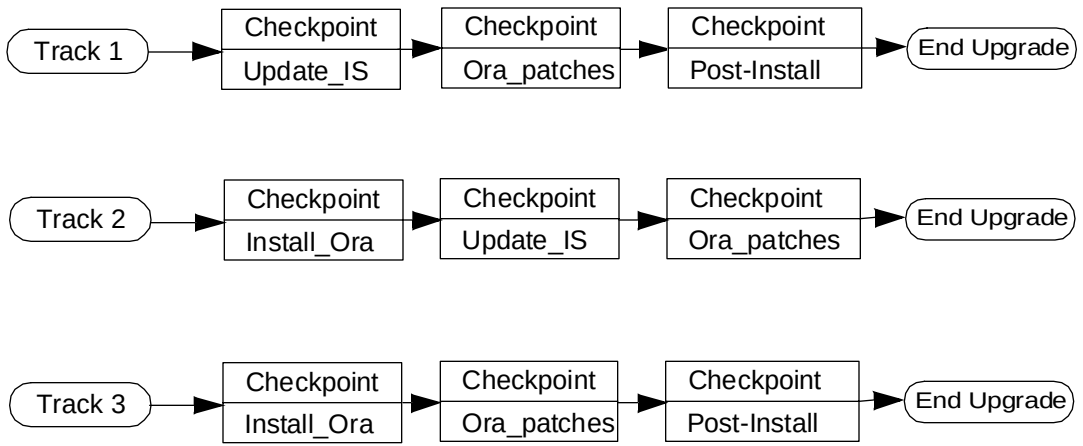
Track	Wizard Actions
Track 1	Upgrade Image Services only
Track 2	Upgrade Oracle and Image Services
Track 3	Upgrade Oracle only



*If Oracle is Site-controlled, the Oracle update must be executed manually.

Exploded View Checkpoint Flowchart

This exploded view corresponds with the outlined area in the previous figure.



Specific Checkpoint Events

The following lists the checkpoints and the requisite are major steps for each checkpoint. Note that your update may not go through each checkpoint 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 Installation complete (Track 2 & 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.

- 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 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

- 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 Update 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 AIX installp command with "-C" option to cleanup any prior failed installations.
- Runs AIX installp command to install IS software.
- Unmounts CD-ROM

Restart Recommendations for this checkpoint

- Continue Previous Update: The update wizard 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 patches and Client Shared Lib Complete (Tracks 1, 2 & 3)

- Executes shell script /fnsw/oracle/P9.2.sh to verify that required Oracle patches have been applied.
- Generates and relinks client shared libraries.

Restart Recommendations for this checkpoint

- Continue Previous Update: The update wizard 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 (Tracks 1, 2 & 3)

This is the final checkpoint.

- Executes fn_migrate.
  (Track 1 stops here.)

- Executes 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 Update: The update wizard 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 (Tracks 1, 2 & 3)

These steps occur after the Post_Install checkpoint is reached.

- Replace /etc/inittab with original /etc/inittab.
- Execute fn_setup to set directory permissions and update /fnsw/local/setup_config file. Along with other setup information you will be asked to provide the System Serial Number (SSN).
- Reboots the system (or not depending on operator interaction).

Appendix C – Manually Expand 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, it does not allow for the placement of logical volumes to specific disks in a volume group. The following manual steps offer more flexibility over fn_dataset_config.

Tip You can also accomplish some of these steps by using SMIT or smitty. This example uses the command line utilities because it is 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 212**
- To expand the Oracle Temporary tablespace, go to **"Create a New Volume for Temporary Tablespace" on page 228**

Create a New Volume for SYSTEM Tablespace

1 Determine which logical volume needs to be added: oracle_db<n> if your system is in non-coexistence mode or oracle_sys<n> if your system is in coexistence mode.

To determine the mode of your system, repeat the steps **“Verify SYSTEM Tablespace” on page 91**.

2 Determine which volume group contains your dataset logical volumes and what physical partitio n size is used.

lsvg -o | lsvg -i -l

The partial output on the following example displays Image Services datasets in the **fnvg** volume group.

```
 fnvg:
LV NAME         TYPE       LPs   PPs   PVs  LV STATE      MOUNT POINT
loglv00         jfslog     1     1     1    open/syncd    N/A
lv00            jfs        31    31    1    open/syncd    /fnsw
lv01            jfs        31    31    1    open/syncd    /fnsw/loca
lv02            jfs        61    61    1    open/syncd    /usr/ora/817
fn_sec_db0      jfs        4      4    1    open/syncd    N/A
fn_sec_rl0      jfs        1      1    1    open/syncd    N/A
fn_cache0       jfs        13    13    1    closed/syncd  N/A
fn_trans_db0    jfs        3      3    1    open/syncd    N/A
fn_trans_rl0    jfs        5      5    1    open/syncd    N/A
fn_perm_db0     jfs        13    13    1    open/syncd    N/A
fn_perm_rl0     jfs        5     5     1    open/syncd    N/A
fn_oracle_db0   jfs        50    50    1    open/syncd    N/A
fn_oracle_rl0   jfs        7     7     1    closed/syncd  N/A
fn_oracle_rl1   jfs        11    11    1    open/syncd    N/A
fn_oracle_sys0  jfs        5     5     1    open/syncd    N/A
fn_oracle_tr0   jfs        3     3     1    open/syncd    N/A
rootvg:
LV NAME         TYPE      LPs PPsPVs   LV STATE      MOUNT POINT
hd6             paging     16    16    1    open/syncd    N/A
```

3 Determine the size of the physical partitions used by the appropriate volume group which contains the Image Services datasets. Enter:

lsvg fnvg

Your output should look similar to the following:

```
VOLUME GROUP:   fnvg                  VG IDENTIFIER:  000014977e824362
VG STATE:       active                PP SIZE:        8 megabyte(s)
VG PERMISSION:  read/write            TOTAL PPs:      537 (4296 megabytes)
MAX LVs:        256                   FREE PPs:       283 (2264 megabytes)
LVs:            17                    USED PPs:       254 (2032 megabytes)
OPEN LVs:       14                    QUORUM:         2
TOTAL PVs:      1                     VG DESCRIPTORS: 2
STALE PVs:      0                     STALE PPs       0
ACTIVE PVs:     1                     AUTO ON:        yes
```

4 Note that the PP size is 8 MB in the above example. You will use 8 as a multiplier when you add logical volumes to this volume group.

Note The following **example** places a LV named fn_oracle_sys1 in the **fnvg** volume group (your system may require a higher numbered LV or a LV named fn_oracle_db<n>). The number of logical partitions specified in the command is 5 because 8MB partition x 5 logical partitions yields a 40MB LV.

5 As **root** user, use the mklv command to create the system table logical volume.

```
mklv -y  'fn_oracle_sys1'  fnvg  5
```

Note The volume size for **fn_oracle_sys<n>** must be entered in multiples of at least **40MB**.

The volume size for **fn_oracle_db<n>** must be entered in multiples of at least **200MB**.

Multiples will depend on the PP (physical partition) size of your volume group. If your PP size is 64MB, then your minimum multiple is 64MB for fn_oracle_sys<n> and 256MB for fn_oracle_db<n>.

6 Check to make sure the LV was created. Enter:

lsvg -l fnvg

Your output should look similar to the following:

```
 fnvg:
LV NAME             TYPE       LPs   PPs   PVs  LV STATE      MOUNT POINT
loglv00             jfslog     1     1     1    open/syncd    N/A
lv00                jfs        31    31    1    open/syncd    /fnsw
lv01                jfs        31    31    1    open/syncd    /fnsw/loca
lv02                jfs        61    61    1    open/syncd    /usr/ora/817
fn_sec_db0          jfs        4      4    1    open/syncd    N/A
fn_sec_rl0          jfs        1      1    1    open/syncd    N/A
fn_cache0           jfs        13    13    1    closed/syncd  N/A
fn_trans_db0        jfs        3      3    1    open/syncd    N/A
fn_trans_rl0        jfs        5      5    1    open/syncd    N/A
fn_perm_db0         jfs        13   13     1    open/syncd    N/A
fn_perm_rl0         jfs        5     5     1    open/syncd    N/A
fn_oracle_db0       jfs        50   50     1    open/syncd    N/A
fn_oracle_rl0       jfs        7     7     1    closed/syncd  N/A
fn_oracle_rl1       jfs        11    11    1    open/syncd    N/A
fn_oracle_sys0      jfs        10    10    1    open/syncd    N/A
fn_oracle_tr0       jfs        3     3     1    open/syncd    N/A
fn_oracle_sys1      jfs        5     5          closed/syncd  N/A
```

In the above example, **oracle_sys1** is closed because it is new and unused.

7 Check the current permissions on the two device files for the new LV:

ls -l /dev/*fn_oracle_sys1

Your output should appear similar to the following:

```
brw-rw----   1 root     system    38, 18 Mar 03 16:05 fn_oracle_sys1
crw-rw----   1 root     system    38, 18 Mar 03 16:05 rfn_oracle_sys1
```

8 Set permissions and ownership on the device files by entering:

chown oracle:dba /dev/*fn_oracle_sys1
chmod 664 /dev/*fn_oracle_sys1

9 Create the associated link file:

ln -s /dev/rfn_oracle_sys1 /fnsw/dev/1/oracle_sys1

10 Make sure the link file was changed by entering:

ls -l /fnsw/dev/1/oracle_sys1

Your output should look similar to the following:

```
moorea(fnsw)/fnsw/dev/1> ls -l /fnsw/dev/1/oracle_sys1
lrwxrwxrwx   1 fnsw     fnusr         20 Oct 27 16:09 /fnsw/dev/1/oracle_sys1@ ->
/dev/rfn_oracle_sys1
```

Configure Tablespace Dataset Partitions

If you need to configure a tablespace dataset partition for **fn_oracle_db<n>**, skip to the section **“Configure Tablespace Dataset Partition for fn_oracle_db<n>” on page 224**.

Configure Tablespace Dataset Partition for fn_oracle_sys<n>

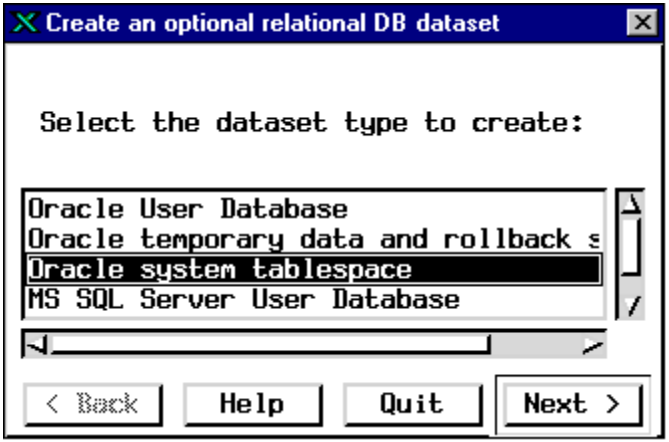
1 If you are running this program from a remote terminal, make sure you export the display to your current terminal. Enter:

```
export DISPLAY=<your hostname:0.0>
xhost +
```

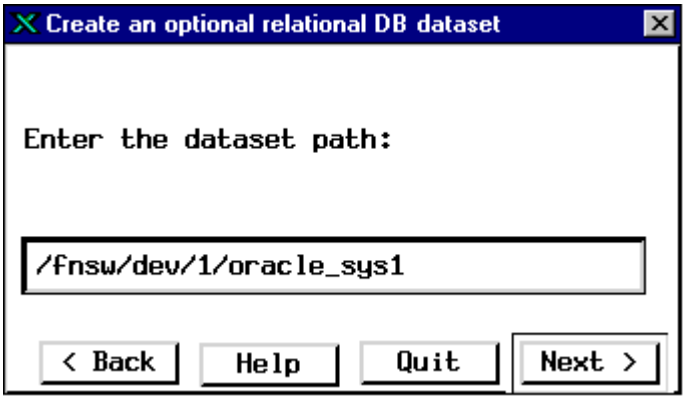
2 As **fnsw** user, start the Configuration Editor by entering **fn_edit**.

The Image Services System Configuration Editor window opens.

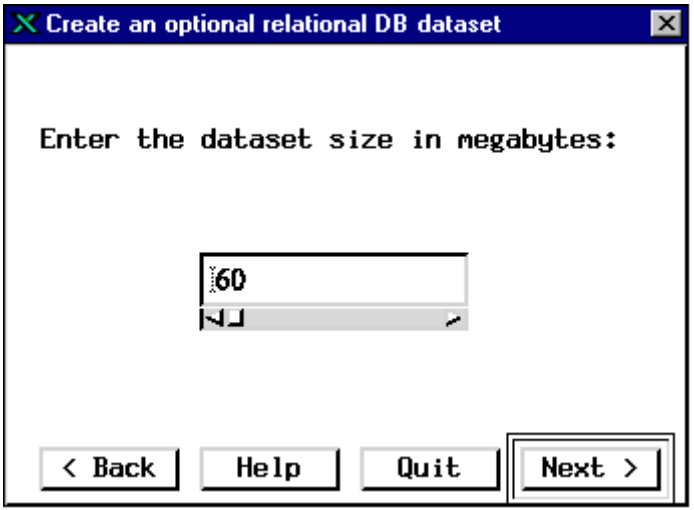
3 On the Procedures tab, select the Create an optional relational DB dataset procedure and click **Run**. The following dialog box appears.



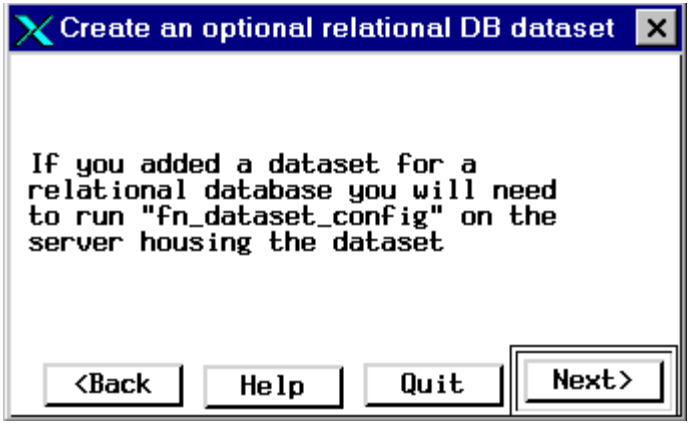
4 Select Oracle system tablespace for the dataset type, and click **Next**. The following dialog box appears.



5 Accept (or change if necessary) the default dataset path and click **Next**.
The following dialog box appears.



6 Select at least 60 (MB) for the dataset size and click **Next**. The following information message window appears.



7 Read the information message and click **Next**.

8 Exit the System Configuration Editor and save the changes you made.

9 Skip to the section, **“Rebuild Configuration Files” on page 226**.

Configure Tablespace Dataset Partition for fn_oracle_db<n>

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

   export DISPLAY=<your hostname:0.0>

   xhost +

2. As **fnsw** user, start the Configuration Editor by entering **fn_edit**.

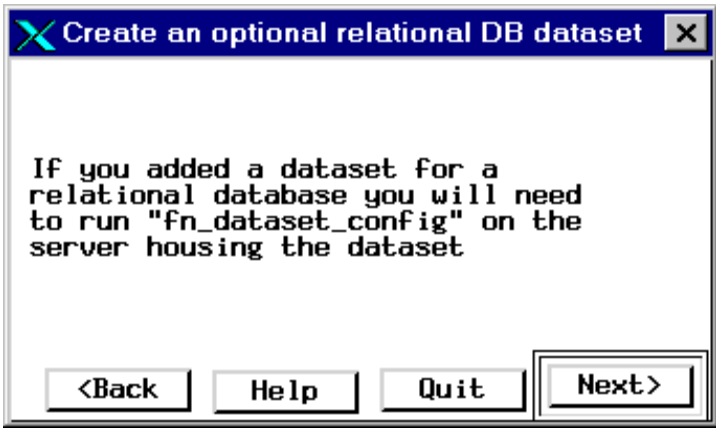
   The IS System Configuration Editor window opens.

3. On the Procedures tab, select the Add an additional dataset procedure and click **Run**.

4. In the dialog box that appears, select Oracle database for the dataset type, and click **Next**.

5. Accept (or change if necessary) the default dataset path and click **Next**.

6 Select at least 200 (MB) for the dataset size and click **Next**.
The following information message window appears.



7 Read the information message and click **Next**.

8 Exit the System Configuration Editor and save the changes you made.

Rebuild Configuration Files

As **fnsw** user, enter the following series of commands to make the changes to your Oracle database:

```
fn_build  -a
initfnsw -y stop
fn_util  updaterdb
fn_util stoprdb
initfnsw start
```

Verify New SYSTEM Tablespace Size

Do the following to verify the new SYSTEM tablespace size and properly shutdown the Oracle database.

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.

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.
```

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**.

To shut down the Oracle database, enter the following:

fn_util stoprdb

Return to the Update

Continue the update process by going to **“Make Additional Backups (if necessary)” on page 136**.

Create a New Volume for Temporary Tablespace

1 Determine which volume group contains your dataset logical volumes and what physical partition size is used.

```
lsvg -o | lsvg -i -l
```

The partial output on the following example displays Image Services datasets in the **fnvg** volume group.

```
 fnvg:
LV NAME         TYPE       LPs   PPs   PVs  LV STATE      MOUNT POINT
loglv00         jfslog     1     1     1    open/syncd    N/A
lv00            jfs        31    31    1    open/syncd    /fnsw
lv01            jfs        31    31    1    open/syncd    /fnsw/loca
lv02            jfs        61    61    1    open/syncd    /usr/ora/817
fn_sec_db0      jfs        4      4    1    open/syncd    N/A
fn_sec_rl0      jfs        1      1    1    open/syncd    N/A
fn_cache0       jfs        13    13    1    closed/syncd  N/A
fn_trans_db0    jfs        3      3    1    open/syncd    N/A
fn_trans_rl0    jfs        5      5    1    open/syncd    N/A
fn_perm_db0     jfs        13    13    1    open/syncd    N/A
fn_perm_rl0     jfs        5     5     1    open/syncd    N/A
fn_oracle_db0   jfs        50    50    1    open/syncd    N/A
fn_oracle_rl0   jfs        7     7     1    closed/syncd  N/A
fn_oracle_rl1   jfs        11    11    1    open/syncd    N/A
fn_oracle_sys0  jfs        5     5     1    open/syncd    N/A
fn_oracle_tr0   jfs        3     3     1    open/syncd    N/A
rootvg:
LV NAME         TYPE      LPs PPsPVs   LV STATE      MOUNT POINT
hd6             paging     16    16    1    open/syncd    N/A
```

2 Determine the size of the physical partitions used by the appropriate volume group which contains the Image Services datasets. Enter:

lsvg fnvg

Your output should look similar to the following:

```
VOLUME GROUP:   fnvg                  VG IDENTIFIER:  000014977e824362
VG STATE:       active                PP SIZE:        8 megabyte(s)
VG PERMISSION:  read/write            TOTAL PPs:      537 (4296 megabytes)
MAX LVs:        256                   FREE PPs:       283 (2264 megabytes)
LVs:            17                    USED PPs:       254 (2032 megabytes)
OPEN LVs:       14                    QUORUM:         2
TOTAL PVs:      1                     VG DESCRIPTORS: 2
STALE PVs:      0                     STALE PPs       0
ACTIVE PVs:     1                     AUTO ON:        yes
```

3 Note that the PP size is 8 MB in the above example. You will use 8 as a multiplier when you add logical volumes to this volume group.

Note The following **example** places a LV named fn_oracle_tr1 in the **fnvg** volume group (your system may require a higher numbered LV). The number of logical partitions specified in the command is 5 because 8MB partition x 5 logical partitions yields a 40 MB LV.

4 As **root** user, use the mklv command to create the system table logical volume.

```
mklv -y 'fn_oracle_tr1' fnvg 5
```

Note The volume size for **fn_oracle_tr<n>** must be entered in multiples of at least **24MB**.

Multiples will depend on the PP (physical partition) size of your volume group. If your PP size is 64MB, then your minimum multiple is 64MB for fn_oracle_tr<n>.

5 Check to make sure the LV was created. Enter:

```
lsvg -l fnvg
```

Your output should look similar to the following:

```
 fnvg:
LV NAME         TYPE       LPs   PPs   PVs  LV STATE      MOUNT POINT
loglv00         jfslog     1     1     1    open/syncd    N/A
lv00            jfs        31    31    1    open/syncd    /fnsw
lv01            jfs        31    31    1    open/syncd    /fnsw/loca
lv02            jfs        61    61    1    open/syncd    /usr/ora/817
fn_sec_db0      jfs        4      4    1    open/syncd    N/A
fn_sec_rl0      jfs        1      1    1    open/syncd    N/A
fn_cache0       jfs        13    13    1    closed/syncd  N/A
fn_trans_db0    jfs        3      3    1    open/syncd    N/A
fn_trans_rl0    jfs        5      5    1    open/syncd    N/A
fn_perm_db0     jfs        13   13     1    open/syncd    N/A
fn_perm_rl0     jfs        5     5     1    open/syncd    N/A
fn_oracle_db0   jfs        50   50     1    open/syncd    N/A
fn_oracle_rl0   jfs        7     7     1    closed/syncd  N/A
fn_oracle_rl1   jfs        11    11    1    open/syncd    N/A
fn_oracle_sys0  jfs        10    10    1    open/syncd    N/A
fn_oracle_tr0   jfs        3     3     1    open/syncd    N/A
fn_oracle_tr1   jfs        5     5          closed/syncd  N/A
```

In the above example, **oracle_tr1** is closed because it is new and unused.

6 Check the current permissions on the two device files for the new LV:

ls -l /dev/*fn_oracle_tr1

Your output should appear similar to the following:

```
brw-rw----   1 root     system    38, 18 Nov 15 16:05 fn_oracle_tr1
crw-rw----   1 root     system    38, 18 Nov 15 16:05 rfn_oracle_tr1
```

7 Set permissions and ownership on the device files by entering:

chown oracle:dba /dev/*fn_oracle_tr1
chmod 664 /dev/*fn_oracle_tr1

8 Create the associated link file:

ln -s /dev/rfn_oracle_tr1 /fnsw/dev/1/oracle_tr1

9 Make sure the link file was changed by entering:

ls -l /fnsw/dev/1/oracle_tr1

Your output should look similar to the following:

```
moorea(fnsw)/fnsw/dev/1> ls -l /fnsw/dev/1/oracle_tr1
lrwxrwxrwx   1 fnsw     fnusr         20 Nov 15 16:09 /fnsw/dev/1/oracle_tr1@ -> /
dev/rfn_oracle_tr1
```

Configure Tablespace Dataset Partitions

If you need to configure a tablespace dataset partition for **fn_oracle_db<n>**, skip to the section **"Configure Tablespace Dataset Partition for fn_oracle_db<n>" on page 224**.

Configure Tablespace Dataset Partition for fn_oracle_tr<n>

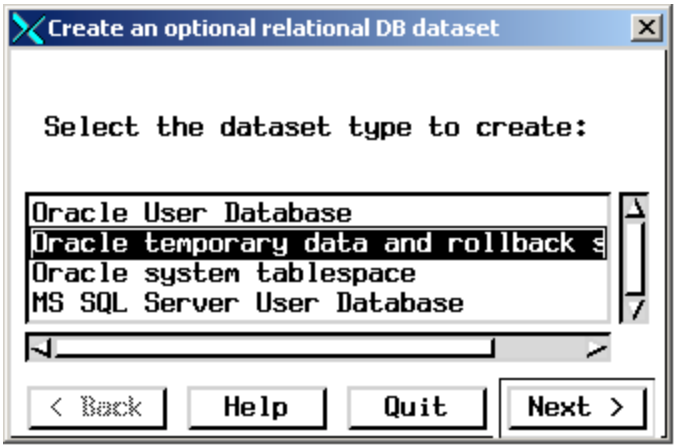
1. If you are running this program from a remote terminal, make sure you export the display to your current terminal. Enter:

   export DISPLAY=<your hostname>:0.0
   xhost +

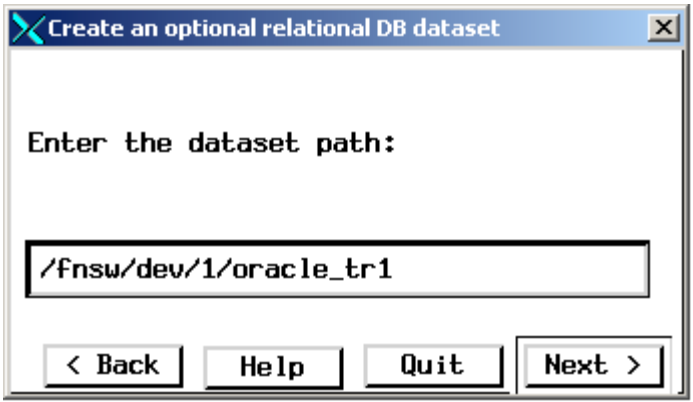
2. As **fnsw** user, start the Configuration Editor by entering **fn_edit**.

The Image Services System Configuration Editor window opens.

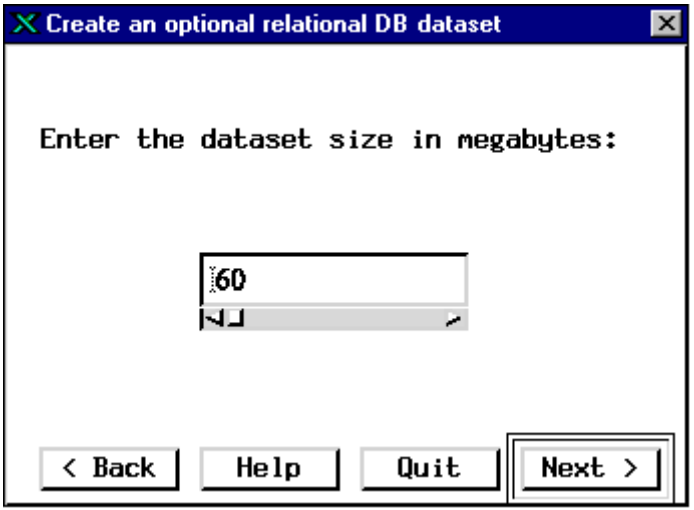
3 On the Procedures tab, select the Create an optional relational DB dataset procedure and click **Run**. The following dialog box appears.



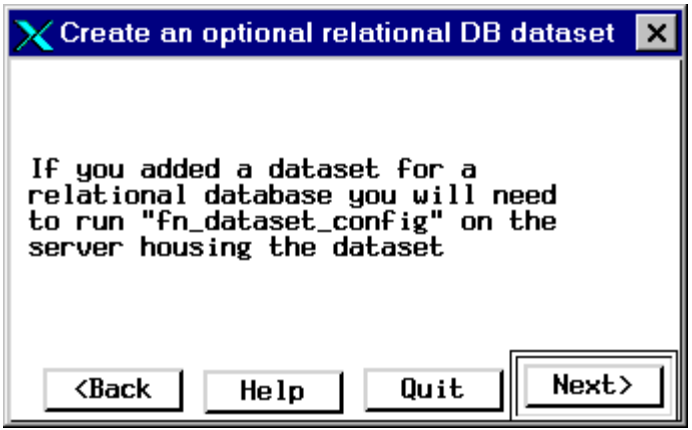
4 Select Oracle temporary data and rollback segments for the dataset type, and click **Next**. The following dialog box appears.



5 Accept (or change if necessary) the default dataset path and click **Next** to continue.
The following dialog box appears.



6 Select at least 40 (MB) for the dataset size and click **Next**. The following information message window appears.



7 Read the information message and click **Next**.

8 Exit the System Configuration Editor and save the changes you made.

Rebuild Configuration Files

As **fnsw** user, enter the following series of commands to make the changes to your Oracle database:

```
fn_build  -a
initfnsw -y stop
fn_util  updaterdb
fn_util stoprdb
initfnsw start
```

Verify New FNTMP_TS Tablespace Size

Do the following to verify the new FNTMP_TS tablespace size and properly shutdown the Oracle database.

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.

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_tr1
          4 FNTMP_TS                         50319360      24570 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**.

To shut down the Oracle database, enter the following:

fn_util stoprdb

Return to the Update

Continue the update process by going to **“Make Additional Backups (if necessary)” on page 136**.

Appendix D – Troubleshooting The Wizard

The following steps should be taken if the wizard should fail:

- Check for a core file. Run a debugging tool on the core file.
- Read the wizard log file. Isolate and correct the error. Contact the Upgrade/Install Assurance Team if necessary.
- Determine the last **checkpoint encountered** (successful checkpoint completion) reached by the wizard before the error occurred.
- Take any other corrective action required by the **incomplete** checkpoint.
- Restart the wizard.

A description of each step follows.

Check for a Core File

If the wizard should fail, a core file may be generated. If that is the case, you can find a file named ‘core’ in /tmp/setup_dir.

Run the FileNet debugging tool on the core file by entering the following:

cstat -n /tmp/setup_dir/core

cstat should return the program name that caused the core file.

Run a standard UNIX debugger on the core file by entering the following:

dbx -f /fnsw/bin/<program name> /tmp/setup_dir/core
(dbx) **t**
(dbx) **quit**

The <program name> is that which is returned from the cstat command.

The debugger should help you further determine which program caused the crash and generate a stack trace.

Interpreting 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/conv92.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**: insuffucient 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-**01918**: user '<*user_name*>' does not exist
ORA-**01919**: role '<*role_name*>' does not exist
ORA-**01921**: role name '<*role_name*>' conflicts with another user or role name
ORA-**02275**: such a referential constraint already exists in the table
ORA-**02289**: sequence does not exist
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_tablename*> 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 possible)" on page 259** 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 May 14 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/817/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   (Fri May 14 11:33:59 2003)
        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 the log does the following:

- Starts at program location 08750 at the provided timestamp of execution. The lines of code that follow are part of this location. Note that a **"Description of the Wizard Program Location Numbers"** follows this section.

- The next line comments on the purpose of this program location. Comment lines are denoted by *******.**

- The next two lines test for current Oracle patch errors by checking the status of an internal variable (ora_patch_err_count=0). Two evaluative lines test this variable (an **Expression** and a **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.

Note A **condition** is made up of one or more **expressions**. Each expression is tested, then the condition is tested based on results of each expression.

- The next line looks for the presence of the clntsh.o file. It executes UNIX commands to check for the file. The UNIX command is pref-

aced by **SYSTEM: Cmd:**. Commands can also be prefaced by **FORK**. The UNIX commands are **ls -l** and **wc**.

- 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 many 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 in the next line. 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 are 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.

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.

Program Location	Wizard Activity
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 Image Services 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 update wizard. 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 **"Update Wizard Overview" on page 22** and the **"Exploded View Checkpoint Flowchart" on page 204**.

The five checkpoints are:

- Oracle 9.2 installation complete.

- Image Services Upgrade to 4.0.0 completed.

- Removal of old Image Services completed.
- Oracle 9.2 patches client shared lib complete.
- 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 succeeding checkpoint.

These checkpoints are discussed in more detail under **"Specific Checkpoint Events" on page 205**.

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 Image Services Upgrade complete.
=====    CHECKPOINT Encountered: IS Upgrade to 4.0.0 Completed  At: 780
         INFO: Checkpoint: IS Upgrade to 4.0.0 Completed
00785    (Fri May 14 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 completed tells you that this checkpoint was successful. The wizard goes on to perform the steps in the succeeding checkpoint.

You must search the entire wizard log file for all instances of 'CHECKPOINT' 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 IS Upgrade is the final instance of a **CHECKPOINT Encountered** in the wizard log, then Oracle 9.2 patches is the incomplete checkpoint if your update is using Track 2. See the **"High Level Flowchart" on page 202** for an illustration of the update tracks.

After 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 (for example, restoring data). Read the specifics on that checkpoint in**"Appendix B – Wizard Checkpoints" on page 199** for more information.

Restart the Wizard (if possible)

Restarting the wizard simply requires you to redo the steps under **“Run the Wizard” on page 145**. 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.

CAUTION When you restart the wizard, you will get the Wizard initial Screen. Do not choose the System Check button. Select the same Upgrade button.

- 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 prepara-

tion steps starting in Chapter 2, **“Preparing for the Update” on page 43**.

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 199** and have contacted the FileNet Upgrade/Install Assurance Team at updgrade@filenet.com before restarting the Wizard.

Appendix F – Installing Oracle Patch Set 9.2.0.2

Prepare to Install the Patch Set

Due to the large size of the 9.2.0.2 patchset for AIX/6000, you will need to copy the contents of both CDs onto the server and install the patch set from there.

1 Use SMIT to create a temporary file system named /ora9202. This file should be 800MB or larger.

2 Give this new file system universal access privileges by entering:

chmod 777 /ora9202

3 Insert the first FileNet CD (Disk1) containing the Oracle Patch Set 9.2.0.2 for AIX/6000 Operating System.

a Mount Disk1 containing the Oracle Patchset 9.2.0.2 for AIX/6000 Operating System.

mount -rv cdrfs /dev/cd0 /cdrom

b Copy the contents of Disk1 to your local server. (Due to size limitation of your file system you can also place the contents on the network drive.)

c Unmount Disk1.

umount /cdrom

d Mount Disk2.

mount -rv cdrfs /dev/cd0 /cdrom

e Copy the contents under /Patches2 on Disk2 and place it under the stage/Patches directory that was copied from Disk2 to the directory on the hard drive.

f Unmount Disk2.

umount /cdrom

g Shut down the existing Oracle Server instance with normal or immediate priority. i.e.: Shutdown all instances (cleanly).

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

initfnsw -y stop

5 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

6 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>

7 Cd to the $ORACLE_HOME/bin directory where the Oracle Universal Installer is located.

For example:

cd /usr/ora/920/bin

8 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.

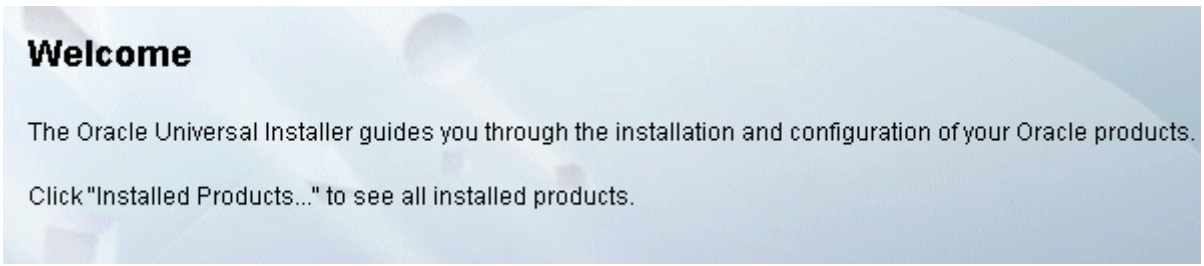
9 Use the Oracle Universal Installer to install the Patch Set as described in the next section.

Launch Oracle Installer

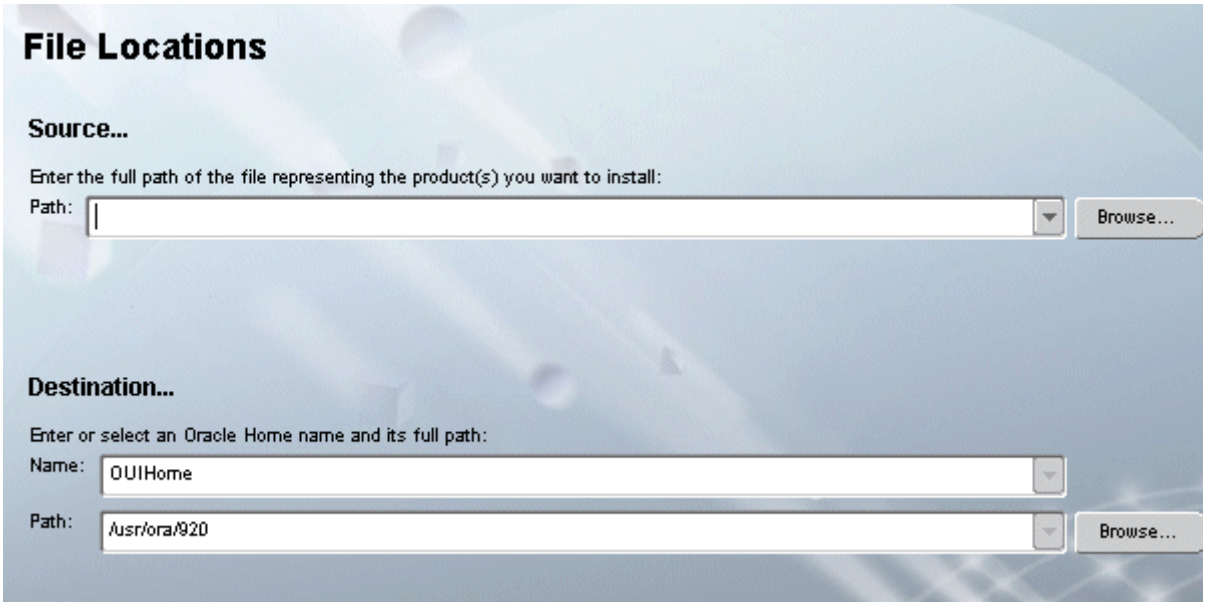
1 Start the installer from the appropriate directory on your server:

./runInstaller

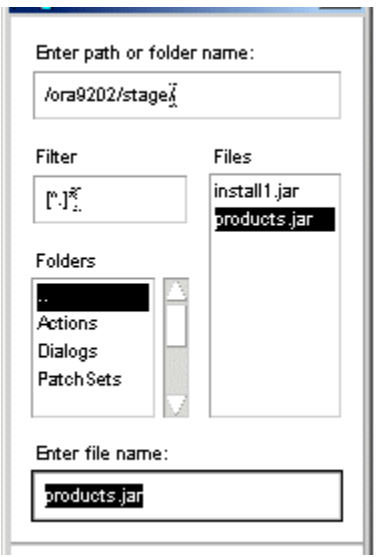
2 On the Welcome screen, click the **Next** button to display the File Locations screen.



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.



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

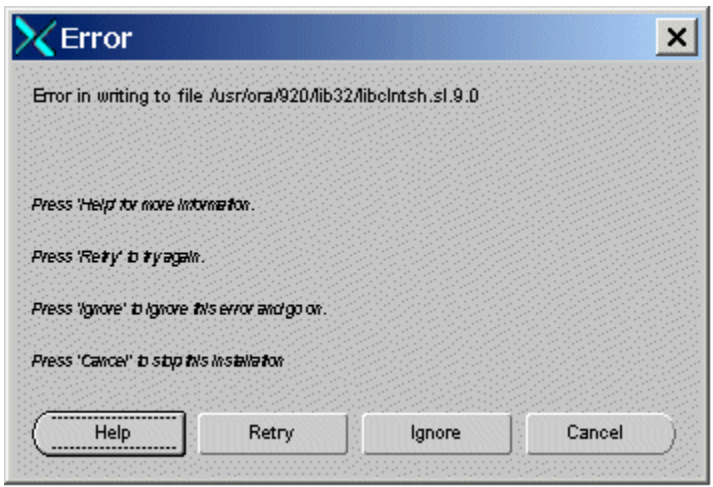


5 Verify the products listed on the Summary screen.

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

6 On the Summary screen, click 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 necessary, 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 289**. 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 this time, Oracle Patch Set 3 (9.2.0.3) does not include the fix for the US7ASCII problem, and no equivalent Interim Patch for Patch Set 3 is available.**

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.

```
lslpp -L | grep -i perl
```

Perl is supplied with the AIX operating system software.

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) is correctly installed on the server. Refer to **"Appendix F – Installing Oracle Patch Set 9.2.0.2" on page 261**.

4 Create a temporary directory for the interim patch. For example, enter:

mkdir /<temp_loc>

5 Have the FileNet CD for Oracle Interim Patch 2645455 available.

6 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 278**.

Otherwise, as **fnsw** user, 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

To double check that all the Oracle processes have been terminated, enter:

ps -ef | grep -i ora

Installing the Interim Patch

1. Mount the FileNet CD with Oracle Interim Patch 2645455 into the CD-ROM drive.

   mount -rv cdrfs /dev/cd0 /cdrom

2. As **root** user, cd into the AIX directory in the CDROM.

   cd /cdrom/AIX

3. Copy the contents of the patch directory on the CD to the temporary directory on your server. Enter:

cp -r * /<temp_loc>

4 Give the new directory universal access privileges by entering:

chmod -R 777 /<temp_loc>

5 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.

6 Set your current path to the directory containing the patch. For example:

- In the Bourne or Korn shell:

  export PATH=$PATH: <temp_loc>/2740448/OPatch

- In the C shell:

  setenv PATH $PATH: <temp_loc>/270448/OPatch

To verify that the PATH variable is set correctly, enter:

```
echo  $PATH
```

7 Apply the patch by entering:

```
cd  <temp_loc>/2740448
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  <temp_loc>/2740448
```

```
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 instance comes up successfully.

Removing the Patch, if necessary

If you need to remove the patch for any reason, follow these steps:

cd <temp_loc>/2740448/

perl OPatch/opatch.pl rollback -id 2645455

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