Installation and Configuration Procedures for Windows Server®

Release 4.0 DB2 Edition

9844112-001

June 2004

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Contents

1 Getting Started

This document explains how to install and configure FileNet Image Services Software on a Windows Server.

Overview

The procedures in this document can be used to set up a server as a **Combined server** (Root/Index/Storage Library), a **Dual** server (separate Root/Index and Storage Library servers), an **Entry** server ((Root/Index/Storage Library), or an **Application** Server.

Image Services and configuration procedures are described in the main body of this document. In addition, several appendices contain the following procedures:

- Adding an Application Server **(page 155)**

- Adding Additional Storage Library Servers (page 183)
- Remote Access (page 213)

Tip Reconfiguring an existing server should be handled the same as installing and configuring a new server.

Required Skills

The software installation and configuration procedures described in this document must be performed by a **FileNet Certified Professional (FCP)**. To learn more about the FCP certification program, please refer to FileNet's Web site at **http://www.filenet.com** under Products > Services & Support > Global Learning Services. FileNet Professional certification is available to FileNet customers, FileNet employees, FileNet partners, and other Technical Service Providers (TSP).

At least seven days prior to the installation, the FCP must contact the Upgrade/Install Assurance Team to schedule the installation and access the team's latest list of current scheduling procedures.

This document assumes you are familiar with these topics:

- Knowledge of the Windows Server operating environment
- Knowledge of Windows Server network models
- Experience with Notepad (i.e., text editor)
- Experience with Windows Server Administrative Tools
- DB2 Database Administration

Documentation Conventions

We have tried to make this procedure easy to follow, whether you are 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 ***Documentation Conventions*** file on the Image Services documentation CD.

New Features of the IS 4.0 DB2 Edition Installation

This release of Image Services software includes the following major improvements and features.

Windows Operating System Support

Windows 2000 (with Service Pack 4), and Windows 2003 operating systems are supported with this release of Image Services software.

Note For Windows 2000, the service pack must be installed. You can download the service pack from: **http://www.microsoft.com/downloads/search.asp?**

IBM DB2 Universal Database Software

In this release of Image Services, FileNet introduces support for IBM DB2 relational database software. The DB2 database must be site-controlled and **must reside on a remote 64-bit AIX 5.2 server**.

DB2 Universal Database version 8 FixPak 4a, or later, is also required.

Image Services on the Windows server accesses the remote DB2 database using DB2 client software installed on the IS server.

See ***Guidelines for Installing and Configuring DB2 Software*** for more information.

New Document for Installing DB2 Software

Guidelines for installing DB2 software are not contained in this document. To install DB2 software refer to the document, ***Guidelines for Installing and Configuring DB2 Software***.

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 CSS Worldwide Customer Support to review these topics.

Release Notes for Image Services 4.0 DB2 Edition

The Release Notes file is available in two places.

- The Image Services 4.0 CD-ROM in location, \relnotes.htm
- The FileNet Web site at **http://www.css.filenet.com**.

Since the latest Release Notes are located on the FileNet Web site, it is **highly recommended** that you obtain the Release Notes file from that location instead using the file on the IS 4.0 CD-ROM.

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

Pay special attention to the **"Patches"** mentioned in the Release Notes. (Search for the keywords **PRE-INSTALL** and **REQUIRED** to locate information about Windows Server, DB2, and Image Services patches that need to be applied before starting this update.) Image Services patches are located on the FileNet Web Site.

Note If you are planning to install an Image Services/Content Services Coexistence system, search through the Release Notes file for the latest information using the key words **IS/CS Coexistence**.

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.

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

Note Version 4.0.20, or higher, of the Image Services Toolkit (formerly known as WAL) is required when running Image Services 4.0 and the IS Toolkit on the same server. Make sure any IS Toolkit SCRs listed in the Release Dependency spreadsheet have been downloaded and installed.

Terminal Services

Windows 2000 Terminal Services is not supported with this release of Image Services. This is because Terminal Services does not allow Xapex and other GUI functions to operate correctly. Some GUI's will lock-up, not generate correctly, or might be missing selection options.

Installation Prerequisites

The prerequisites for your installation are included in the following sections.

For your convenience, an Installation Worksheet is included at the end of this chapter. You should transfer all of the requested information to the appropriate sections on the Installation Worksheet. In this manner, all the information necessary to complete the Image Services installation will be in one easy-to-find place.

National Language Support

This release of Image Services provides additional information on using character sets other than US7ASCII and ISO 8859-1. It's extremely important that the character set you select for one product matches the character sets you select for all the others.

For example, when you install the operating system, be sure to select the character set you plan to use with Image Services and DB2. Likewise, when you install DB2 software, be sure to select the same character set as you did for the operating system.

When you install the FileNet Image Services software, be sure to select the appropriate character set on both the System Attributes tab in the System Configuration Editor and on the Relational Databases/ DB2 tab.

Later, when you create indexes, document classes, and media families, you'll be able to use the appropriate alphanumeric characters for your locale.

Note Folders are created and named using Desktop client software. Because the folders are stored in the index database, their names must also use the Windows code page character set that is the equivalent of the character set used by DB2 and IS on the Image Services server.

For FileNet systems configured with Western European character sets, valid alphanumeric characters must be in the 7-bit ASCII range. For FileNet systems configured with non-Western European character sets, any valid 8-bit alphanumeric character is acceptable.

Both Western and non-Western 8-bit character sets (character values range from 0 to 255) have valid alphanumeric characters above the ASCII range. ASCII characters occupy the first half of all 8-bit character sets and range in value from 0 to 127. Non-ASCII characters have values ranging from 128 to 255.

The following table summarizes FileNet support for both ISO and MS single-byte character sets.

Character Sets			Decimal Values	
ISO (International Organization for Standardization)		Microsoft Windows Code Page	ASCII (0 to 127)	Non-ASCII (128 to 255)
Western European	8859-1	CP 1252	Yes	No
Eastern European	8859-2	CP 1250	Yes	Yes
South European	8859-3	**	Yes	Yes
Northern and North-eastern European	8859-4	CP 1257	Yes	Yes
Latin/Cyrillic	8859-5	CP 1251	Yes	Yes
Latin/Arabic	8859-6	CP 1256	Yes	Yes
Latin/Greek	8859-7	CP 1253	Yes	Yes
Latin/Hebrew	8859-8	CP 1255	Yes	Yes
Western European and Turkish	8859-9	CP 1254	Yes	Yes
North European	8859-10	**	Yes	Yes

** Microsoft does not have character set code pages that correspond to ISO 8859-3 and ISO 8859-10. Be sure to choose an ISO character set for DB2 and Image Services that has a corresponding Windows code page.

Hardware Requirements

To complete the procedures is this document, your server must meet the following minimum hardware requirements.

Note If your server will be used with an eProcess system, refer to the eProcess documentation for hardware requirements.

- Minimal Processor: 800Mhz Pentium III.
- 256 MB or more memory per CPU (512 MB recommended)

Tip To check the amount of memory, logon on the server as **fnsw** or **Administrator**. From the Command Prompt window, enter the **winmsd** command, click the *Memory...* tab, and look for the entry that says *Physical Memory Total:*

- A tape device (e.g., DAT Cartridge, 8mm, QIC, etc.) (Record the tape device type here: _____.)
- An NTFS file system with the required amount of disk space as described in the Total Disk Space section below.

Tip To see how much disk space is available, use the *Windows Explorer,* and select the drive where you plan to install the Image Services software. The available disk (free) space appears in the message area at the bottom of the window. Refer to the *FileNet Disk Sizing Spreadsheet* for actual FileNet dataset sizes.

- A modem installed (and configured for operation) on your server
- An HP Optical Disk Library (optional)

Minimum Disk Space

FileNet Image Services software, DB2 software, temporary working storage, and the Windows Operating System, have minimum disk

space requirements. Refer to the chart below for disk space requirements for Combined Root/Index servers and Storage Library servers.

Note These sizes include a 30% growth factor.

Tip To check your free disk space, open the Windows Explorer, right click on the drive containing your FileNet or DB2 software, and choose Properties.

Software	Combined or Root/ Index Server with DB2 Client	Storage Library Server
Windows Operating System	3 GB	3 GB
FileNet datasets	1 GB	1 GB
DB2 Client Software	110 MB	-
Total disk space	4.11 GB	4 GB

Software Requirements

To complete the installation and configuration procedures is this document, your server must have the following:

Windows Operating System Software

The following Windows operating systems are supported with this release of Image Services software.

- Windows 2000 Server
- Windows 2000 Advanced Server
- Windows 2000 Datacenter Server (for Unisys ES7000 Server)

  Windows 2000 Service Pack 4 is also required.

Note You can download the service pack from: **http://www.microsoft.com/downloads/search.asp?**

- Windows 2003 Standard

- Windows 2003 Enterprise Edition

IBM DB2 Universal Database Software

IBM DB2 V8.1.0 for AIX Database Server (1 CD)

DB2 UDB Enterprise Server Edition (ESE) for AIX 5L. This compact disk contains the IBM DB2 RDBMS software for the DB2 database server.

IBM DB2 V8.1.0 for Windows Client (1 CD)

DB2 UDB Administration / Runtime Client for Windows. This compact disk contains the IBM DB2 RDBMS software for the DB2 client on the Image Services server.

Note IBM DB2 software media are not supplied by FileNet.

IBM DB2 Universal Database Version 8 FixPak 4a (or later)

Download the FixPak from IBM's Web site, **www.ibm.com**.

FileNet Software Media

Image Services media: *Image Services 4.0 for Windows Server,* CD-ROM. (This CD-ROM contains the Image Services 4.0 software, COLD 4.0 software, and the required Universal SLAC Keys.)

Communication Software

In order to enable FileNet engineers to remotely manage products that are installed on servers running a Windows Server operating system, pcANYWHERE32 TCP Remote Control Service software must be installed on your server.

For information on installing pcANYWHERE32, refer to **"Appendix C – Remote Access Procedures" on page 213**.

Universal SLAC Key

In the IDMIS 3.5.0 release, a Universal SLAC Key replaced the Hardware-specific SLAC Key.

Hardware-specific SLAC Keys, which were available for releases prior to IDMIS 3.5.0, were generated specifically for each system and were tied to the servers' machine IDs.

Universal SLAC Keys now allow hardware and software re-configuration and expansion without requiring a new key, and they are no longer tied to specific machine IDs. Although four Universal SLAC Keys exist, the following two are required for DB2:

- Image Services with eProcess for DB2
- eProcess only (no Imaging) for DB2

Debugger

The debugger program is recommended for Image Services 4.0. The debugger enables FileNet support personnel to troubleshoot both

FileNet and Windows-related problems and must be installed on each Image Services server.

To determine if the debugger is already installed, use the Windows Explorer to locate the file **/Windbg** on each Windows Server. If this file is present, the debugger is installed.

If this file is *not* present, and if the media and license are available, we recommend that you install it. Contact your Microsoft retailer for complete ordering information.

Note The debugger and C compiler are included with the Microsoft Developer Network (MSDN) professional subscription (formerly level2).

Server Naming Convention

Properly naming Image Services servers is an important step when setting up your Image Services system. Server names can have a maximum of **20 characters** and should only contain ASCII alpha-numeric characters and hyphens.

Note Non-alphanumeric and underscore characters should not be used.

Every system resource is identified by a three-part name stored in the NCH database. The three parts of the resource name identify an object, a domain (system name), and an organization, in this format:

object:domain:organization

The maximum length of a three-part name is **82 characters**—40 for the object, 20 for the domain, 20 for the organization, two for the colons separating the parts.

Object Name

An **object** is a resource like a tape, printer, database, software service, logon name, etc. Some objects have names predefined by the system. For example, DefaultIMS is the name used to access the index database.

Domain Name

The **domain** (or system) name is set up at FileNet system configuration time. In a multi-server system, each server has a different server name, so the domain name is usually the server name of the Root/Index server.

Organization Name

The third part of the NCH resource name is the **organization** name. This can be your company or department name, such as ABCDEnterprises or FileNetAccounting.

Important!

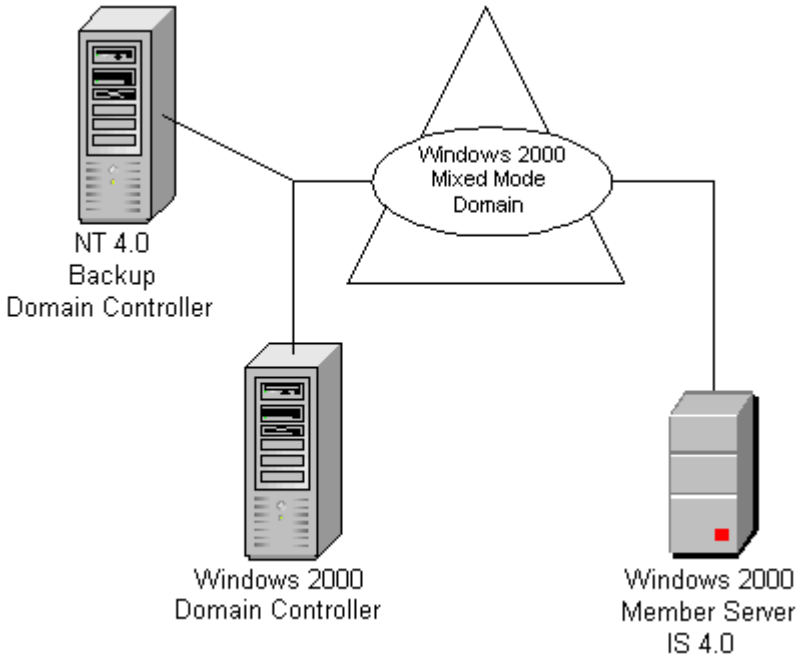
When you specify an object from a PC workstation, the maximum length of a three-part name is 79 characters—39 for the object, 19 for the domain, 19 for the organization, two for the colons.

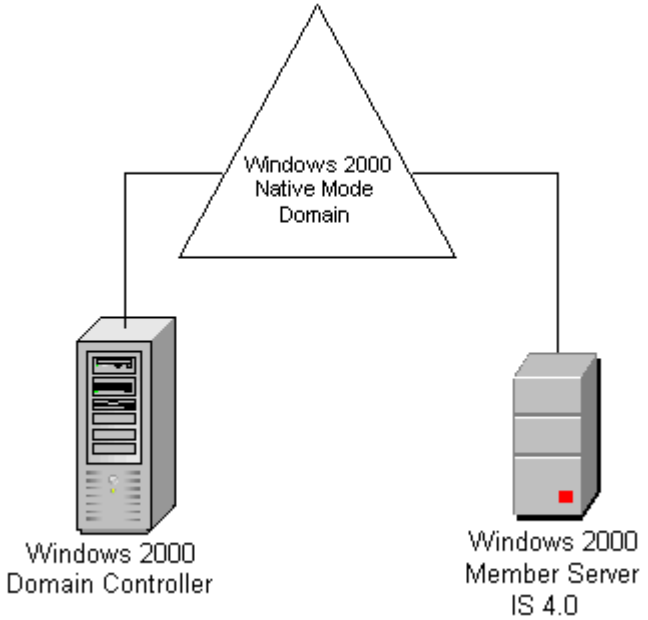
The reason for this convention is that when NCH (Network Clearing House) has to cross a router to find a server, it converts the domain name to an IP host name using specific criteria, one of which is dropping the underscore character. In fact, all non-alphanumeric and underscore characters are eliminated.

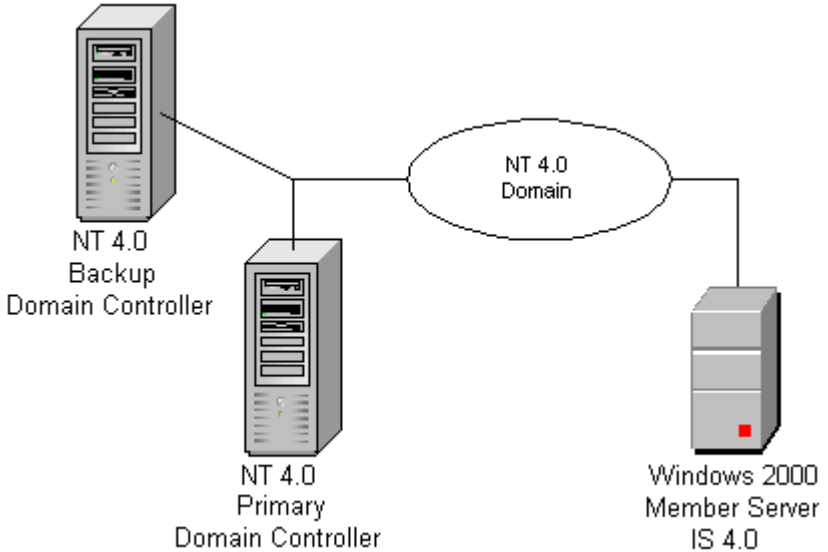
Domain Security and Planning

Although Image Services 4.0 can be installed on both Windows 2000 member servers and domain controllers, FileNet strongly recommends that you **DO NOT** install Image Services on domain controllers. Installations on member servers or stand alone servers are preferred. The Windows 2000 domains can be in mixed or native mode.

You can also install IS 4.0 on a Windows 2000 member server if you are still using NT 4.0 Primary and Backup domain controllers. Image Services 4.0 does not have to be installed on a server in a domain to function properly. Here are a few very basic examples.


Windows 2000
Mixed Mode
Domain
NT 4.0
Backup
Domain Controller
Windows 2000
Domain Controller
Windows 2000
Member Server
IS 4.0


Windows 2000
Native Mode
Domain
Windows 2000
Domain Controller
Windows 2000
Member Server
IS 4.0


NT 4.0
Domain
NT 4.0
Backup
Domain Controller
NT 4.0
Primary
Domain Controller
Windows 2000
Member Server
IS 4.0

FileNet Users and Groups

FileNet users and groups are automatically created on the local machine when the Image Services software is installed.

However, although **not** recomended, you can create Global Groups on the domain controller and then add the Global Groups to the local FileNet groups to facilitate centralized security.

CAUTION If you choose to create Global Groups on the domain controller, you must create these groups **after** the IS software has been installed. This is necessary because the IS installation software sets up user accounts with specific passwords that are used later on in the installation. If user accounts were manually set up with different passwords, errors will result when the software is initialized.

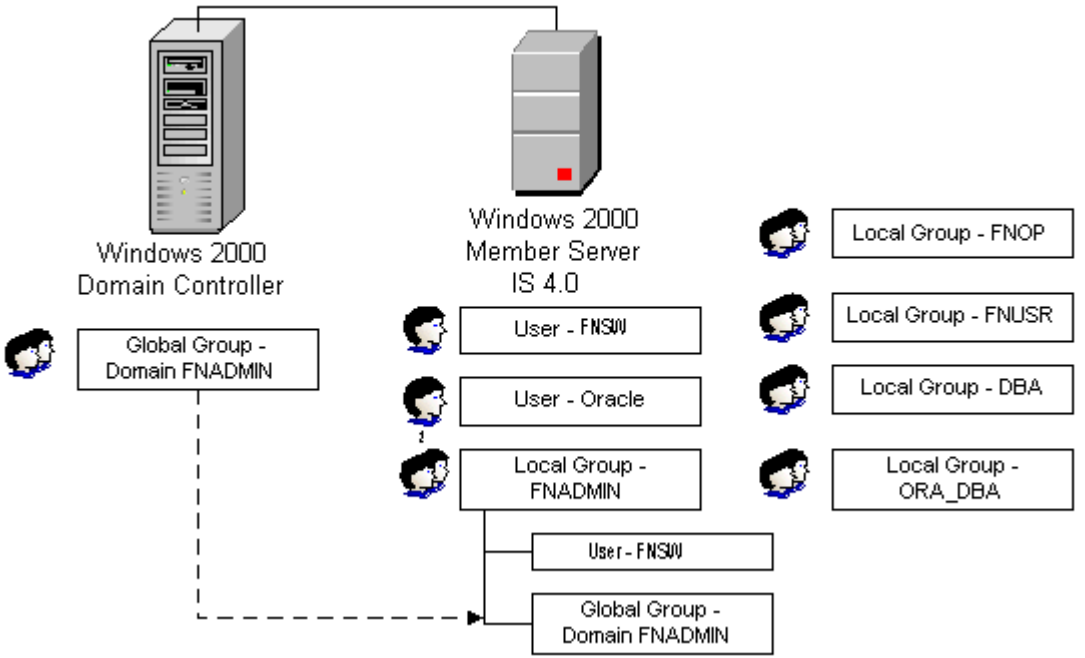
FileNet **strongly** recommends that **ONLY** local IS users and groups be established on the IS server for the following reasons:

- This configuration reduces security complexity and aids in IS troubleshooting.

- It is NOT necessary to configure Global Groups and users in order to effectively implement the Windows Domain security model.

The following page shows a simple example of how you can configure users and groups.

For information regarding group membership for using IS tools, see the ***IS System Tools Reference Manual***.


Windows 2000
Domain Controller
Windows 2000
Member Server
IS 4.0
Global Group -
Domain FNADMIN
User - FNSW
User - Oracle
Local Group -
FNADMIN
User - FNSW
Global Group -
Domain FNADMIN
Local Group - FNOP
Local Group - FNUSR
Local Group - DBA
Local Group -
ORA_DBA

Additional System Information

In addition to verifying that your system meets the minimum hardware and software requirements detailed above, you must gather the following information to complete the Image Services installation on your Windows server.

Once you have gathered the information requested in this section, transfer the information to the **"Installation Worksheet" on page 46**.

1. Determine the password for the user **Administrator**. Record the password on the Installation Worksheet on **page 46**.

2. Verify that the PC server name and Internet Protocol (IP) address are in the **hosts** file (which is where the Windows software is installed, for example, \winnt\system32\drivers\etc) along with the names and addresses of any other servers you want to communicate with remotely. (You can use Notepad to view this file.)

Note The location of the **hosts** file can change, depending on where the Windows software is installed.

3 Determine the Domain name(s), IP address(es) and System Serial Number(s) (SSN) of all Image Services servers (peer servers) that will be communicating with the PC server. For information on naming servers, see **"Server Naming Convention" on page 31**.

- Each IP address should contain four numbers separated by decimals [e.g., 135.0.20.39].

Note FileNet Image Services software requires that the server have a static IP address. Verify that a specific IP address has been assigned to the server. Use of a dynamic IP address (DHCP) is not supported.

- Each System Serial Number (SSN) should contain 10 digits.

Note After installation, your SSN can be determined by entering the *SSN* command at a Command Prompt on each compatible system's root server.

4 Record the Domain Name, IP address, and System Serial Number for each peer server in the Compatible System Information table on

page 48. For information on naming servers, see **"Server Naming Convention" on page 31**.

5 Determine the NCH (Network Clearing House) Name, Printer Type, and Printer Server Static IP address for all printers on the system and record the information in the Printer Information table on **page 50**. For information on naming servers, see **"Server Naming Convention" on page 31**.

6 Configure Remote Access Service (RAS) on your Windows server. RAS will allow FileNet CSS to dial in to your system and perform remote problem diagnosis. Refer to **"Appendix C – Remote Access Procedures" on page 213** for instructions on how to set this up.)

Related Documentation

As you read this document you may see references to other documentation, or Online Help, that you might need to consult. This information is listed below.

- ***Guidelines for Installing and Configuring DB2 Software***
- ***System Administrator's Companion for Windows Server***
- ***System Administrator's Handbook***
- *FileNet Image Services - System Configuration Editor* Online Help

Note For information on DB2 products, refer to the documentation that came with your software.

2

Preparing for the Installation

This chapter contains procedures that are necessary to modify your system environment. These procedures must be performed before beginning your installation.

Note If you are reinstalling previously installed FileNet and DB2 software, the criteria specified in this chapter should already have been met. However, you may still want to read this chapter to ensure that all pre-requisites are satisfied before updating your software.

Installation Worksheet

Pages 47 through 54 contain useful tables that can be used as an installation worksheet. These worksheet tables are intended to help you organize the information you have gathered in a single place for easy reference during the installation process.

Print these pages and use them for recording the specified required information. You will refer to them often during the installation of your software.

In addition, this section details specific file system and dataset information that you must gather (or determine) to complete the Image Services installation successfully.

System Information

Password for the user **Administrator**: _____

Record the appropriate information in the table below.

Installation Information	System Information
Server Static IP Address	
Network Address (cluster servers only)	
FileNet System Serial Number (SSN)	
NCH Domain Name	
Organization Name	

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.

Compatible System Information

Record information about compatible (peer) servers and systems in the table below.

NCH Domain Name	Static IP Address	SSN

Storage Library Information

Record the appropriate Storage Library device information for each Storage Library device on your system in the table below.

Storage Library Device (SLD) Information	SLD 1	SLD 2	SLD 3	SLD 4
Storage Library Type (e.g., ODU, OSAR 96, OSAR 125, etc.)				
SBUS Slot Number				
SCSI Target Number				
SCSI Logical Unit Number				

Record the path for the Storage Library Device Driver here: _____

Printer Information

Record the information for each printer on your system in the table below.

NCH Name	Printer Type	Printer Server Static IP Address

Optical Drive information

Record the appropriate Optical Drive information for each optical drive on your system in the table below.

Optical Drive Information	Drive 1	Drive 2	Drive 3	Drive 4
Drive Type (e.g., Hitachi_II, etc.)				
SCSI Adapter Number (0-3)				
SCSI ID Number (0-6)				
Logical Unit Number (0-3)				

Record the path for the Optical Drive Driver here: _____

File System and Dataset Information

You must determine the expected size of the datasets (in Mb), and on which NTFS file system to install each dataset. Refer to your Scout analyisis report and complete the following table appropriately for your system.

Dataset Name	RDBMS	Required Minimum Size	Actual System Size (Mb)
cache0	DB2	100 Mb	
permanent_db0	DB2	100 Mb	
permanent_rl0	DB2	40 Mb	
transient_db0	DB2	20 Mb	
transient_rl0	DB2	40 Mb	
sec_db0	DB2	12 Mb	
sec_rl0	DB2	4 Mb	

Note The FileNet Image Services software and all FileNet configuration files and datasets must reside on NTFS file systems to maintain data integrity, security, and file naming requirements.

System Cache Information

You must determine the minimum and maximum cache sizes (in%) for the following caches. Refer to your Scout analyisis report and record the cache information for your system in the table below.

Cache Type	Min./Max. Default Size (%)	Min. Size (%)	Max. Size (%)
Retrieval	20% / 20%		
Fill-in	1% / 10%		
System Print	10% / 20%		
Application Print	10% / 30%		
Batch	10% / 60%		
Folder View	10% / 20%		
Revise	10% / 20%		

IBM DB2 V8.1

The **Database Administrator** is responsible for installing the DB2 software and creating the DB2 database for Image Services.

- The **DB2 server** software must be installed on a dedicated remote AIX server. Also, the DB2 database for Image Services must be created on the remote AIX server. Refer to **Chapter 2** of the ***Guidelines for Installing and Configuring DB2 Software*** for further information.
- The **DB2 client** software needs to be installed on the Windows Image Services server and linked to the remote DB2 database. Refer to **Chapter 3** of the FileNet ***Guidelines for Installing and Configuring DB2 Software*** for details.

The *Guidelines for Installing and Configuring DB2 Software* document may be given to the Database Administrator.

DB2 Database Information

After DB2 has been successfully installed, the Database Administrator needs to provide the following information to the System Administrator and the FileNet Technical Consultant.

User	Default User Name	User Name You Chose	Default Group Name	Group Name You Chose
Instance Owner	db2inst1		db2iadm1	
Fenced User	db2fenc1		db2fadm1	
DB2 Administration Server User	db2as		db2asgrp	

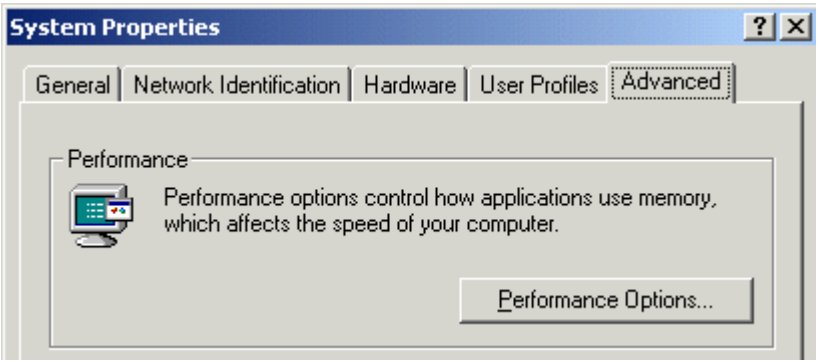
f_sw password: _____
f_sqi password: _____
f_maint password: _____
f_open password: _____
DB2 Database Alias Name: _____
(e.g., indexdb)
user_tbl_space location: _____
(e.g., userspace1)

System Configuration Issues

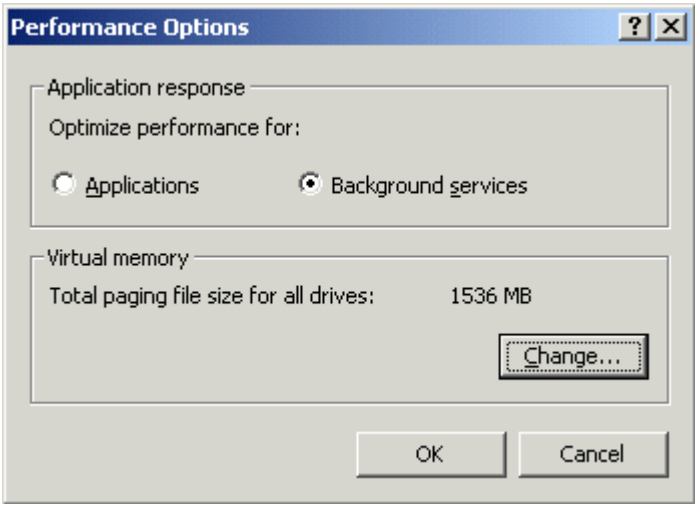
This section contains procedures that must be followed to ensure that your system is properly configured before installing Image Services and DB2 software.

Check/Configure Paging File Size

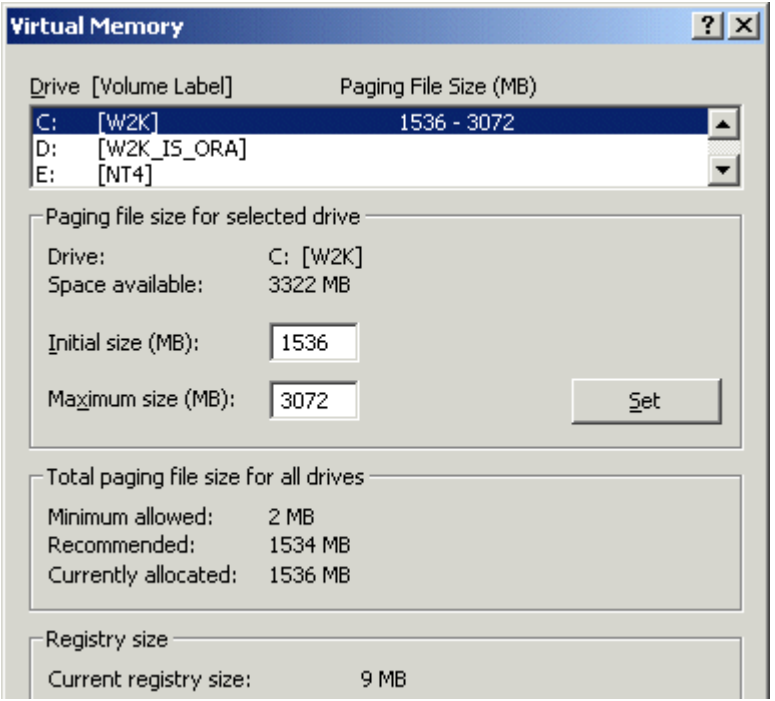
1 Open the Control Panel, and double-click the *System* icon. The System Properties window opens.



2 Click on the *Advanced* tab of the System Properties window and choose the Performance button.



3 In the Virtual Memory section, click the *Change* button. The Virtual Memory dialog box opens.


Virtual Memory
Drive [Volume Label]
Paging File Size (MB)
C: [W2K] 1536 - 3072
D: [W2K_IS_ORA]
E: [NT4]
Paging file size for selected drive
Drive: C: [W2K]
Space available: 3322 MB
Initial size (MB): 1536
Maximum size (MB): 3072
Set
Total paging file size for all drives
Minimum allowed: 2 MB
Recommended: 1534 MB
Currently allocated: 1536 MB
Registry size
Current registry size: 9 MB

4 In the Virtual Memory dialog box, select the drive where you want to allocate the virtual memory.

Tip Performance is enhanced if virtual memory is not on the same drive as the FileNet datasets. In addition, you can allocate virtual memory on more than one drive.

5 Ensure that the initial paging file size for FileNet software (alone) is at least 128 Mb. Therefore, you must increase the current virtual memory allocated (if any) by at least 128 Mb. In addition, the Maximum Size value must be equal to, or greater than, the Initial Size value.

a If you DO NOT need to increase the paging file size:

- Click *Cancel* in the Virtual Memory dialog box.
- Click *Cancel* in the Performance Options dialog box.
- Click *OK* in the System Properties dialog box.

- Close the Control Panel, and skip to the next section, **"Configure TCP/IP and SNMP Protocol (Required For All Systems)" on page 62**.

b If you DO need to increase the paging file size, enter the initial size and maximum size (in Mb) in the Virtual Memory dialog box.

Note If your system requires more virtual memory than specified here, the error message: "System running low on virtual memory. Please close some applications...." will display during normal Image Services operation. Use this procedure to increase the virtual memory paging size.

6 Click the *Set* button to accept the new settings.

7 Click the *OK* button to close the Virtual Memory window.

8 Click the *OK* button to close the Performance Options window.

9 Click *OK* to exit the System Properties window.

10 The System Settings Change dialog appears next with a message asking if you want to restart your computer now. Click *No*. (Do Not reboot the server at this time.)

Configure TCP/IP and SNMP Protocol (Required For All Systems)

FileNet software requires that TCP/IP protocol be installed on your server for complete functionality. If TCP/IP is not currently installed on your server, you can install it by opening the Network and Dial-up Connections dialog box. Click the *Start* button, point to *Settings*, and double-click the *Network and Dial-up Connections* icon.

You must also install the SNMP (Simple Network Management Protocol) service. Refer to your Windows Server documentation for further details on installing both these components.

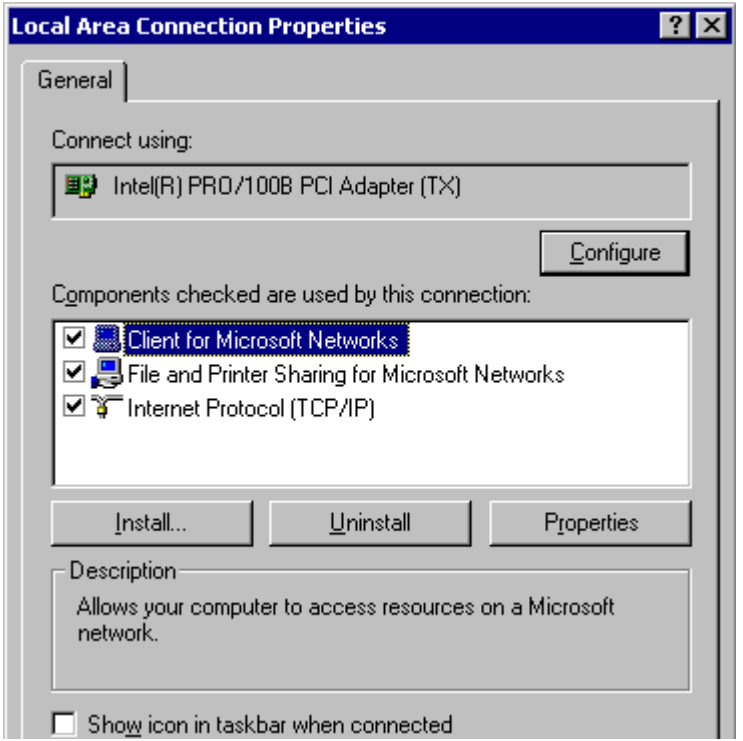
Set Server Optimization Level (Recommended)

While the steps in this section are optional, FileNet Image Services software operates much better when the system is optimized for network applications.

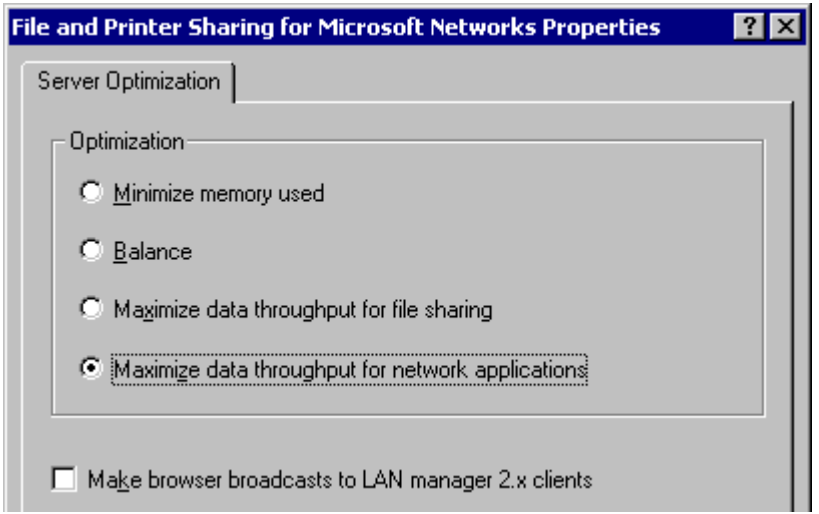
1 From the Taskbar, click the *Start* button, point to Settings, and double-click the *Network and Dial-up Connections* icon.

2 Right-click on “Local Area Connection,” and choose *Properties.*

The Local Area Connection Properties dialog box opens.


Local Area Connection Properties
General
Connect using:
Intel(R) PRO/100B PCI Adapter (TX)
Configure
Components checked are used by this connection:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
Internet Protocol (TCP/IP)
Install...
Uninstall
Properties
Description
Allows your computer to access resources on a Microsoft network.
Show icon in taskbar when connected

3 Select “File and Printer Sharing for Microsoft Networks” and click *Properties.* The following window appears.



4 Select the *Maximize data throughput for network applications* radio button, and click *OK*.

5 Close the Network and Dial-up Connections window.

Determining if Your Storage Management System Supports Synchronous Writes

If your system uses a storage management system such as NAS (Network Attached Storage) to store database files or CSM cache data files, it **must** support synchronous writes. This requirement is not unusual. Directories which are used for storing database files, and any directories used for storing CSM cache files must support synchronous writes. Otherwise, data may be lost. It is also a specific requirement of database vendors for storing database files.

A program called the **sync_write_test** program is used to determine if a given storage management system directory supports synchronous writes. This stand-alone program can also be used without other IS software.

Note Local SCSI magnetic disk drives and SAN devices always support synchronous writes. So, it is not necessary to run this tool on SCSI or SAN devices. Local ATA magnetic disk storage devices do not always support synchronous writes, so they must be tested.

For information on how the sync_write_test program works and how to run the test, see the **IS System Tools Reference Manual**.

Ready to Install FileNet Image Services

After you have completed the procedures in this chapter, you are ready to install the FileNet Image Services software. Continue to **Chapter 3, "Installing FileNet Image Services Software," on page 68**.

3

Installing FileNet Image Services Software

This chapter contains instructions for installing FileNet Image Services software.

CAUTION The DB2 software must be installed **before** installing FileNet Image Services software. If you have not yet installed the DB2 software you must do that first. Refer to the document ***Guidelines for Installing and Configuring DB2 Software***.

Note FileNet strongly recommends that you **do not** install the IS and DB2 Client software on the drive where the Windows Operating System is installed. The Windows OS should reside on a separate drive.

Tip Before installing any software, make sure that the Windows Explorer is set to display file names and extensions. (Do this by selecting Folder Options, View tab from the Windows Explorer Tools menu.)

Check the Link to the DB2 Database

Since the DB2 database is located on a remote AIX server, you can check the connection between the DB2 Client and the remote DB2 database from a Command Line Prompt.

Log onto the Image Services server as the DB2 Client instance owner (such as **fnsw**), and enter the following at a Command Line:

db2
DB2> **connect to <db_alias_name> user f_sw using <f_sw password>**

where <db_alias_name> is the database alias name of the DB2 database on the remote server, and <f_sw password> is the f_sw user's password set up by the Database Administrator.

Install the IS Software

The Setup program will perform the following functions before and during the Image Services software installation process:

- Verify and create the basic operating environment required to install FileNet Image Services on a Windows server (for example, verifying resource requirements and the presence of required FileNet security group accounts)
- Verify the Windows Operating System version required for this release
- Create FileNet groups and users
- Assign advanced user rights to fnsw user
- Extract the FileNet Image Services objects from the distribution medium and install them to the respective target locations on the server. (An icon for the COLD 2.2 software will also be created and the software installed, but a license will be required to use the program.)

- Create basic System and FileNet specific Registry keys, services, and program groups necessary for the subsequent configuration of Image Services software
- Place appropriate security restrictions on released files or other objects

If you are licensed for COLD, you will see the COLD icon in the *FileNet Image Services Server Application* Program Group once the Setup program completes the installation process.

Note The FileNet Setup Program will not allow the installation of FileNet Image Services on a FAT file system. Only NTFS formatted target drives are supported in this release.

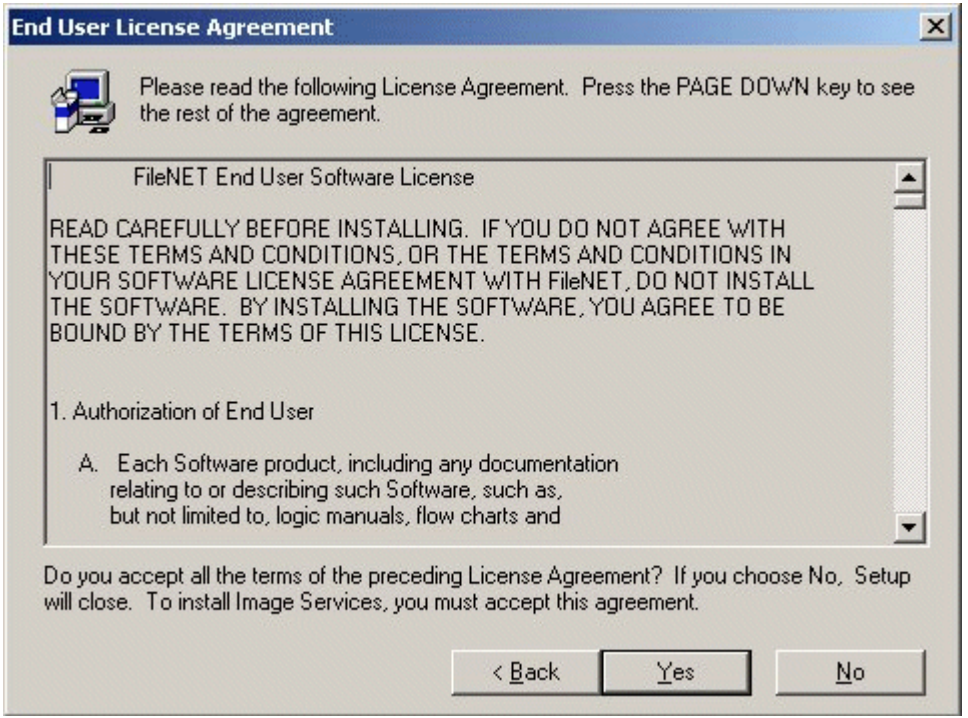
Tip Use the Computer Management tool to determine the file system of a particular drive before installing the IS software. The Computer Management tool is located in the Administrative Tools folder.

1 If you aren't already, logon as the *local* Windows **Administrator**.

2 Load the **Image Services 4.0 for Windows Server** CD-ROM into the CD-ROM drive.

3 In a few seconds, the Logo screen appears followed by the *Welcome to FileNet Image Services Setup Program* message box.

4 Click the *Continue* button to proceed. The End User License Agreement screen appears.


End User License Agreement
Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.
FileNET End User Software License
READ CAREFULLY BEFORE INSTALLING. IF YOU DO NOT AGREE WITH THESE TERMS AND CONDITIONS, OR THE TERMS AND CONDITIONS IN YOUR SOFTWARE LICENSE AGREEMENT WITH FileNET, DO NOT INSTALL THE SOFTWARE. BY INSTALLING THE SOFTWARE, YOU AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE.
1. Authorization of End User
A. Each Software product, including any documentation relating to or describing such Software, such as, but not limited to, logic manuals, flow charts and
Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Image Services, you must accept this agreement.
< Back
Yes
No

5 Click *Yes* to accept the agreement.

6 A screen displays with the message, “Setup has added the user Administrator to FileNet IS FNADMIN group. To continue installation of IS software, please log off and log on again.”

This screen informs you that you need to restart your computer to save fnadmin privileges before you can continue with the installation.

7 To continue with the installation, click *OK.*

8 Reboot your server and logon again as Windows **Administrator**.

Note It is necessary to logoff and log back on to refresh security information for the session.

9 When the *Welcome to FileNet Image Services Setup Program* message box appears, click the *Continue* button to proceed.

The License window appears.

10 Read the license agreement and click *Yes.*

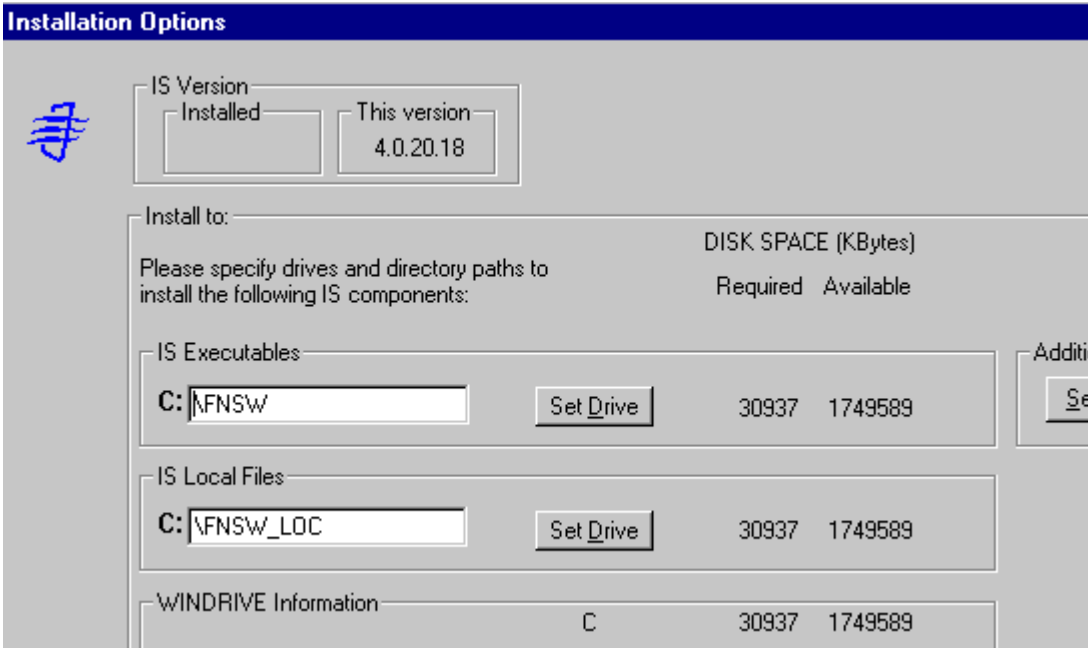
The *System Environment* window will display.

11 Verify that the information displayed in the System Environment window is correct, and that the Image Services release number that you have requested corresponds with what the Setup Program has detected on the screen. Then click the the *OK* button.

The Release Notes screen appears.

12 Read the information in the Release Notes that pertain to Windows Server, then close the window.

Note You must *close* the Release Notes window before you can continue.


Installation Options
IS Version
Installed
This version
4.0.20.18
Install to:
Please specify drives and directory paths to install the following IS components:
DISK SPACE (KBytes)
Required Available
IS Executables
C: \FNSW
Set Drive
30937 1749589
IS Local Files
C: \FNSW_LOC
Set Drive
30937 1749589
WINDRIVE Information
C
30937 1749589

13 In the Installation Options dialog box, the setup program lists default directories for the Image Services Executables and Image Services Local Files.

Note FileNet strongly recommends that you **do not** install the IS and DB2 Client software on the drive where the Windows Operating System is installed. The Windows OS should reside on a separate drive.

To change either of these default drives:

a Click the *Set Drive* button next to the selection you want to change.

b From the drive list, select the drive you want.

c Click the *OK* button.

Note The selected disk for executable files must have at least 159 Mb of free space available to accommodate the Image Services 4.0 software installation.

14 To change the drive for additional files, repeat the step above. Otherwise, continue to the next step.

Note The installation setup program sets the permissions for the drive where the additional datasets will be located so that the database directories can be created. Therefore, you cannot select the drive where the \fnsw and \fnsw_loc directories are located, because the permissions for this drive has already been set. The drive you use for additional datasets must be different from the drive where \fnsw and \fnsw_loc is located.

15 When the drive and directory information is correct, click the *Install* button to start the installation.

16 When the Confirmation message window appears, click the *Yes* button to begin installing the Image Services software.

As the Image Services software is being installed, the Setup window appears and indicates the status of the installation.

The installation process takes approximately 5 minutes to complete. The Setup Program will automatically create two FileNet program groups:

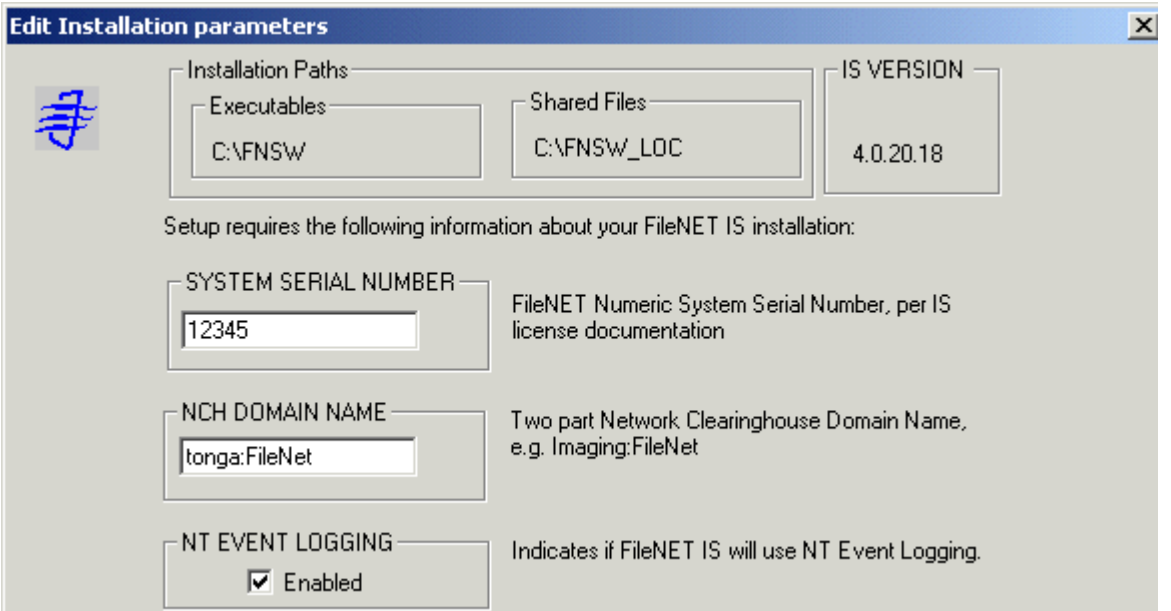
- *FileNet Image Services Server Applications* - Contains all Image Services related GUI applications
- *FileNet Image Services Configuration* - Contains the system configuration tools, the setup program, and the license administration program

17 Near the end of the installation, the following message appears, “Is this going to be an Image Services Combined server?”

Answer Yes or No.

18 If you choose No to the question above, the message, “Is this going to be an Image Services Index Server?” appears. Answer Yes or No as appropriate.

The Installation parameters dialog box appears.



19 In the Installation parameters dialog box:

a Enter the System Serial Number (**ssn**) and the two-part Domain:Organization name in the fields provided.

Note Refer to the **"Installation Worksheet" on page 46** for your ssn. If you are installing an Application Server or Storage Library Server, the domain name should be the Root Domain.

b If desired, you can disable WINDOWS EVENT LOGGING (enabled by default) by clicking in the EVENT LOGGING checkbox to toggle the check mark off.

20 After you have completed the above fields, click the *OK* button.

21 At the confirmation message prompt, click the *Yes* button to save the installation parameters.

22 At the next screen you can choose one of the following three button choices:

- *SLAC License Entry*

- *Edit Parameters*
- *Exit*

If you are installing an Application or Storage Library Server, click *Exit* and proceed to Appendix A, section **"Configure the Root Server" on page 159**.
Otherwise, continue below.

23 The Universal SLAC Key for the FileNet Image Services system you're installing is located on the Images Services CD-ROM. The two required SLAC keys for this release are:

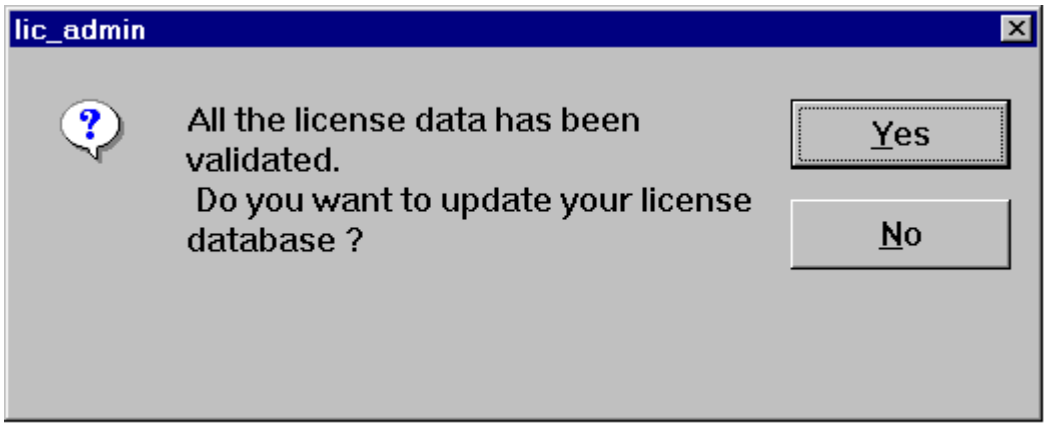
- **uisdb2.key** - Image Services with eProcess for DB2
- **uvwdb2.key** - eProcess only (no Imaging) for DB2

a Click the *SLAC License Entry* button to set up the system licensing.

b From the "Please select the file to import license data from" window, using the *Look in* list box, select the cd-rom drive and browse to where your SLAC Key resides. Highlight your system SLAC Key file and click *Open*.

c After you have selected the system SLAC Key file, you will see the FileNet Software License (SLAC) Manager window. Click the *OK* button if you want to proceed with the SLAC Key installation on your system. Otherwise, click *Cancel* to exit this window and continue to **step 24**.

d If you selected *OK* in Step **c**, you will receive the following message window. Otherwise, continue to **step 24**.



e Click *Yes* to have your SLAC Key updated. Your system SLAC Key is now installed.

Tip The SLAC Key is stored only in the NCH database. Therefore, if you ever need to re-initialize the NCH database, you must also reinstall the SLAC Key.

24 If you want to make changes to any of the installation parameters you selected above, click the *Edit Parameters* button. Once all changes (if any) have been made, click the *Exit* button to exit the Setup Program.

25 Unload the **Image Services 4.0 for Windows Server** CD-ROM from the drive, and store it in a safe place.

Reboot the Server

At this point you must reboot the server so that newly installed device drivers can take effect. The time needed for the shutdown/reboot process varies for each system.

1. Reboot the server.
2. After the server reboots, logon as **fnsw** with password **fnsw.**

Note When the IS software is first installed, the fnsw password is set to fnsw.

Install Required Pre-Startup Fixes

At this time, install only the fixes that directly relate to Image Services 4.0 initial configuration issues. Search through the Release Notes file for the key words **PRE-STARTUP** and **REQUIRED.**

Note These are only the fixes required ot start the FileNet Image Services software successfully. Install any other fixes after the Image Services installation has been successfully completed.

You can also retrieve the latest fixes from the CSS Worldwide Customer Support Web site at **http://www.css.filenet.com** or from the Tech Info CD.

Continue with Server Configuration

For a **Combined server or Dual server** system, continue with the next chapter, **Chapter 4, "Configuring FileNet Image Services Software," on page 87**

If you're adding an **Application server**, skip to the section, **"Configure the Root Server" on page 159**, in Appendix A.

If you're adding a **Storage Library server**, skip to the section, **"Configure the Root Server" on page 187** in Appendix B.

4

Configuring FileNet Image Services Software

This chapter provides instructions to help you construct an Image Services system configuration database customized to your installation.

When using the various Tabs in the *FileNet Image Services - System Configuration Editor* window, you will click on a tab, complete the fields, and then click on the next tab as directed.

Tip Every screen or dialog box in the *FileNet Image Services - System Configuration Editor* has Online Help available for it. In addition, most screens can be re-sized (for example, “maximized”) for your convenience and to satisfy your preference.

Note The text shown in some screens or dialog boxes may not appear exactly as depicted in this chapter. This results because some text in screens or dialog boxes is dependent on the template you select or the type of relational database that you have installed on your server. The overall examples, however, should still apply to all configurations.

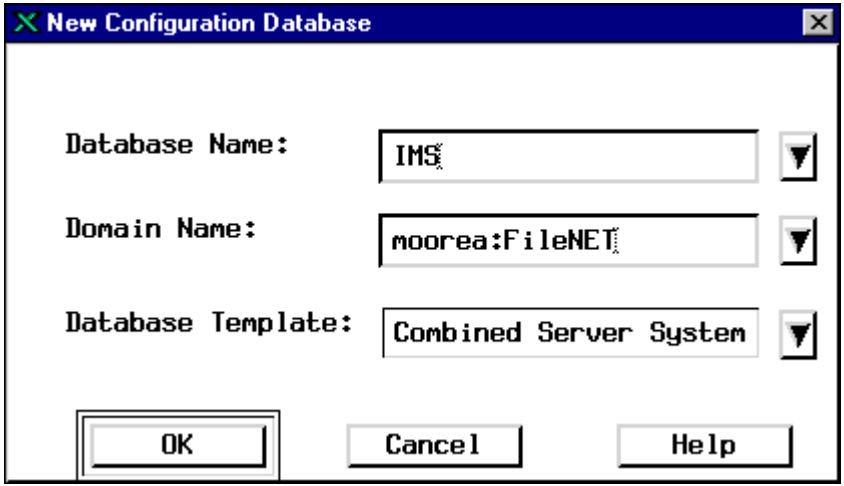
Create the Configuration Database

Follow the procedures in this section to create the configuration database.

1. If you have not already done so, logon as **fnsw**.
2. Open the Configuration Editor.

   From the *Taskbar*, click the *Start* button, point to *Programs*, point to the *FileNet Image Services,* point to *System Configuration,* and click the *Configuration Editor* icon.

   The New Configuration Database dialog box will open.



The *Configuration Editor* program will detect that no databases exist and will open the New Configuration Database dialog box automatically.

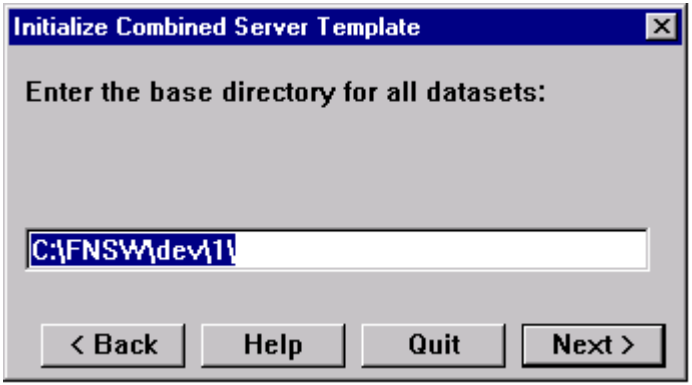
CAUTION If the Open Configuration Database dialog box displays instead of the New Configuration Database dialog box, you have an existing Image Services configuration (cdb) file. Click *Cancel*, then select *New* from the File menu.

3 Verify that the two-part domain information is correct in the New Configuration Database dialog box. (The proper syntax is: <Domain>:<Organization>.)

4 From the Database Template: pull-down list, select a template type from the following template choices:

- Combined server system
- Dual server system
- Remote entry system
- WorkFlo Management System

5 Click the *OK* button.



6 Enter the base directory for all datasets, and click the *Next* button. In the next dialog box, select the type of database installed on your system.

7 Select the DB2 relational database version for your new configuration and click *Next*.

Note Only DB2 8.1.0 (with FixPak 4a) is supported in this release.

8 A series of dialog boxes and prompts for the specific template you selected above, appear next. Answer each prompt to configure your system. In necessary, refer to your **"Installation Worksheet" on page 46** for dataset sizes, etc.

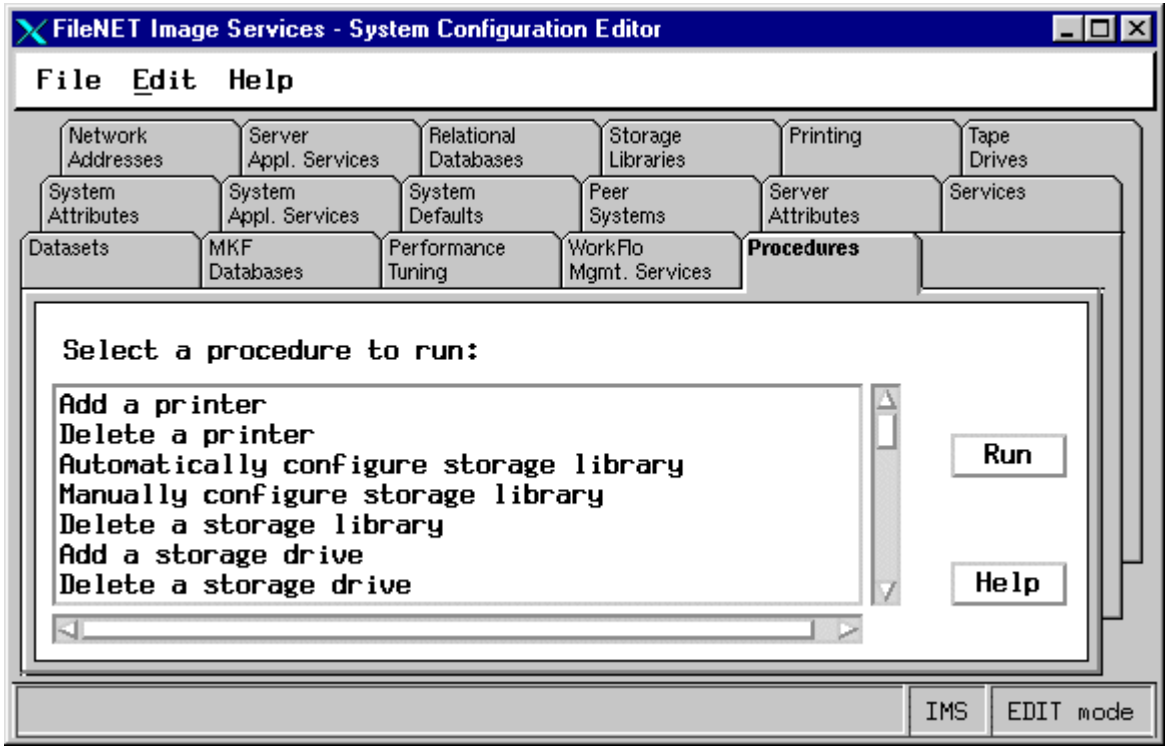
When you're prompted for information about your DB2 Relational Database, use the information that was supplied to you by the Database Administrator when the DB2 software was installed. Refer to the **"DB2 Database Information" on page 56**.

In addition to prompts for other system information, you'll be asked to:

- Select the relational database type (DB2 8.1.0).
- Enter and verify the passwords assigned to:
  - f_sw
  - f_maint
  - f_sqi
  - f_open
- Enter the relational database name.
- Enter the user tablespace name.

Note Accept the default values offered for dataset names. This information will not be saved and you will have the opportunity to change the table names before exiting the Configuration Editor.

9 When your configuration is complete, a Configuration Complete message appears. Click *Next* to continue. The Configuration Editor opens.


FileNET Image Services - System Configuration Editor
File Edit Help
Network Addresses
Server Appl. Services
Relational Databases
Storage Libraries
Printing
Tape Drives
System Attributes
System Appl. Services
System Defaults
Peer Systems
Server Attributes
Services
Datasets
MKF Databases
Performance Tuning
WorkFlo Mgmt. Services
Procedures
Select a procedure to run:
Add a printer
Delete a printer
Automatically configure storage library
Manually configure storage library
Delete a storage library
Add a storage drive
Delete a storage drive
Run
Help
IMS
EDIT mode

Tip When you are finished configuring the database, you can select tabs in the Configuration Editor to verify that you entered the information correctly.

10 Before you exit the Configuration Editor, complete any remaining configuration sections in this chapter that apply to your system.

Verify the Image Services Character Set

On the System Attributes tab, scroll to the right and check the settings for **Default Character Set** and **Former Character Set**. On a new server, both are initially set to ISO 8859-1.

Change the Default Character Set to match the current Windows Server code page and the DB2 character set; for example, ISO 8859-2.

If the FileNet system has been converted from an older character set, such as FileNet International, set the Former Character Set appropriately. If the system has never been converted, set the Former Character Set to match the Default Character Set.

See “National Language Support” on page 20 for more information.

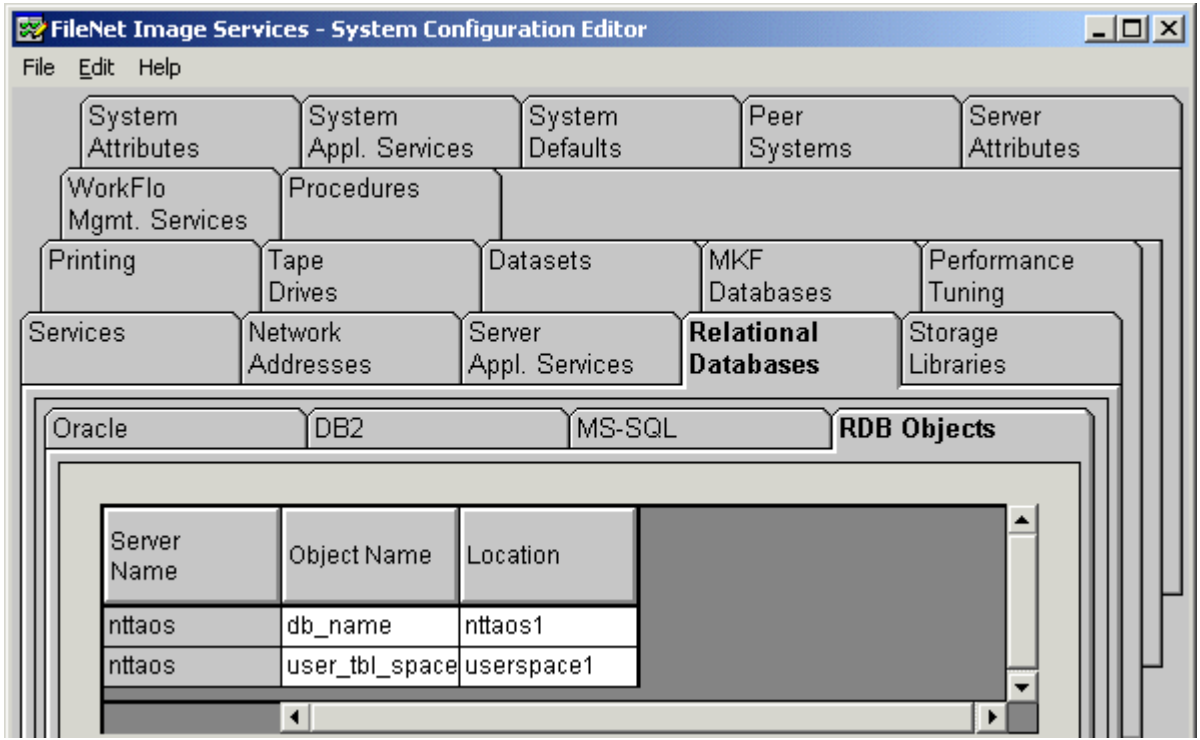
Configure DB2 Software

Follow the procedures in this section to configure the DB2 software on your server.

Verify the Database and Tablespace Names

In this section you are verifying the database and tablespace names that will be used with the FileNet software.

1 Click the Relational Databases tab, then click the RDB Objects subtab.


FileNet Image Services - System Configuration Editor
File Edit Help
System Attributes
System Appl. Services
System Defaults
Peer Systems
Server Attributes
WorkFlo Mgmt. Services
Procedures
Printing
Tape Drives
Datasets
MKF Databases
Performance Tuning
Services
Network Addresses
Server Appl. Services
Relational Databases
Storage Libraries
Oracle
DB2
MS-SQL
RDB Objects
Server Name
Object Name
Location
nttaos
db_name
nttaos1
nttaos
user_tbl_space
userspace1

2 On the RDB Objects subtab, verify the database alias name and the tablespace name in the Object Name and Location columns:

- **DB2 Database Alias name (db_name)**, such as indexdb.
- **Tablespace name (user_tbl_space)**, such as userspace1.

Note Image Services uses the database alias name, which may or may not be the same as the database name, to link the IS DB2 client to the DB2 database Server.

3 On the DB2 subtab, verify the following fields:

- **Version** - must be **8.1.0** (7.2.0 is not supported at this time.)
- **Password Expiration Policy** This field lists the number of days that the f_sw, f_maint, f_sqi, and f_open passwords remain in effect before they expire. The default value is **60 (days)**. To change the default, enter a new value in this field.

Note A blank field is not permitted, and a value of 0 is equivalent to "Never Expires."

- **Notify Admin Policy** This field lists the number of days prior to password expiration that the administrator will be reminded to update the password. The default value is **14 days** before the password expires. To change the default, enter a new value in this field.

Note This value must always be less than or equal to the password expiration value. A blank field is not permitted, and a value of 0 would mean notification the day the password expires.

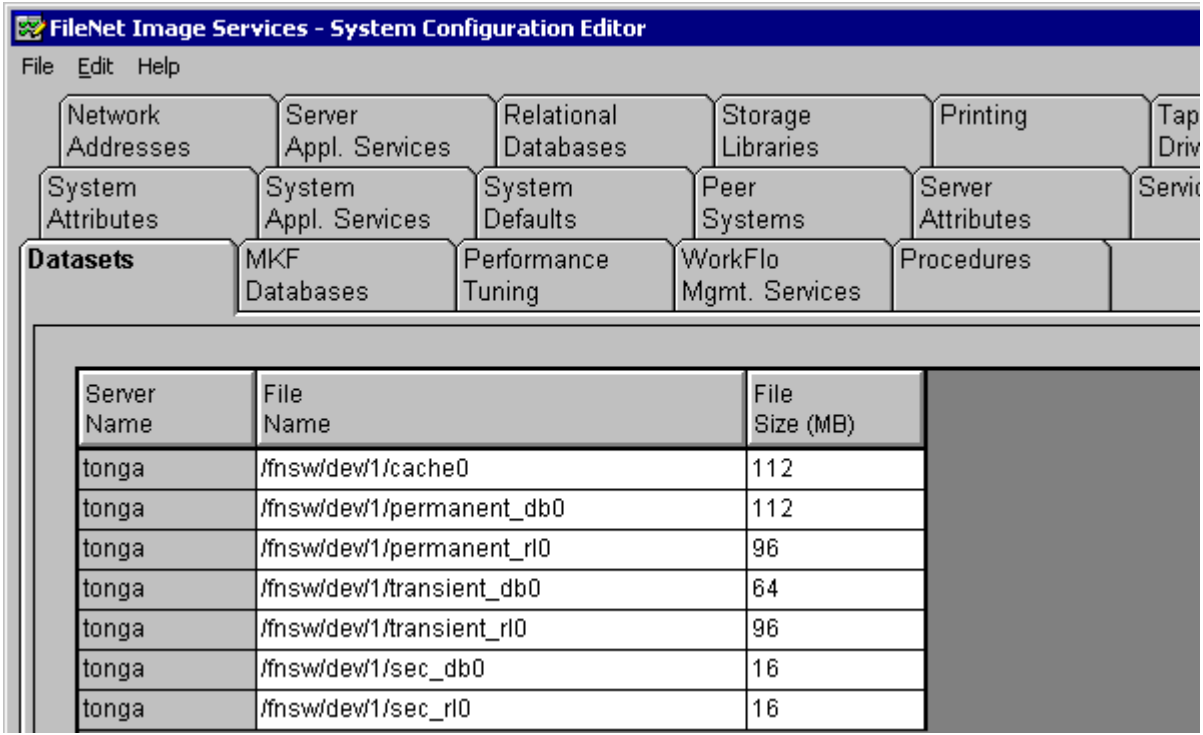
Optional Configuration Procedures

The following configuration procedures are optional:

Read these sections and perform any procedures that are needed for your system.

Modify Dataset File Sizes (Optional)

This section discusses how to modify dataset file sizes. The example shown below lists datasets that were added to a Combined server system.



Server Name	File Name	File Size (MB)
tonga	/fnsw/dev/1/cache0	112
tonga	/fnsw/dev/1/permanent_db0	112
tonga	/fnsw/dev/1/permanent_rl0	96
tonga	/fnsw/dev/1/transient_db0	64
tonga	/fnsw/dev/1/transient_rl0	96
tonga	/fnsw/dev/1/sec_db0	16
tonga	/fnsw/dev/1/sec_rl0	16

All of the dataset sizes are set by default. If you want to change any of them, do so in their respective File Size (MB) spreadsheet cells on the Datasets tab.

When creating larger datasets, note the following:

- The sizes of all of the datasets can be changed in the Datasets tab in the File Size column.
- Maximum and minimum sizes in number of megabytes is checked by the Editor program.
- If you need a larger cache, you need to run the Add Additional Dataset procedure from the Procedures tab.
- The maximum number of dataset cache partitions is 255, and each partition can be up to 16GB in size.

Refer to the **“Installation Worksheet” on page 46** for defined or calculated dataset sizes.

Note Supporting 255, 16GB partitions allows for terabyte caches. The maximum cache size is 4080GB, or 4 terabytes. The maximum partition size depends on two operating system features: 1) The host operating system must support 16GB partitions; and 2) The host operating system must provide a mechanism which allows seeking to any offset up to 16GB from the beginning of a partition. Due to memory requirements, you should use EBR rather than CSM_exim to backup the millions of cache objects.

Configure Logical Cache (Optional)

1. Click on the Server Application Services tab in the *FileNet Image Services - System Configuration Editor* window.

2. Select the *Cache* subtab to view a list of caches configured on your server. Default values are automatically given to each of the caches.

Note Refer to **"Installation Worksheet" on page 46** for information concerning your cache percentages.

3 To modify the minimum or maximum allocation for each cache configured, click on the white box below the minimum or maximum column of each cache allocation you want to change, and enter the new value into the field.

4 The *Locked*, *Daemon*, and *Write Threshold (%)* values are set to default values. FileNet recommends that these default values be left unchanged.

Note The following remaining sub-tabs in the Server Application Services tab do not need to be configured unless you want to assign non-default values to the application parameters:

Scheduling subtab: sets up station document services parameters.

Cache Duration subtab: sets up the prefetch, migrate, and refresh duration for the System Cache.

Batch subtab: sets up station batch services parameters.

ICR subtab*:* ICR (Intelligent Character Recognition) cache is NOT SUPPORTED in this release.

Configure System Document Services Parameters (Optional)

1 Click on the System Application Services tab in the *FileNet Image Services - System Configuration Editor* window.

2 Select the Document Services sub-tab if you want to change the values of any of the document services parameters. Document number and surface ID ranges can be changed from this menu.

3 If you want to change the way images are sent to the optical disk, select the Others sub-tab. These parameters are set to default values by the software. To change any of these parameters, click on the field of each parameter you want to change, and type in the new value.

Configure the Database Parameters (Optional)

Complete the steps in this section as required.

Configure Relational Database Parameters

1 Click on the Relational Databases tab in the *FileNet Image Services - System Configuration Editor* window.

2 Click on the DB2 sub-tab.

3 The DB2 parameters are set to default values by the software. These parameters should be left at their default values unless changes are necessary.

Note Refer to **"Installation Worksheet" on page 46** for information concerning your relational database parameters.

4 If you need to change any of these parameter values, select the field next to the database parameter you want to change and type in the new value.

Configure MKF Database Parameters

1 Click on the MKF Databases tab in the *FileNet Image Services - System Configuration Editor* window.

2 The MKF database parameters are set to default by the installer software. These parameters should be left at the default values unless changes are necessary.

Note The default MKF database block size in Image Services 4.0 is 8 KB. Other possible block sizes are 1 KB, 4 KB, or 16 KB. If you select 1 KB, the maximum size of the database is limited to 16 GB (eight 2 GB datafiles). The other block sizes enable you to have Permanent and Transient databases larger than 16 GB. Click Help if you have any questions on the parameter values.

Optional Storage Library Configuration Procedures

The following optional Storage Library procedures are for configuring a **combined** server (Root/Index/Storage Library).

- **"Verify/Configure Storage Library Device Settings (Optional)" on page 109**
- **"Connect/Configure Storage Library Devices (Optional)" on page 111**
- **"Configure Third-Party Access to Optical Libraries (Optional)" on page 113**

Read these sections and perform any procedures that are needed for your system. If you do not need to perform any of these procedures, continue to the section, **"Exit the System Configuration Editor" on page 117**.

Note Procedures for configuring a **Dual server** (separate Root/Index and Storage Library servers) are found in **"Setup Storage Library Server (Optional)" on page 123**. To configure an MSAR System, refer to the ***MSAR Procedures and Guidelines*** document for information.

Verify/Configure Storage Library Device Settings (Optional)

To view the information concerning the storage libraries configured on your server, select the Storage Libraries tab from *FileNet Image Services - System Configuration Editor* window.

Tip Even though an ODU (Optical Disk Unit) is technically not a storage library because it lacks a robotic arm, for the purposes of configuration be sure to perform the same steps for an ODU that you would perform for a storage library.

Note If you select the *Manually configure optical storage library* option from the Procedure list, consult your Help Text to configure the storage library. The ID format for both the storage library arm and drive devices must be:

<#> <#> <#> <#> for example: **1 2 3 4** where:

The *first* number is the *SCSI adapter id*
The *second* number is the *bus id*
The *third* number is the *device id*
The *fourth* number is the *LU#*

Refer to **"Installation Worksheet" on page 46** for information concerning your storage library devices.

Connect/Configure Storage Library Devices (Optional)

Complete the steps in this section only if the following criteria are met:

- Your system is a combined Root/Index/Storage Library server.
- You did not attach a Storage Library device before installing and configuring the FileNet Image Services software on your server.

1 Logoff the Windows Server, and turn the server off.

2 Connect the storage library device, and power the device on.

3 Logon as **fnsw**.

4 Open a Command Prompt window, and enter the following command:

fnddcfg

Once the command is finished, you will receive a message instructing you to reboot the server to make the changes effective.

5 Reboot the server, and logon as **fnsw** again.

6 Open a Command Prompt window, and enter the following command:

fndev

The physical addresses of all attached storage library devices should appear.

7 Open the Configuration Editor.

From the Taskbar, click Start, point to Programs, point to the *FileNet Image Services Configuration* folder, and click the Configuration Editor icon.

8 Verify that the two-part domain information is correct, and click *OK*.

The *FileNet Image Services - System Configuration Editor* window opens with the Procedures tab displayed.

9 From the Procedures tab, select Automatically Configure a Storage Library from the list of available procedures.

10 Click *Run* and respond to each of the dialog box prompts that display.

Configure Third-Party Access to Optical Libraries (Optional)

Image Services normally reserves all the optical drives and library arms on the SCSI bus for its own use. However, if other third-party software products that access these devices are also going to run on this server, a text file named fnsod.foreign needs to be created in the <drive>:\fnsw_loc\sd directory to specify which devices are available for use by the third-party products.

If this server is dedicated to running Image Services only, skip this section and continue to **"Exit the System Configuration Editor" on page 117**.

If this server is going to be used for both Image Services and third-party software, continue with the following steps.

Note Image Services must not be running during this procedure.

1 List the available devices by opening a command prompt and entering:

fndev

The fndev display from a server that has a 160ex library and a 2.6GB ODU would look similar to this:

```
SOD.1010 1 1 0 1 0 HP C1113F 1.22
ARM.1020 1 1 0 2 0 HP C1160J 1.47
SOD.1030 1 1 0 3 0 HP C1113J 1.06
SOD.1040 1 1 0 4 0 HP C1113J 1.06
```

2 Open Notepad to create the fnsod.foreign file.

In this file, list all the SCSI device nodes that the third-party application will use. The format is:

ARM.bctl or
SOD.bctl

where:

ARM indicates the device is a robotic arm.

SOD indicates the device is a SCSI Optical Device.

bctl are the bus, controller, target, and lun (logical unit number).

To exclude the 160ex storage library as shown in step 2, the contents of your fnsod.foreign file would look similar to this:

```
ARM.1020
SOD.1030
SOD.1040
```

To exclude just the ODU, the fnsod.foreign file would look like this:

```
SOD.1010
```

To exclude a tape library, only an ARM.bctl entry is required for the library's robotic arm. No SOD.bctl entry is needed.

3 When you've finished adding entries to the file, exit Notepad and save the file as fnsod.foreign.

Note Notepad adds a .txt extension to the file name when you save it, so you must rename the file in the next step to remove the .txt extension.

4. Locate the fnsod.foreign.txt file in the <drive>:\fnsw_loc\sd folder and remove the .txt extension.

5. As Administrator, reconfigure the device driver by entering:

   fnddcfg -u
   fnddcfg

6. Then restart the server.

7. When the server has finished restarting, list the available SCSI devices by entering:

   fndev

   The resulting list of devices should contain all the attached optical arms and disks NOT listed in the fnsod.foreign file you just created.

Important DO NOT use the fnsod.foreign file to exclude a broken drive within a Storage Library. The library arm informs the system software of the drives in the library, and this would cause problems with auto-configuration routines.

Exit the System Configuration Editor

1. From the *FileNet Image Services - System Configuration Editor* window, click on the File menu and click the Exit option.

2. Click the *Yes* button to save the configuration and exit the System Configuration Editor.

Initialize the Server Software

This section includes the procedure for initializing the server software.

CAUTION You must start the database before initializing the FileNet databases. If you do not start the database, the initialization process will fail.

Initialization Procedure

The initialization procedure in this section is required for local installations of an IS connected to a remote AIX DB2 database server.

Note If you have not yet installed the SLAC key, you must do so now before proceeding and initializing the server. See **page 82** for information on installing the SLAC key.

1 If you aren't already, logon as **fnsw.**

2 To initialize the index database and all the MKF databases (includes permanent, transient, and security databases), enter the following command at the Command Prompt:

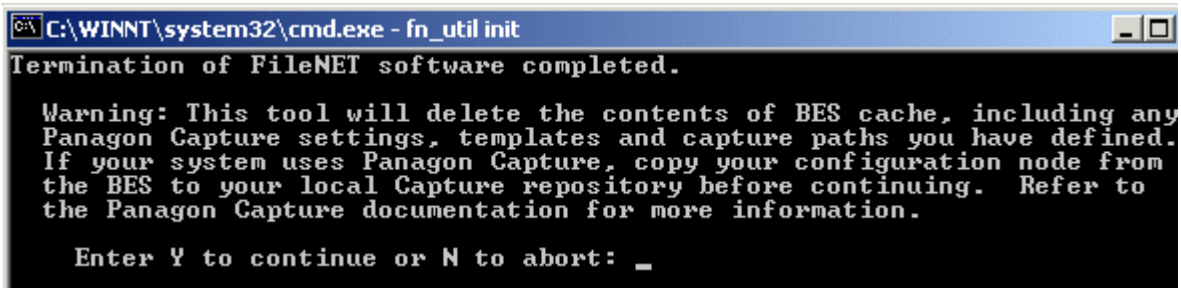
fn_build -a

fn_util init

Note During the initialization process you will receive several *"Could not find <file>"* error messages. You can ignore these messages because during the initialization process these files do not yet exist.

The initialization will take approximately 10 - 30 minutes during which there is very little status feedback to the display. The larger the datasets, the longer the process will take.

3 During the initialization, the following warning message appears:



Enter Y to continue the initialization.

4 When initialization is complete, view the DB2.log files to make sure that there were no errors in the database initialization process.

Tip You can monitor the progress of the initialization by viewing the fn_util.log and DB2.log files in a command prompt window. These files are located in the following directories:

\fnsw_loc\logs\fn_util\fn_util.log
\fnsw_loc\logs\fn_util\DB2.log

The file size increases each time you view the log files, indicating the progress of the initialization.

Verify FileNet Dataset Permissions (Optional)

If the FileNet datasets reside on a different disk than the FileNet Image Services software, you must set the user and group permissions.

1. As **fnsw** user, open Windows Explorer and select the directory containing the FileNet datasets. For example, fnsw\dev\1
2. Right-click on the folder containing the FileNet datasets and select Properties. The Properties dialog box opens.

3 In the Properties dialog box, select the Security tab, and set the following permissions for the users and groups in the table below:

Group	Permissions
Administrators	Full Control
Everyone	Read
fnadmin	Full Control
fnop	Read & Execute and Write
fnusr	Read & Execute and Write

4 Click *OK* to close the Properties dialog box.

5
Completing the Installation

This chapter contains the final procedures necessary to complete the installation of your system.

Setup Storage Library Server (Optional)

Complete the procedures in this section *only* on the Storage Library server of a **Dual** server configuration. If you **do not** have a separate Storage Library server continue to the section, **"Configure RES, Cross-Committal, or Multi-Committal Systems (Optional)" on page 138**.

Note If your system is not configured for Dual server operation, skip this section, and proceed to **"Start the FileNet Software" on page 141**.

Install Image Services Software on Storage Library Server

Refer to the chapter, **Chapter 3, "Installing FileNet Image Services Software," on page 68** to install FileNet software on the Storage Library server.

Note The Image Services software that you will install on the Storage Library Server must be the same version as the software installed on the Root/Index server.

Once the Image Services software is installed on the Storage Library server, verify that the Image Services software is running on the Root/Index server before proceeding with the next section.

Connect Storage Library Device(s)

1. Logoff the server, and turn the server off.
2. Connect the ODU or storage library device, and power the device on.
3. Logon as **fnsw**.

4 Before running the command in this step, make sure that the SCSI devices and not configured to be bootable devices.

Open a Command Prompt window, and enter the following command:

fnddcfg

Once the command is finished, you will receive a message instructing you to reboot the server to make the changes effective.

5 Reboot the server, and logon as **fnsw** again.

6 Open a Command Prompt window, and enter the following command:

fndev

The physical addresses of all attached storage library device will display on the screen.

7 Open the Configuration Editor.

From the *Taskbar*, click the *Start* button, point to *Programs*, point to the *FileNet Image Services,* point to *System Configuration,* and click the *Configuration Editor* icon.

8 Verify that the two-part domain information is correct, and click *OK*.

The *FileNet Image Services - System Configuration Editor* window opens with the Procedures tab displayed.

9 From the Procedures tab, select Automatically Configure a Storage Library from the list of available procedures.

10 Click *Run*.

Note If you are configuring an RES template, a dialog box prompting you for the domain name of the peer system will display. Respond to these prompts as appropriate.

11 From the *FileNet Image Services - System Configuration Editor* window, click the *File* menu and select the *Exit* option.

12 Click the *Yes* button to save the configuration and exit the System Configuration Editor.

Configure Third-Party Access to Optical Libraries (Optional)

Image Services normally reserves all the optical drives and library arms on the SCSI bus for its own use. However, if other third-party software products that access these devices are also going to run on this server, a text file named fnsod.foreign needs to be created in the <drive>:\fnsw_loc\sd directory to specify which devices are available for use by the third-party products.

If this server is dedicated to running Image Services only, skip this section and continue to **"Build Configuration Files on the Storage Library Server" on page 131**.

If this server is going to be used for both Image Services and third-party software, continue with the following steps.

Note Image Services must not be running during this procedure.

1 List the available devices by opening a command prompt and entering:

fndev

The fndev display from a server that has a 160ex library and a 2.6GB ODU would look similar to this:

```
SOD.1010 1 1 0 1 0 HP C1113F 1.22
ARM.1020 1 1 0 2 0 HP C1160J 1.47
SOD.1030 1 1 0 3 0 HP C1113J 1.06
SOD.1040 1 1 0 4 0 HP C1113J 1.06
```

2 Open Notepad and create the fnsod.foreign file.

In this file, list all the SCSI device nodes that the third-party application will use. The format is:

ARM.bctl or
SOD.bctl

where:

ARM indicates the device is a robotic arm.

SOD indicates the device is a SCSI Optical Device.

bctl are the bus, controller, target, and lun (logical unit number).

To exclude the 160ex storage library as shown in step 2, the contents of your fnsod.foreign file would look similar to this:

```
ARM.1020
SOD.1030
SOD.1040
```

To exclude just the ODU, the fnsod.foreign file would look like this:

```
SOD.1010
```

To exclude a tape library, only an ARM.bctl entry is required for the library's robotic arm. No SOD.bctl entry is needed.

3 When you've finished adding entries to the file, exit Notepad and save the file as fnsod.foreign.

4 Locate the file in the <drive>:\fnsw_loc\sd folder and remove the .txt extension.

Note Notepad adds a .txt extension to the file name when you save it, so you must rename the file to remove the .txt extension.

5 As Administrator, reconfigure the device driver by entering:

```
fnddcfg  -u
fnddcfg
```

6 Then restart the server.

7 When the server has finished restarting, list the available SCSI devices by entering:

```
fndev
```

The resulting list of devices should contain all the attached optical arms and disks NOT listed in the fnsod.foreign file you just created.

Important DO NOT use the fnsod.foreign file to exclude a broken drive within a Storage Library. The library arm informs the system software of the drives in the library, and this would cause problems with auto-configuration routines.

Build Configuration Files on the Storage Library Server

This section assumes that the FileNet Image Services software has already installed and configured on the Storage Library server. The Image Services version on the Storage Library server must match the version installed on the Root/Index server.

Note You must start the FileNet software on the Root/Index server before starting the Image Services software on the Storage Library server.

1. Verify that the FileNet Image Services software is running on the Root/Index server before continuing.

2. On the Storage Library server, logon as **fnsw**.

3. If necessary, shutdown the FileNet software on the Storage Library Server by entering the following command:

   initfnsw stop

4. Build the appropriate configuration files by entering the following at the Command Prompt:

   fn_build -a

5. Still as **fnsw** on the Storage Library server, switch to the directory containing the links to the Storage Library device drivers and databases by entering a command similar to the following:

   cd \fnsw\dev\1

6. List the directory contents by entering the following command:

dir

The following items should appear in the directory listing:

- cache0
- oddX1 (X=device ID, one for each optical drive)
- osarx (x=arm ID, one for each optical library arm)
- permanent_db0
- permanent_rl0
- transient_db0
- transient_rl0

Note If the datasets do not exist in the /fnsw/dev/1 directory, you must run the FileNet System Configuration Editor program on the Root/Index server again and configure the appropriate partitions for the Storage Library server.

(In addition, you must run the fn_build -a tool on the Root/Index server and start the FileNet Image Services software before repeating the steps in this section.)

7 Finally, as **fnsw**, enter the following commands:

fn_util init

The fn_util init program will initialize the transient and permanent databases on the Storage Library server. (When the fn_util programs are done, a message displays indicating that the new database partitions are initialized and zeroed out.)

Note You can monitor the progress of the initialization by viewing the init.log file in a command prompt window. The directory location of this file is, \fnsw_loc\logs\fn_util\fn_util.log

Note If you are attaching an existing Storage Library server to a new system, you may receive the following message:

63,0,10 <fnsw> ds_init (14983) ... CRITICAL
The Scalar Numbers Table is behind the snt.chkpt file.

This message indicates the scalar numbers table and the checkpoint file are out of synchronization. Continuing in this condition may cause multple documents to be committed with the same doc ID. To solve this problem, run the following commands to start the permanent database and update the scalar numbers table:

fn_util startdb
SNT_update

After SNT_update is finished, run fn_util init again.

Configure Storage Devices on Storage Library Server

1. On the Storage Library server, logon as **fnsw**.

2. Open the Configuration Editor.

   From the *Taskbar*, click the *Start* button, point to *Programs*, point to the *FileNet Image Services,* point to *System Configuration,* and click the *Configuration Editor* icon.

3. Verify that the database and domain names are correct, and click *OK*. (The two-part domain name is set up as follows:<Domain>:<Organization>.)

   The *FileNet Image Services - System Configuration Editor* window opens with the Procedures tab displayed.

4. From the Procedures tab, select *Automatically* Configure a Storage Library from the list of available procedures.

5. Click *Run*.

6 Check the Optical Library tabs to verify that the correct Storage Library devices were configured.

7 Finally, still as **fnsw**, open a Command Prompt window, and enter the commands similar to the following:

fn_util inittrans
fn_util initperm

The **fn_util inittrans** and **fn_util initperm** scripts initialize the transient and permanent databases on the Storage Library server. Once the databases are initialized, the scripts check for the presence of permanent.ddl and transient.ddl files in the /fnsw/local/sd/1 directory.

8 Start the FileNet Image Services software on all servers: Root/Index server first, then Storage Library server. (See **"Start the FileNet Software" on page 141** for instructions on starting the FileNet software.)

Configure RES, Cross-Committal, or Multi-Committal Systems (Optional)

This section is optional. If you **do not** have a Remote Entry Server (RES), Cross-Committal, or Multi-Committal System, continue to the section **"Verify the System Serial Number" on page 140**.

This section presents a brief description of these systems, for detailed information refer to the ***Image Services Multi-Committal and Cross-Committal Configuration Handbook***.

Each of the FileNet systems in an RES configuration, Cross-Committal configuration, or a Multi-Committal System configuration is technically an independent system with a Root/Index server and is considered a **peer system** by all the others.

- A Cross-Committal System is composed of a **source** Image Services system and a **target** Image Services system. The source system commits images to the target system, but does not retain the images locally.

- A Remote Entry Server (RES) is a specific type of Cross-Committal system that has no storage library and is used only for entering images for committal to another independent system (the target) that does have a storage library. The target system is also capable of entering and committing images, so in this situation the two systems must be “compatible,” that is, they must have non-overlapping document IDs and surface IDs.

- A Multi-Committal System is an independent FileNet system that contains a Storage Library server and commits images both to its own Storage Library and to the Storage Library of another independent FileNet system. Multi-Committal Systems may or may not be “compatible” systems with non-overlapping document IDs. If they aren’t compatible, new doc IDs are assigned on the target system, a minor performance consideration.

Verify the System Serial Number

Use the **ssn** command to display the system serial number. At a Command Prompt, enter the following command:

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.

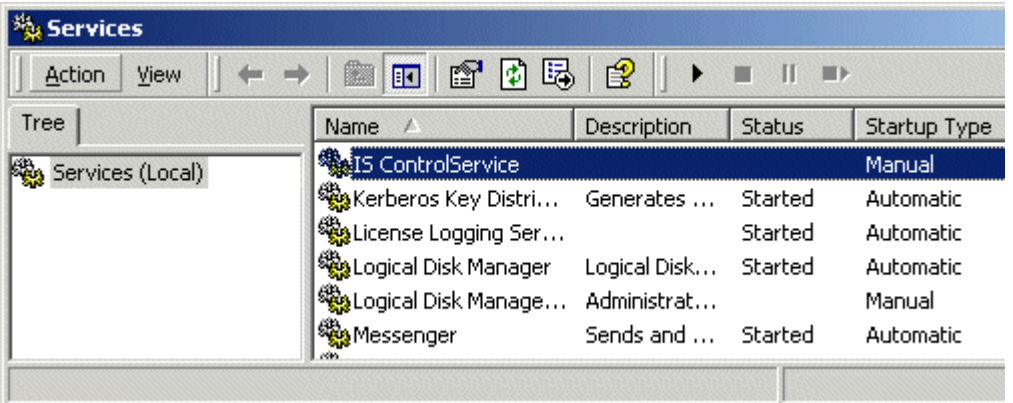
Start the FileNet Software

Use this procedure to start the FileNet Image Services software.

Note If you configured your system as a Dual server, make sure that the FileNet Image Services software in started first on the Root/Index server and then on the Storage Library server. Complete the steps in this section on both servers.

1. Logon as **fnsw**, if you aren't already.
2. From the Control Panel, open the Administrative Tools folder, and double-click the *Services* icon.

   The Services dialog box appears.



3 In the list of Services, verify that the IS ControlService is *Started* and the Startup Type is set to *Automatic*.
(If the service is not started the TM_daemon is not running.)

If the settings for IS ControlService are correct, skip to **Step 6 on page 143**.

4 If the properties are **not** correct, right-click *IS ControlS*ervice. The IS ControlService Properties dialog opens.

5 In the IS ControlService Properties window do the following as necessary:

a Set the Startup type to *Automatic*

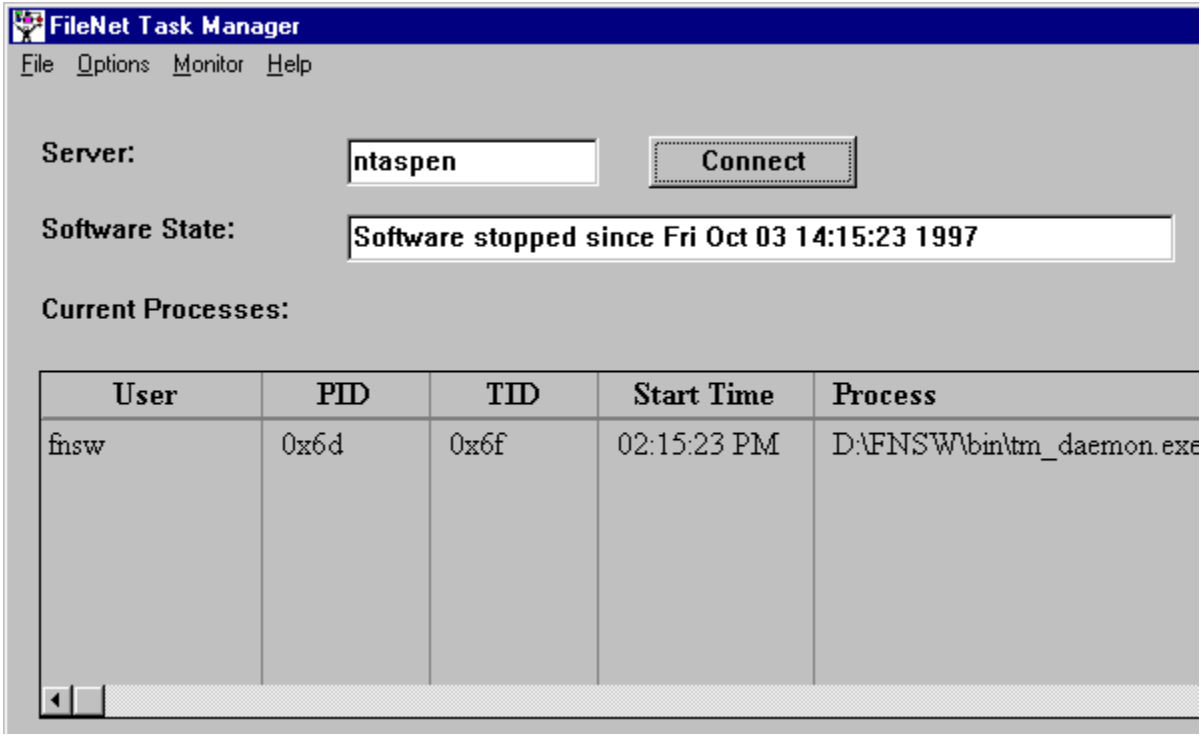
b Click the *Start* button to start the IS ControlService

c Click *OK* to exit the IS ControlService Properties window

6 Close the Services window.

7 Open the FileNet Task Manager.

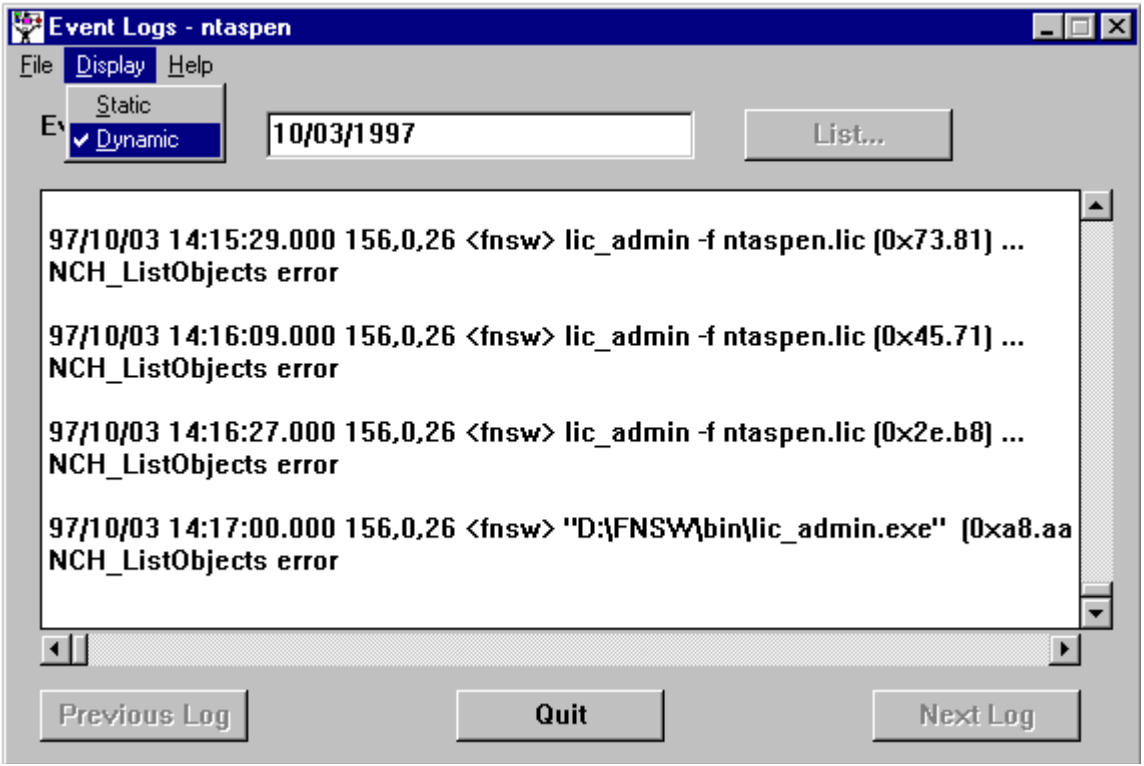
From the *Taskbar*, point to *Programs*, *FileNet Image Services, Server Applications*, and click the *Task Manager* icon.


FileNet Task Manager
File Options Monitor Help
Server:
ntaspen
Connect
Software State:
Software stopped since Fri Oct 03 14:15:23 1997
Current Processes:
User
PID
TID
Start Time
Process
fnsw
0x6d
0x6f
02:15:23 PM
D:\FNSW\bin\tm_daemon.exe

Since the Image Services ControlService is running, the TM_ daemon.exe process will be listed in the *Process* column.

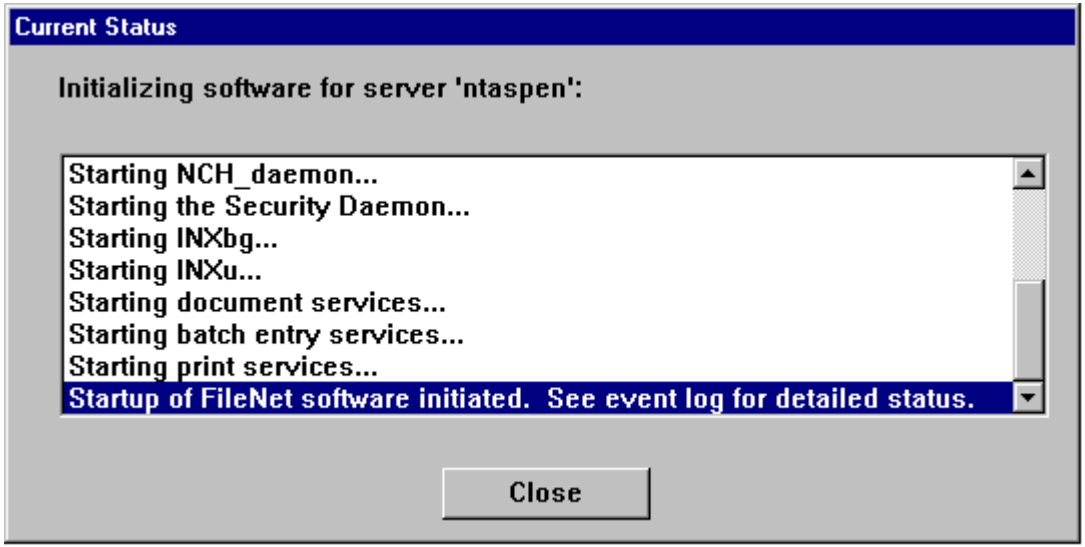
8 Click the *Monitor* pull-down menu and select the *Event Logs...* option.

The Event Logs window appears.


Event Logs - ntaspen
File
Display
Help
Static
Dynamic
10/03/1997
List...
97/10/03 14:15:29.000 156,0,26 <fnsw> lic_admin -f ntaspen.lic (0x73.81) ...
NCH_ListObjects error
97/10/03 14:16:09.000 156,0,26 <fnsw> lic_admin -f ntaspen.lic (0x45.71) ...
NCH_ListObjects error
97/10/03 14:16:27.000 156,0,26 <fnsw> lic_admin -f ntaspen.lic (0x2e.b8) ...
NCH_ListObjects error
97/10/03 14:17:00.000 156,0,26 <fnsw> "D:\FNSW\bin\lic_admin.exe" (0xa8.aa
NCH_ListObjects error
Previous Log
Quit
Next Log

9 Click the *Display* pull down menu and select the *Dynamic* option. This will enable the event window to be refreshed whenever messages are logged. Leave the Event Logs window open.

10 At the FileNet Task Manager window, click *Start* to bring up the FileNet software. Messages will display in the Current Status window as FileNet software is being started.



11 After the FileNet software has been initiated, click the *Close* button to close the Current Status window.

12 View the Event Logs window to make sure there are no error messages.

13 After viewing the Event Logs, close any other open windows.

Install Service Packs and Hot Fix Packs (Optional)

Now you can install any Hot Fix Packs or Service Packs that apply to Image Services 4.0 DB2 Edition. Be sure to read the accompanying README file, which contains the instructions for installing the software. Services Packs are available on CD-ROM.

Hot Fix Packs are available on the FileNet Web site **http://www.css.filenet.com**.

Make System Backups

Backups should be made of your system configuration in case something unforeseen occurs. You should do this for both the root and application
servers.

1. If you aren't already, logon as **fnsw**.

2. Shutdown the FileNet software by entering the following command:

   initfnsw stop

3. Load a blank tape into the tape drive.

4. Double-click on the *Administrative Tools* icon to open the Administrative Tools window.

5. From the Administrative Tools window, locate and double-click the *Backup* icon.

6. The backup tool should list all of the drives on your server which can be backed up. Locate and select the drive(s) containing the files and databases for both the operating system and FileNet system (for example, drive *C* and *D*.) This can be done by clicking on the white box to the left of the drive(s) you intend to backup.

7. Next, click the *Operations* pull down menu, and select the *Backup...* option.

8 Select the following options in the Backup Information window:

- Verify After Backup
- Backup Registry
- Restrict Access to Owner or Administrator

Also, if you need to, you may change the tape name in this window.

9 Type in the back up type (for example, *Full Backup, <System Name>, W/E 2-26-95*) in the *Description* field.

Note the location of the backup logfile and record the location for future reference.

10 Click the *OK* button to begin the backup. The backup program will display its status while it is in progress. The backup and verification will take about 20 - 30 minutes to complete, depending on the system.

11 When the backup is complete, make sure it can successfully verify the database file, and click the *OK* button.

12 To exit the backup tool, click the *Operations* pull down menu and select the *Exit* option.

13 Unload and label the backup tape.

Configure Image Services Processes to Autostart (Optional)

This procedure allows you to configure your system to automatically start the Image Services processes immediately after the IS ControlService has started. This preference will prevent you from having to start the Image Services processes manually from the FileNet Task Manager every time you restart your computer.

1. From the Start menu, select Programs, FileNet Image Services, System Configuration, and click Setup.
2. When you are asked whether you are logged on using a Domain User account, select either *Yes* or *No* as appropriate for your site.
3. At the FileNet Image Services Installation Maintenance screen, click the Edit Parameters button.
4. At the Edit Installation parameters dialog box, check the AUTOSTART Image Services PROCESSES option and click *OK*.

5 At the CONFIRM SAVE dialog box, click *Yes* to save the installation parameters.

6 Exit the FileNet Image Services Installation Maintenance window.

7 Click the *Yes* button at the CONFIRM EXIT window.

MSAR Systems

The Magnetic Storage and Retrieval (MSAR) storage library is a new feature that was added to FileNet Image Services in release 3.6.30. It provides high speed and high capacity storage libraries on magnetic disk media instead of using optical media or large magnetic disk caches (Cache-only systems).

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

Appendix A – Adding an Application Server

This appendix describes how to add an Application server to your system, and uses some of the procedures in the main body of this document. All the steps in this appendix should be done on the Application server unless specified otherwise.

In addition to installing and configuring a new Application server, use this appendix to:

- Add services to an existing server (for example, adding Batch Entry Services to an existing server). See, **“Add Services” on page 165**.
- Reconfigure an old server because the functions it performs are no longer required. (Reconfiguring an old server should be handled the same as installing and configuring a new Application server.)

Before You Begin

Before using this appendix ensure that:

- FileNet Image Services Release 4.0 and DB2 software has already been installed and configured on a Combined or Dual server.
- The Combined or Root/Index server will be the Root server for the Application server.

If a Root/Index server has not already been installed and configured you should do so now. Refer to the ***Guidelines for Installing and Configuring DB2 Software*** document, and **Chapter 3,"Installing FileNet Image Services Software"** of this document to install the necessary software.

Installation Prerequisites

Certain prerequisites (software and system requirements) are required to be performed prior to beginning the installation of the Application server software. Refer to **"Installation Prerequisites" on page 19** of this document to complete these requirements.

The Installation Prerequisites section also details specific file system and dataset information that you must gather (or determine) to successfully complete the Image Services installation on the Application server.

An **"Installation Worksheet" on page 46** is available for your use. You should transfer all of the requested information to the appropriate sections on the Installation Worksheet. All of the information necessary to complete the Image Services installation on the Application server will be in one easy-to-find place.

Additional System Information

In addition to verifying that your system meets the minimum software and system requirements detailed above, you must gather other important information to complete the Application server installation.

Follow the procedure in the section **"Additional System Information" on page 41** to obtain this information. Once you have gathered the information requested, transfer the data to the **"Installation Worksheet" on page 46**.

Other Sources of Information

As you read this procedure, you will see references to other documents you may need to consult. Refer to **"Related Documentation" on page 44** for a list of the documents you might need during the software installation procedure.

Install DB2 Software (if applicable)

If you are configuring an Application server with either SQL Services, WorkFlo Queue Services, or VWServices, you need to install DB2 Client software. Refer to the ***Guidelines for Installing and Configuring DB2 Software*** document to install the DB2 software.

If you are configuring an Application server with only Batch, Cache, and/or Print Services, you **do not** need to install DB2 client software on the Application server. Instead, proceed to the section **"Install Image Services Software" on page 159**.

Install Image Services Software

The procedures for installing Image Services software on your Application server are the same as the procedures in the main body of this document. Refer to **Chapter 3, "Installing FileNet Image Services Software," on page 68** to install your Application server software. At the end of that chapter there is a link to return to this appendix and the section below to configure the Root server.

Configure the Root Server

This section describes how to configure the **Root** server. You must modify the configuration database on the Root server to allow for the presence of an Application server on your system.

Server Types

Perform the steps in this section and its sub-sections on these servers:

Root/Index server during a Dual server installation

Root/Index/Storage Library server during a Combined server installation)

Add Application Server(s)

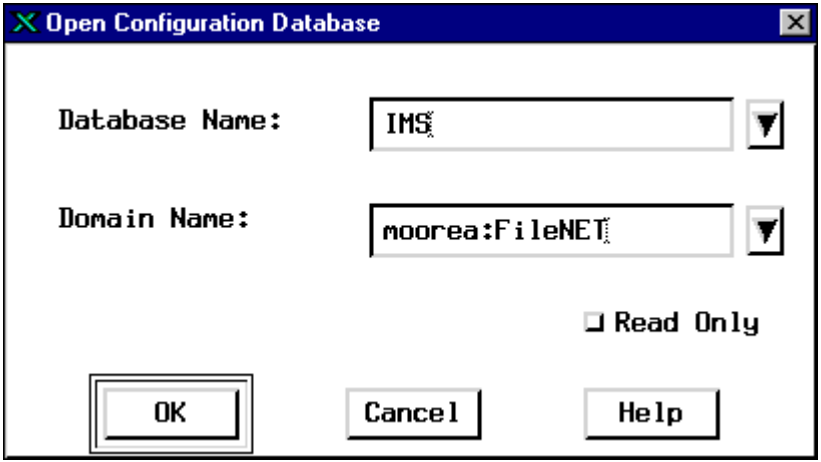
Perform the steps in this section on the **Root server**.

1 Logon as **fnsw**.

2 Open the Configuration Editor.

From the *Taskbar*, click the *Start* button, point to *Programs*, point to the *FileNet Image Services,* point to *System Configuration,* and click the *Configuration Editor* icon.

The Open Configuration Database dialog box appears.

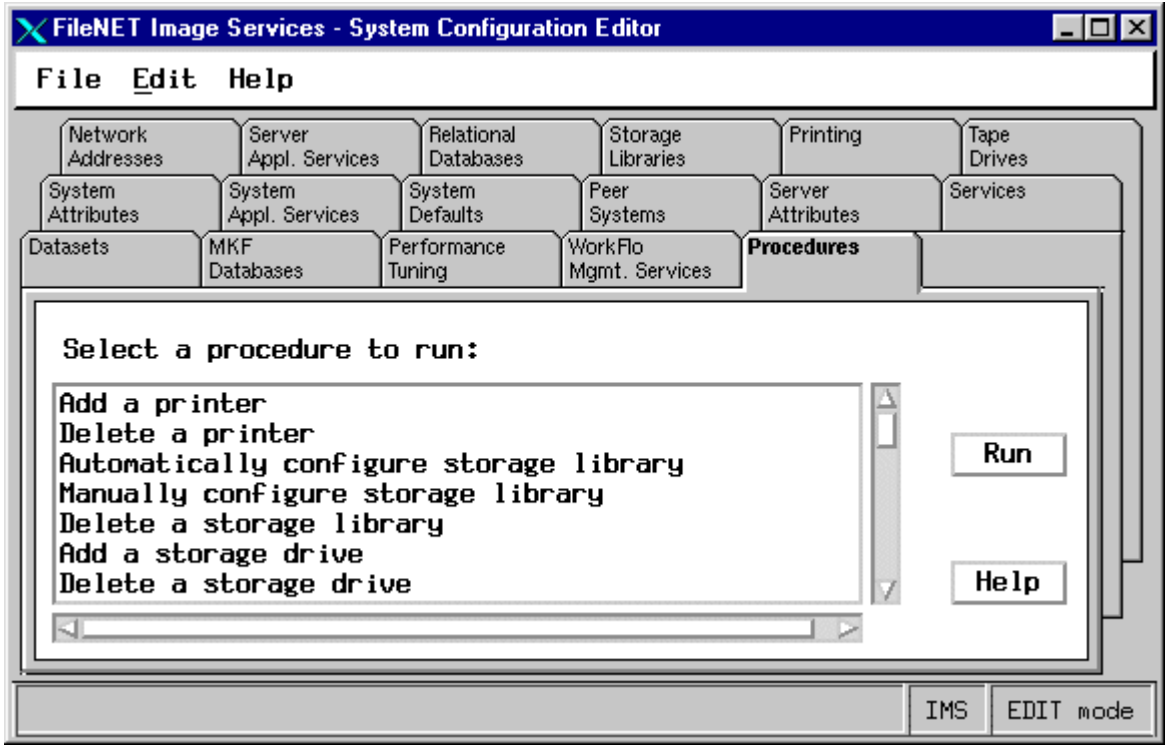

Open Configuration Database
Database Name:
IMS
Domain Name:
moorea:FileNET
Read Only
OK
Cancel
Help

Note The configuration database on the root server contains configuration information for the entire NCH domain of this FileNet system. Since this is an Application server, it does not have its own configuration database.

The configuration information you entered when setting up your root server will be displayed. Keep in mind that the Image Services software must be running on the root server when you open the configuration database.

3 In the Open Configuration Database dialog box, verify that the two-part domain information is correct and click *OK*. (The two-part domain name is set up as follows: <Domain>:<Organization>.)

The FileNet Image Services - System Configuration Editor window displays with the *Procedures* tab opened by default.


FileNET Image Services - System Configuration Editor
File Edit Help
Network Addresses
Server Appl. Services
Relational Databases
Storage Libraries
Printing
Tape Drives
System Attributes
System Appl. Services
System Defaults
Peer Systems
Server Attributes
Services
Datasets
MKF Databases
Performance Tuning
WorkFlo Mgmt. Services
Procedures
Select a procedure to run:
Add a printer
Delete a printer
Automatically configure storage library
Manually configure storage library
Delete a storage library
Add a storage drive
Delete a storage drive
Run
Help
IMS
EDIT mode

Note If your system has a workgroup Image Services license, some screens may not appear as shown in this document.

4 Select the *Add an Application Server* option from the list of procedures, and click the *Run* button.

Note Refer to *FileNet Image Services - System Configuration Editor* online help when completing the following fields.

5 In the next dialog box, enter the name of the Application server and click *Next*. This name is user defined. It can be whatever you want.

6 Enter the network address for the Application server, and click *Next*.

7 Enter the Network Name for the server. This field is optional. Enter the network name, or leave blank, and click *Next*. For more information, see the System Configuration online help.

8 After completing the *Add an Application Server* procedure, verify that you entered the information correctly.

To verify, click on the *Network Addresses* tab in the *System Configuration Editor* window. You should see the Application server listed.

9 If you want to add another Application server, click on the Procedure Tab in the System Configuration Editor window and repeat **Step 4** through **Step 8**.

Add Services

Use the steps in this section to add Application Services to your Application server. You can add one or more of the following Application Services:

- Batch Entry Service
- Cache Service
- Print Service
- Structured Query Language (SQL) Service
- WorkFlo Queue Service

- VWService

  To add a VWService to the server, see the installation handbook for your Process Engine platform for instructions.

Note Although ICR Service appears in the list of services to add, ICR is NOT SUPPORTED in this release.

Add a Batch Service

1. From *FileNet Image Services - System Configuration Editor* window, click on the *Procedures* tab.
2. Select *Add a Service to a Server* from the list of *Procedures and* click *Run.*
3. Click on the domain name of the Application server.
4. Choose *Batch Services* and click *OK.*
5. Enter the dataset path. (e.g., D:\FNSW\dev\1\cache0)

Note The path must be on the Application server, NOT the root/index server.

6 Respond to the *Do you want to use fast batch committal?* prompt by clicking *yes* or *no*. If you accept fast batch committal, you will accept the defaults. If you want, you can change the configuration later.

Note If fast batch committal is enabled, you cannot use cluster indexes. See the ***System Administrator's Handbook*** or the *System Configuration Editor online Help* for more details on fast batch committal and clustering.

7 You are prompted for the number of BES commitment processes. Choose 2 (the default) or *4*.

8 If you want to add more services, continue to the next appropriate procedure below. If you don't want to add any more services, skip to **"Exit the FileNet Image Services System Configuration Editor" on page 176**.

Add a Cache Service

If you have added Batch Services, you do not need to perform this procedure.

1. From *FileNet Image Services - System Configuration Editor* window, click on the *Procedures* tab.
2. Select *Add a Service to a Server* from the list of *Procedures*, and click *Run*.
3. Click on the domain name of the Application server.
4. Choose *Cache Services*. Click *OK*.
5. If you want to add more services, continue to the next appropriate procedure below. If you don't want to add any more services, skip to **"Exit the FileNet Image Services System Configuration Editor" on page 176**.

Add an SQL Service

Follow the steps below to install an SQL Service.

Note If you add an SQL Service to this Application server, DB2 client software is required. Before beginning this procedure, make sure that the DB2 client software has been installed on the Application server.

1. From *FileNet Image Services - System Configuration Editor* window, click on the *Procedures* tab.
2. Select *Add a Service to a Server* from the list of *Procedures and* click *Run.*
3. Select the server to add the SQL Service to, and click *Next*.
4. Select *SQL Services* from the list of services that appear, and click *Next.*

Note If DB2 passwords have already been set using the “Add WorkFlo Queue Service” procedure, prompts for **Step 5** - **Step 14** will not be appear. In this case, skip to **Step 15 on page 171**.

5 Enter the DB2 password for user f_sw, and click *Next.*

6 Enter the password for user f_sw again, and click *Next.*

7 Enter the DB2 password for user f_maint, and click *Next.*

8 Enter the password for user f_maint again, and click *Next.*

9 Enter the DB2 password for user f_sqi, and click *Next.*

10 Enter the password for user f_sqi again, and click *Next.*

11 Enter the DB2 password for user f_open, and click *Next.*

12 Enter the password for user f_open again, and click *Next.*

13 Enter the DB2 database name. This name is user defined. It can be whatever you want up to 8 characters in length.

14 Enter the location of the DB2 user table space, or accept the default, and click *Next*.

15 If you want to add more services, continue to the next appropriate procedure below. If you don't want to add any more services, skip to **"Exit the FileNet Image Services System Configuration Editor" on page 176**.

Add a WorkFlo Queue Service

Follow the steps below to add a WorkFlo Queue Service.

Note If you add a WorkFlo Queue Service to this Application server, DB2 client software is required. Before beginning this procedure, make sure that the DB2 client software has been installed on the Application server.

1 From *FileNet Image Services - System Configuration Editor* window, click on the *Procedures* tab.

2 Select *Add a Service to a Server* from the list of *Procedures and* click *Run.*

3 Click on the domain name of the Application server.

4 Choose *WorkFlo Queue Services.*

Note If DB2 passwords have already been set using the “Add SQL Service” procedure, promtps for **Step 5** - **Step 14** will not be appear. In this case, skip to **Step 15 on page 173**.

5 Enter the DB2 password for user f_sw, and click *Next.*

6 Enter the password for user f_sw again, and click *Next.*

7 Enter the DB2 password for user f_maint, and click *Next.*

8 Enter the password for user f_maint again, and click *Next.*

9 Enter the DB2 password for user f_sqi, and click *Next.*

10 Enter the password for user f_sqi again, and click *Next.*

11 Enter the DB2 password for user f_open, and click *Next.*

12 Enter the password for user f_open again, and click *Next.*

13 Enter the DB2 database name. This name is user defined. It can be whatever you want up to 8 characters in length.

14 Enter the location of the DB2 user table space, or accept the default, and click *Next*.

15 If you want to add more services, continue to the next appropriate procedure below. If you don't want to add any more services, skip to **"Exit the FileNet Image Services System Configuration Editor" on page 176**.

Add a Print Service

1 From *FileNet Image Services - System Configuration Editor* window, click on the *Procedures* tab.

2 Select *Add a Service to a Server* from the list of *Procedures and* click *Run.*

3. Click on the domain name of the Application server.

4. Choose *Print Services*. You will be asked if you want to add print services. Click *Yes*.

5. Click on the *Procedures* tab in the *FileNet Image Services - System Configuration Editor* window.

6. Choose *Add Printer*.

7. You will be asked if this is the default printer you are adding. If it is, click *Yes*. If you are not adding the default printer, click *No*.

8. Enter the printer name, which is user-defined.

9. Enter the NCH printer name (for example, LJ4M).

10. Enter the network address for the printer (for example, 125.0.85.245).

11. Select the paper printer size.

12. Select the printer eject tray. The default is *Default*.

13 You are prompted about adding additional printers. Repeat steps 7 through 13 to add more printers as necessary.

14 If you want to add more services, continue to the next appropriate procedure below. If you don't want to add any more services, skip to **"Exit the FileNet Image Services System Configuration Editor" on page 176**.

Add VWService

For instructions on adding a VWService, see the installation handbook for your Process Engine platform.

Note If you add a VWService to this Application server, DB2 client software is required. Before beginning this procedure, make sure that the DB2 client software has been installed on the Application server.

Continue to the next section to **"Exit the FileNet Image Services System Configuration Editor"**.

Exit the FileNet Image Services System Configuration Editor

When you exit the System Configuration Editor, be sure to save your changes.

1. Select the *Exit* option from the File pull-down menu in the System Configuration Editor window.
2. When prompted to save your changes, click the *Yes* button to save the configuration and exit the System Configuration Editor.

Reboot the Server

In order for the configuration changes you made in the preceding procedures to take effect, you must restart the Image Services on the root server.

1. Reboot the server.
2. After the server reboots, logon as **fnsw**.

Configure the Application Server

Perform the steps in this section and its sub-sections on the Application server.

It is now necessary to build the Application server's configuration files and initialize the server. The same version of Image Services software must already be installed on the Root/Index server and the Application server.

Note Make sure FileNet Software is running on the Root server, and *not* on the Application server.

Build and Initialize the Application Server

1. On the Application server, logon as **fnsw**.
2. Open an Command Prompt window, and type in the following command to build the system configuration files:

   fn_build -a

The **fn_build** program will generate configuration files used by the components of the Image Services software. Each file is produced in two steps. First a temporary file is produced with a *.new* extension. Then, if there is a difference between the *.new* version and the existing version, the *.new* version of the file is copied over the existing version of the file. (In addition, **fn_build -a** checks the validity of the software license.)

IMPORTANT! This step is extremely important because it gererates a special file that fn_util init needs when it's run in the next section

3 Make sure **fn_build** ran successfully by checking that no errors have occurred.

Initialize FileNet Databases

1. As **fnsw**, initialize the appropriate databases.

2. To initialize the index database and all the MKF databases (includes permanent, transient, and security databases), enter the following command at the Command Prompt:

   fn_util init

   This process may take a while (a minimum of 10 minutes without any feedback to the user); the larger the datasets, the longer the wait.

Note You can monitor the progress of the initialization by viewing the init.log file in a command prompt window. The directory location of this file is, \fnsw_loc\logs\fn_util\fn_util.log

Verify FileNet Dataset Permissions (Optional)

Use this procedure to verify or set your FileNet dataset permissions.

Note If the FileNet datasets reside on a different disk than the FileNet Image Services software, you must set the permissions.

1. Open *Windows Explorer.*
2. Select a directory containing a FileNet dataset.
3. Select Security and set the following permissions:

Group	Permissions
Administrators	Full Control
Everyone	Read
fnadmin	Full Control
fnop	Read & Execute and Write

4. Repeat steps 2 and 3 for all datasets affected.

Bring Up FileNet Software

1 Reboot the Application server.

Note The time needed for the shutdown/reboot process varies for each system.

2 Logon to the Application server as **fnsw**, if you aren't already.

3 Locate the FileNet Image Services Server Applications window, and double-click on the *Task Manager* icon.

4 Once you see the TM_daemon.exe process message appear under the *Process* column, bring up the FileNet event log window by clicking on the *Monitor* pull down menu and selecting the *Event Logs...* option.

5 From the Event Logs window, enable the event window to be refreshed whenever messages are logged by clicking on the *Display* pull down window and selecting the *Dynamic* option.

6 To bring up the FileNet software, return to the FileNet Task Manager window and click on *Start*. The system will display messages in the Current Status pop-up window as FileNet software is being started up.

7 When the FileNet software is up and the *Close* button is highlighted, click on the *Close* button to close the Current Status window.

8 View the *Event Log* window to make sure there are no error messages.

Appendix B – Adding Additional Storage Library Servers

This appendix describes how to install and configure multiple Storage Library servers on your FileNet Windows Server system. It is structured for use with some of the procedures already documented in the main body of this document, and where necessary, it references procedures that you must perform.

You can use this procedure to add Storage Libraries to a brand new Windows Server System, or to an existing system where you want to add more storage libarary servers.

Note If this is a brand new system, perform the procedures in this appendix after you have installed and configured the Root/Index server and have verifying that it is functioning properly.

Overview

Use this appendix and repeat the procedures for each Storage Library Server that you intend to add.

Note the following:

- You can add addtional Storage Library Servers on either a Combined or Dual server system.
- You **do not** need to install RDBMS software on any of the Storage Library servers you are adding

Multiple Optical Library Server Uses

The portion of the FileNet Image Services software that files and retrieves document images is known as Storage Library Services. This software controls every activity in the Optical Disk Library to make sure that all documents are stored and retrieved from the optical disks in an orderly manner. Storage library services can be added to any system on a Combined server, Dual server, or multi-server installation. The Storage Library server keeps track of the name and location of every

document stored in the Optical Disk library (or on magnetic disk in a cache-only system). In addition, the server contains one or more magnetic disk drives to store images temporarily before they are permanently written to optical disk.

Multiple Storage Library servers are setup on a system to enhance capacity and/or performance:

- If you already have as many optical disk libraries on a server as possible, or if you cannot physically fit another optical disk library in close enough proximity to the existing server, you may need another server in order to add an optical disk library to the system and to allow the system to handle more disks on-line.
- If the CPU, I/O bus, or magnetic disks on a Storage Library server are already pushed to their maximum throughput, adding a Storage Library server will increase performance. However, if the existing server has not reached its performance limit, adding another Storage Library server will decrease performance slightly because of the overhead of controlling a second server.
- If you have a cache-only system all images remain on the Storage Library servier's hard drive. Because addressing considerations limit

the maximum size of cache on one server to only 4 TB, a cache-only system might need to have more than one Storage Library server

Multiple Storage Library servers are **not** a solution for a disaster recovery plan because you cannot write the primary copy of one document to one Storage Library server and the transaction log copy to another Storage Library server. Both copies will always be written to the same Storage Library server. Note that Database Maintenance will not let you select destination Storage Library servers for a transaction log family.

Prerequisites

To successfully complete the instructions in this document, you must have already performed the following actions for the Storage Library Servers you plan to install:

- Reviewed all **"Installation Prerequisites" on page 19** in chapter one.
- Transferred all necessary information to the **"Installation Worksheet" on page 46** in chapter one.

- Completed all of the steps that are in the subsection **"System Configuration Issues" on page 57** in chapter two.

Return to this appendix after you complete the steps above.

Install IS Software on the Storage Library Server

Refer to **Chapter 3, "Installing FileNet Image Services Software,"** and install the FileNet Image Services software on the storage library server(s) you are installing. Return to this section after you complete the steps in Chapter 3.

Note You do not need to install RDBMS software on the Storage Library server(s).

Configure the Root Server

Server Types Perform the steps in this section and its sub-sections on the Root server, or on each server with a cache.

Commit Documents in the Transient Database (Existing Systems ONLY)

If you are adding a storage library server to an already existing and operational Windows Server system, you must commit documents in the transient database to make sure that the batches not yet committed are not lost while you configure the Storage Library server.

1. Open the FileNet Task Manager and verify that the FileNet Image Services software is up and running.
2. Print or delete all outstanding print requests.
3. Commit all uncommitted documents or batches.
4. Open the FileNet Application Executive and then the Cache Export/Import application.
5. Examine the remaining contents of cache.
6. Examine the statistics on bes_cache, page_cache, and print_cache.

All caches should show no locked objects. These represent uncommitted batches, unwritten images, and pending print jobs.

Note If you have any FAX servers, there will be two locked objects per FAX server in print_cache.

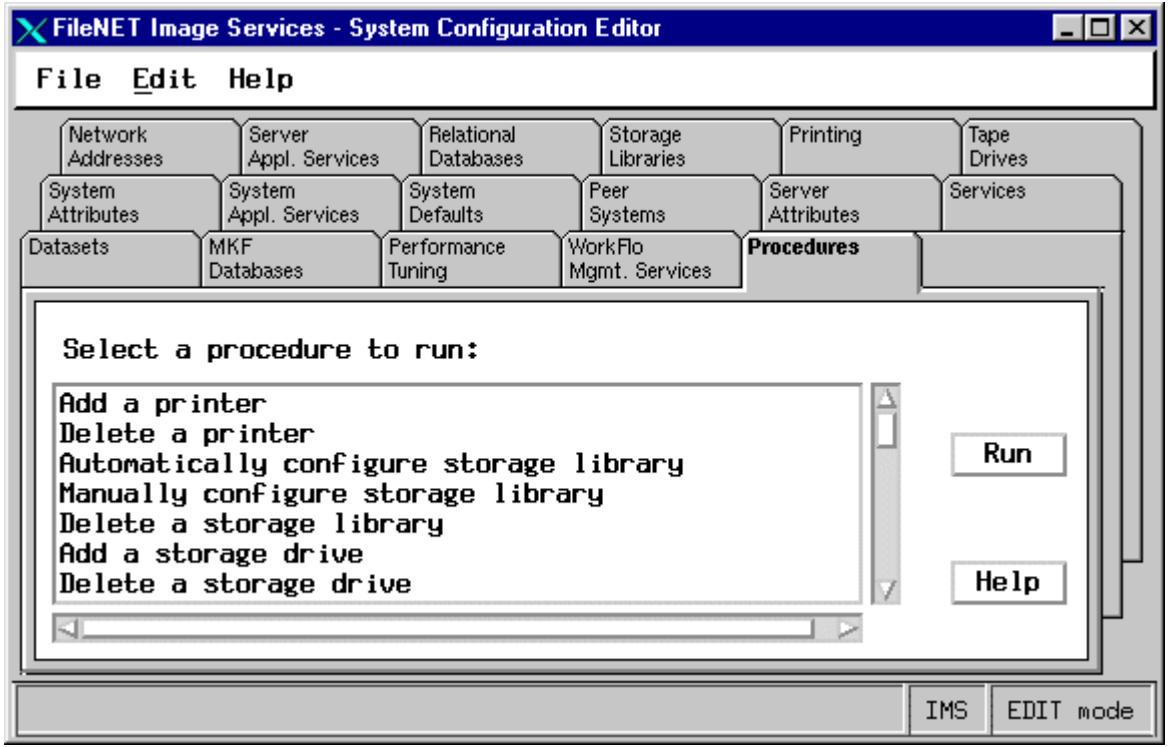
7 Close the Cache Export/Import application, and the FileNet Application Executive.

Add Storage Library Servers

1 As **fnsw** user, open the System Configuration Editor.

2 Verify the two-part domain information is correct. (The two-part domain name is set up as follows: <Domain>:<Organization>.)

The System Configuration Editor window appears with the Procedures tab opened by default.


FileNET Image Services - System Configuration Editor
File Edit Help
Network Addresses
Server Appl. Services
Relational Databases
Storage Libraries
Printing
Tape Drives
System Attributes
System Appl. Services
System Defaults
Peer Systems
Server Attributes
Services
Datasets
MKF Databases
Performance Tuning
WorkFlo Mgmt. Services
Procedures
Select a procedure to run:
Add a printer
Delete a printer
Automatically configure storage library
Manually configure storage library
Delete a storage library
Add a storage drive
Delete a storage drive
Run
Help
IMS
EDIT mode

3 Select Add a Storage Library server from the Select a procedure to run: listbox and click *Run*.

Note Use online help when completing the following steps.

4 Enter the name of the Storage Library server. The server name of the storage library server is user defined. Click *Next*.

5 Enter the network address of the Storage Library server (refer to the **"Installation Worksheet" on page 46**). Click *Next*.

6 Enter the network name for the Storage Library server, and click *Next.*

7 Enter the path for the cache partition (default: <drive>:\fnsw\dev\1\cache0).

8 Enter the cache dataset size.

9 Enter the path for the transient database (default: <drive>:\fnsw\dev\1\transient_db0).

10 Enter the dataset size for the transient database.

11 Enter the path for the transient database redo log (default: <drive>:\fnsw\dev\1\transient_rl0).

12 Enter the dataset size for the transient database redo log.

13 Respond to the “Do you want to use fast batch committal?” prompt by clicking *Yes* or *No*. If you accept fast batch committal, you will accept the defaults. You can change the configuration later.

Note If fast batch committal is configured, you cannot use cluster indexes. See the ***System Administrator’s Handbook*** for more details on fast batch committal and clustering.

The maximum document size for remote committals using fast batch is 2.1 GB. See the ***Multi-Committal and Cross-Committal Configuration Handbook*** for more information on remote committal.

---

14 You are prompted for the number of BES commitment processes. Choose *1 - 4*.

15 Enter the path for the permanent database (default: <drive>:\fnsw\dev\1\permanent_db0)

16 Enter the dataset size for the permanent database.

17 Enter the path for the permanent database redo log (default: <drive>:\fnsw\dev\1\permanent_rl0).

18 Enter the dataset size for the permanent database redo log.

19 After the procedure has been completed, do the following to make sure you have entered the information correctly:

- Click on the Network Addresses Tab in the System Configuration Editor window; you should see the Storage Library server listed.
- Click on Server Application Services Tab; you should also see the Storage Library server listed.
- Click on the Dataset Tab to see the datasets you added to the Storage Library server including cache0, transient_db0, transient_rl0, permanent_db0, permanent_rl0.

20 If you are adding another storage library server, repeat **steps 3** through 18. Otherwise continue to the step below.

21 Exit the System Configuration Editor and save your changes.

Connect Storage Library Device(s)

Use this procedure to connect your storage library devices.

Note Before performing this procedure, make sure that the SCSI card is not configured as a bootable device.

1. Logoff the Storage Library Server, and turn the server off.
2. Connect the storage library device, and power the device on.
3. Turn-on power to the Storage Library Server.
4. After the Storage Library Server boots-up, logon as **fnsw**.
5. Open a Command Prompt window, and enter the following command:

   fnddcfg

   Once the command is finished, you will receive a message instructing you to reboot the server to make the changes effective.

6 Reboot the server, and logon as **fnsw** again.

7 Open a Command Prompt window, and enter the following command:

fndev

The physical addresses of all attached storage library device will display on the screen. You should see an output similar to the following:

```
Arm3030 1 3 0 3 0
Sod3040 1 3 0 4 0
```

Note The example above shows the output for one osar and one drive.

8 From the Taskbar, click the *Start* button, point to Programs, and click on the *FileNet Image Services Configuration* icon.

9 From the FileNet Image Services Configuration window, locate and click on the Configuration Editor icon.

10 Verify that the two-part domain information is correct, and click *OK*.

The FileNet Image Services System Configuration Editor window opens with the Procedures tab displayed.

11 From the Procedures tab, select Automatically Configure a Storage Library from the list of available procedures.

12 Click *Run*.

Note If you are configuring an RES template, a dialog box prompting you for the domain name of the peer system will display. Respond to these prompts as appropriate.

13 After you have completed configuring the storage library, exit the FileNet Image Services System Configuration Editor and save your changes.

Start the FileNet Software

Start the FileNet Image Services software on all servers: Root/Index server first, then Storage Library server(s).

Refer to **"Start the FileNet Software" on page 141** in this document. Return to this section after you complete the steps in the section above.

Build Configuration Files on the Storage Library Server

This section assumes that the FileNet Image Services software has already been installed and configured on the Storage Library server. The Image Services version on the Storage Library server must match the version installed on the Root/Index server.

Note You must start the FileNet software on the Root/Index server **before** starting the Image Services software on the Storage Library server.

1. Verify that the FileNet Image Services software is running on the Root/ Index server.

2. On the Storage Library server, logon as **fnsw**.

3. If necessary, shutdown the FileNet software on the Storage Library Server by entering the following command:

   initfnsw stop

4. Build the appropriate configuration files by entering the following command at a Command Prompt:

   fn_build -a

5. Run the following command to initialize the databases:

   fn_util init

   The fn_util init program will initialize the transient and permanent databases on the Storage Library server. (When the fn_util programs are

done, a message displays indicating that the new database partitions are initialized and zeroed out.)

You can monitor the progress of the initialization by viewing the init.log file in a command prompt window. The directory location of this file is, \fnsw_loc\logs\fn_util\fn_util.log

6 On the Combined server, enter the following commands from a command prompt:

nch_tool

listprop OsarServer(x)*
(Where x is the new osar server number.)

See the following example:

```
nch_tool>listprop OsarServer1

Properties for OsarServer1:<domain>:FileNet
(addressList, [172.25.50.24,32769])
(osarService, "Library Service")
(osarDesc,0 2 DocServer:<domain>:FileNet page_cache1:Persistent:FileNet

nch_tool>listprop OsarServer2
Properties for OsarServer2:<domain>:FileNet
(addressList, [172.25.50.127,32769])
(osarService, "Library Service")
(osarDesc,0 3 DocServer:<domain>:FileNet page_cache2:<domain>:FileNet)
```

Note In the example above, OsarServer2 would be the new osar server. On the line begining with: "osarDesc, 0 3 ..." 3 is the number used for the add_osvr command, which you will run in **Step 12 on page 202**.

7 Open the FileNet Task Manager.

From the Taskbar, point to Programs, FileNet Image Services, Server Applications, and click the *Task Manager* icon.

8 Select Backup Mode. This step is necessary to bring up courier.

9 Repeat **steps 7** and **8** on the new Storage Library server.

10 On the Combined server, enter the following command from a command prompt:

fn_util startdb

11 Repeat **step 10** above on the new Storage Library server.

12 On the Combined server, enter the following command from a command prompt:

add_osvr x
(where x is the number you got from the listprop command earlier in this procedure. See the **"Note" on page 201**.)

The add_osvr command creates the family_locator table on the Combined server and updates the family_disk table on the new osar server. When it completes the message, “Program terminated successfully” appears.

Note After running the add_osvr command, there will be a message in the elog which reads, “Run Database maintenance to re-save all media families.” On a new installation of root or Storage Library servers there are no media families, so this message can be ignored.

For more information on the add_osvr, del_osvr, and move_disk commands, see the ***System Tools Reference Manual***.

13 At the new Storage Library server, select *Stop* from the FileNet Task Manager.

14 At the Combined server, select *Restart* from the FileNet Task Manager.

15 At the new Storage Library server, select *Start* from the FileNet Task Manager.

Make System Backups

Backups should be now be made of your system configuration in case something unforeseen occurs. You should do this for the Root, Application, and Storage Library servers.

Refer to **“Make System Backups” on page 149** in this document.

Storage Library Server Utilities (Optional)

This section briefly describes the function and uses of the following Storage Library server utilities:

- **move_disk**, which allows you to move optical disks from one optical disk library to another.
- **del_osvr**, which allows you to remove a Storage Library server from your system.

The utilities described in this section need not be used on any Storage Library server unless a specific need exists. For more information about Storage Library server utilities, refer to the ***System Tools Reference Manual***.

Note For information on MSAR Storage Libraries, see the ***MSAR Procedures and Guidelines*** document.

CAUTION Whenever any change in Storage Library configuration occurs, especially when a Storage Library is deleted, it's extremely important to resave all the media families manually and resolve any errors. See the Database Maintenance chapter of the ***System Administrator's Handbook*** for information on saving media families.

Moving Disks Between Storage Library Servers

Run the **move_disk** utility if you want to move optical disks from an Optical Disk Library attached to your old Storage Library server to an Optical Disk Library attached to your new Storage Library server in order to balance disks equally between each server.

The **move_disk** utility does the following:

- Reads optical disk information from the Storage Library server database where it currently resides.
- Inserts the optical disk information into the destination Storage Library server database.

- Updates the surface locator table to point to the new location of the optical disk.
- Deletes the optical disk information from the source Storage Library server database where the disk previously resided.

To run **move_disk**, follow these steps:

1. Eject all disks to be moved from the Optical Disk Library as described in the “Storage Library Control” chapter of the ***Image Services System Administrator’s Handbook***.

2. Run the **move_disk** utility from the source Storage Library server attached to the Optical Disk Library where the disks currently reside. Type:

   move_disk <surfid 1> ... <surfid*n*> <dest_server_name>

   where **<surfid 1> ... <surfidn>** represents the surface ids and **<dest_server_name>** represents the server id of the Storage Library server attached to the Optical Disk Library to which you want to move the disks.

3 Insert the disks into the Optical Disk Library attached to the destination Storage Library server using Storage Library Control (SLC). This is described in the “Storage Library Control” chapter of the ***Image Services System Administrator’s Handbook***.

Deleting a Storage Library Server

You can delete a Storage Library server using the **del_osvr** utility. This utility removes a Storage Library server from a system and moves references to the optical disks from the deleted Storage Library server to a remaining Storage Library server.

The **del_osvr** utility does the following:

- Checks the Storage Library server(s) for documents not written yet. If it finds any unwritten documents, it notes the problem and terminates. You must then either start the Storage Library server and let it finish the outstanding write_requests, or run **WRT_clean** to remove them. Refer to the *Image Services System Tools Reference Manual* for information about **WRT_clean**.

- Copies all optical disk database information from each Storage Library server to be deleted to the destination Storage Library server. It then deletes this information from the Storage Library server being deleted.

- Updates the family disk information on each deleted Storage Library server to remove all current, future, and previous write surfaces. It adds this information to the destination Storage Library server so that partially full disks will continue to be written. If a partially full disk cannot be added to the destination family's current surfaces because the current surface array is full, a message is logged to the system error log.

- Updates the surface locator and family locator tables. If only one Storage Library server remains, the entries in the surface and family locator tables are deleted. If multiple Storage Library servers remain, the pointer in the surface locator table is changed to point to the destination Storage Library server, and the pointer to the deleted Storage Library server in the family locator table is removed. Optical disks assigned to deleted Storage Library servers will be assigned to the destination Storage Library server. However, families referencing a deleted Storage Library server will have that ref-

erence removed, but will not have a reference to the destination Storage Library server explicitly added. Also, if all the servers referenced by a family are deleted, that family will be changed to reference all remaining Storage Library servers.

Run the **del_osvr** utility from the source Storage Library server (the server that you are deleting) to update the permanent and transient MKF databases on each Storage Library server with the necessary changes.

To use **del_osvr**, perform the following steps:

1. Backup the system to tape.

Note If you get partially through deleting a Storage Library server and have a problem, restoring the backups is the **only** way to return to the original state. There is no other program that can undo an uncompleted attempt to delete a Storage Library server.

2. Make sure there are no pending write requests for the Storage Library server(s) to be deleted. If there are, delete them.

3 Eject all disks to be moved from the Optical Disk Library(s) of the Storage Library server to be deleted.

4 Bring down the FileNet software on all Storage Library servers by entering:

initfnsw stop

5 Run the **fn_util startdb** tool on every Storage Library server to start up the permanent and transient databases by typing the following:

fn_util startdb

6 On each server, enter a command similar to the following:

del_osvr <svrid1> <svrid2> ... <svrid*n*> <dest_server_num>

<svrid1> <svrid2> ... <svridn> are the server ids of the Storage Library servers to be deleted, and **<dest_server_num>** is the destination Storage Library server to move information to from the Storage Library servers being deleted.

Note If the Storage Library server on which optical disks are referenced is not correct, or the Storage Library server's families referenced are not the desired ones after you run the **del_osvr** utility, you may run the **move_disk** utility to move optical disks, and you may also run database maintenance to change families.

7 After **del_osvr** is completed, run **fn_edit** on the Root server to delete the Storage Library server. Be sure to delete the logical cache allocation before removing the station.

8 In the Application Executive, use Database Maintenance to re-save all media families, and resolve any warning or error messages that appear by adding or changing the preferred library information to match the current storage library configuration.

Appendix C – Remote Access Procedures

Remote access is limited to a tty or **telnet** session. So, when FileNet dials into a site, that session is built on what appears to the remote server as only a terminal. Because Remote Access Services (RAS), provides the potential for an interconnection between the customer's network and any network that the RAS client is on, security or configuration concerns must be addressed. RAS can either be configured so that the dial-up clients have access to only the Windows Server, or to the entire network.

TCP/IP protocol must be installed and running for Image Services remote support. The pcAnywhere telnet service which is used to access the character based tools runs over IP like any other telnet implementation. FileNet Customer Service and Support strongly suggests that RAS setup be done after the Image Services installation has been completed and tested. RAS installation will vary slightly depending on the network protocols you have installed. The following sections also assume that the Windows Server has already been setup

as a participant in the local Microsoft Network domain or work group, if that is appropriate to the site.

This appendix contains the following sections:

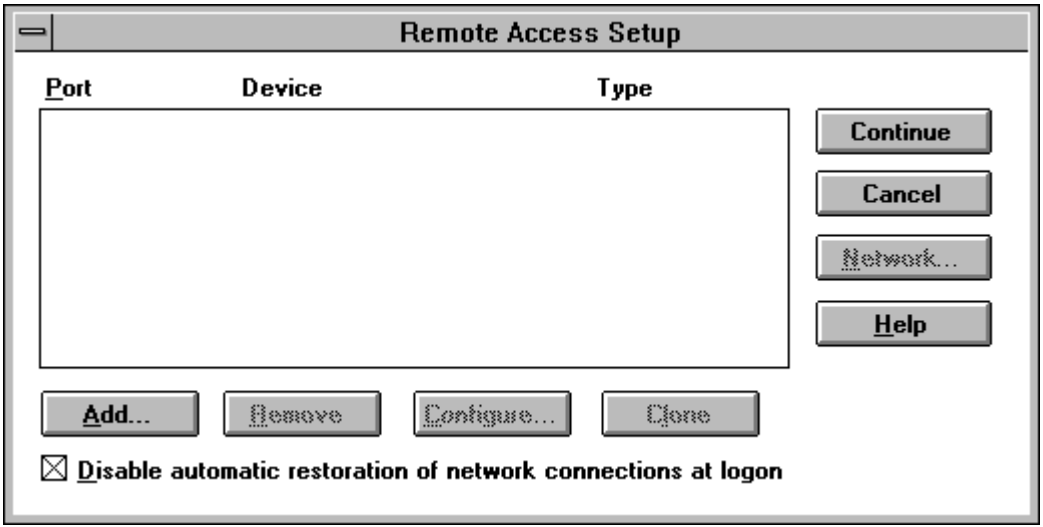
- Adding Remote Access Software
- Granting Remote Access Rights to the FNADMIN User
- pcAnywhere TCP Remote Control Services
- Granting Users Permission to Logon

Adding Remote Access Software

Remote Access Setup configures RAS, creates a Remote Access Service program group, then confirms that installation was successful.

1. Log into the system as **fnsw** or Windows **Administrator**.
2. In Control Panel, choose the *Network* option.
3. In the Network Settings dialog box, choose the *Add Software* button.
4. From the Network Software list, select *Remote Access Service* and then choose the *Continue* button.
5. When prompted for the path to the distribution files, provide the path and choose the *OK* button.

   The RAS files will be copied to your computer. After the files are copied, you will see a Remote Access Setup dialog box similar to the followng.



6 Select the *Add...* button. In the Add Port dialog box, you will see a list of all ports available to Windows Server for RAS. If you have successfully installed an ISDN card, X.25 card, or other device, you should see it in this list.

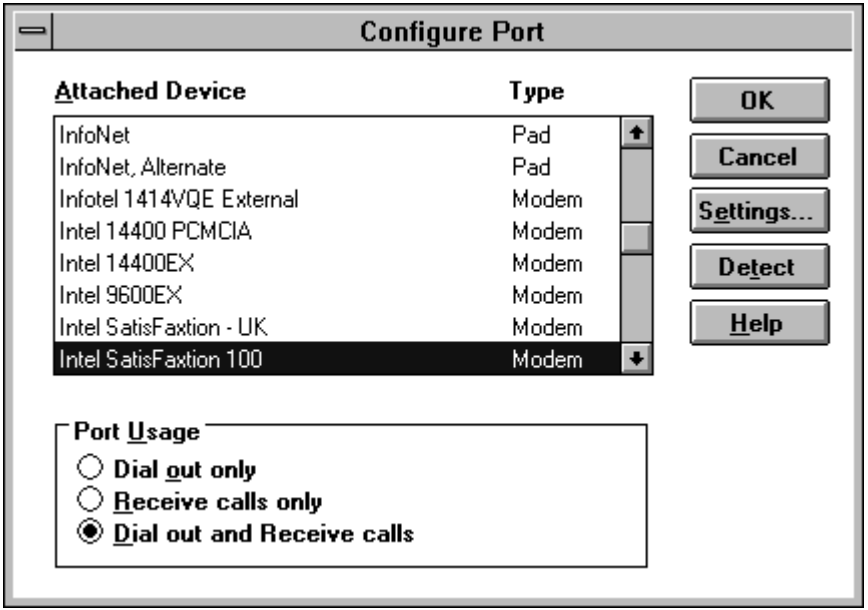
7 Select the port you will use for remote access and choose the *OK* button

8 Remote Access Setup will offer to automatically detect the modem connected to the selected port.

a To manually select a modem, choose *Cancel*.

b To automatically detect the modem, choose *OK.* When a dialog box appears announcing the modem detected, click *OK.*

The *Configure Port* screen displays.


Configure Port
Attached Device
Type
InfoNet
Pad
InfoNet, Alternate
Pad
Infotel 1414VQE External
Modem
Intel 14400 PCMCIA
Modem
Intel 14400EX
Modem
Intel 9600EX
Modem
Intel SatisFaxtion - UK
Modem
Intel SatisFaxtion 100
Modem
OK
Cancel
Settings...
Detect
Help
Port Usage
Dial out only
Receive calls only
Dial out and Receive calls

Note Occasionally, when attempting to detect a modem, Remote Access Setup displays a dialog box requiring you to select your modem from a short list of possible modems. This occurs only when Remote Access Setup cannot distinguish between two or more modems.

9 In the Configure Port dialog box, the modem detected will be highlighted.

a If RAS did not detect your modem, or if you chose to manually select the modem, select the device attached to the port from the list.

Note Only supported modems are listed.

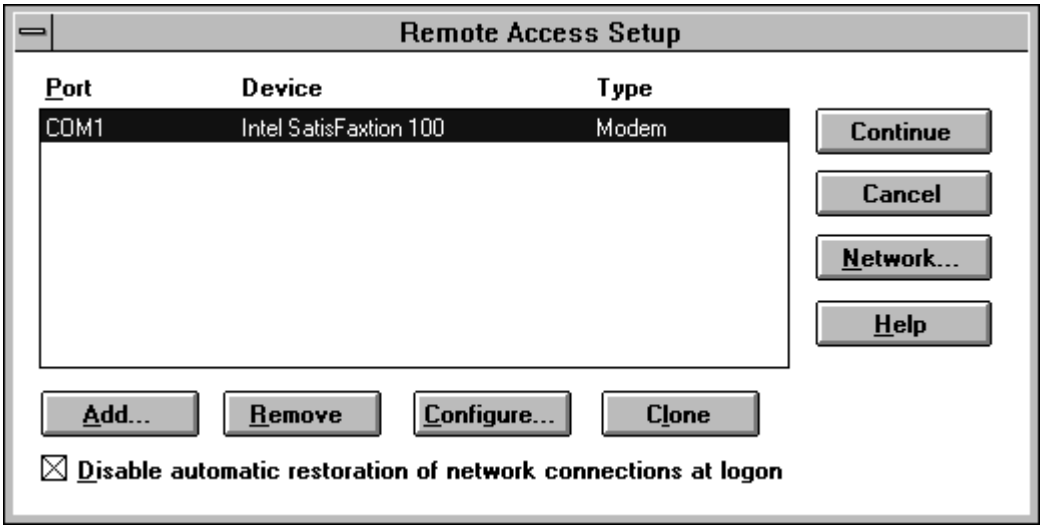
b If you are adding a port after initial RAS installation, you can use the *Detect* button to automatically detect the modem connected to the new port.

10 In the *Port Usage* box, choose how the port is to be used. To enable remote support for Image Services, select *Dial Out and Receive Calls* or *Receive Calls Only*.

- *Dial Out Only* - means the computer will be a RAS client only. This choice is NOT currently supported, but FRC is exploring a setup which will allow client only configuration.
- *Receive Calls Only* - means the computer will be a RAS server only.
- *Dial Out And Receive Calls* - means the computer can be a client or server, however, the computer cannot do both at the same time. This choice offers the greatest flexibility.

11 To configure information specific to the type of device attached to the port, select the device and choose the *Settings* button. The default settings are usually ideal.

12 Choose the *OK* button. The Remote Access Setup dialog box reappears.



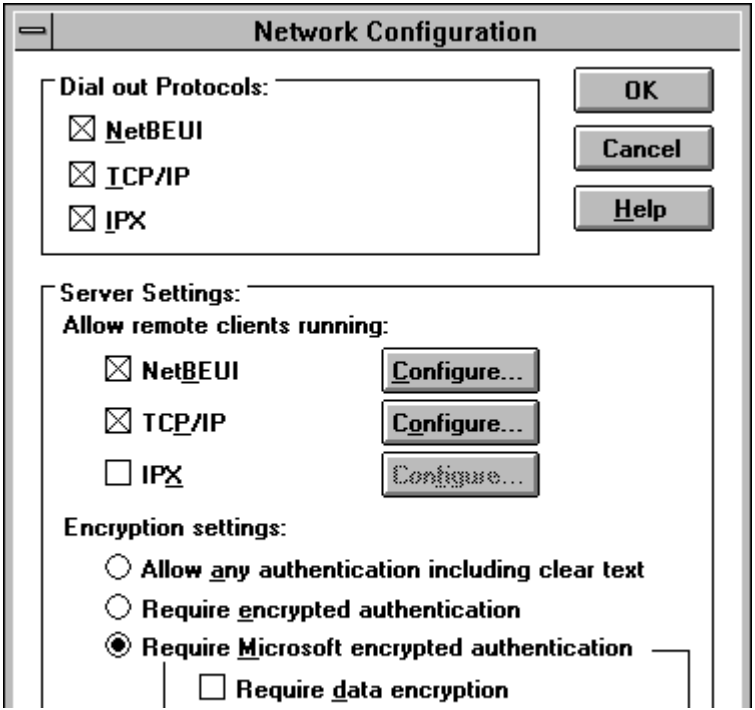
13 In the Remote Access Setup dialog box, configure or reconfigure the ports by highlighting a port and using the buttons along the bottom of the dialog box.

Consult the online *Help* for a description of each button's use. Default settings are usually ideal.

Note The example in the dialog box above is meant for illustrative purposes only. The ports and devices on your system will likely be different

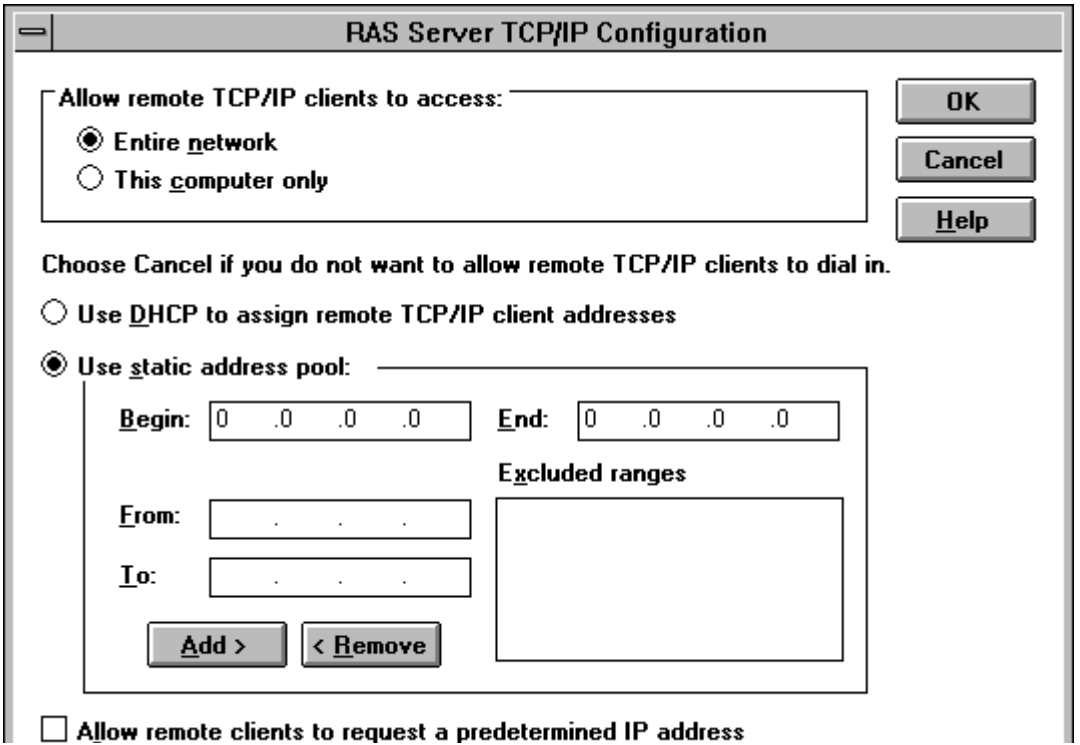
14 Choose the *Network* button to configure the network settings for the port and modem that is highlighted.

You should see a dialog box similar to the following.


Network Configuration
Dial out Protocols:
NetBEUI
TCP/IP
IPX
OK
Cancel
Help
Server Settings:
Allow remote clients running:
NetBEUI
Configure...
TCP/IP
Configure...
IPX
Configure...
Encryption settings:
Allow any authentication including clear text
Require encrypted authentication
Require Microsoft encrypted authentication
Require data encryption

15 In the *Server Settings:* section, make sure that *TCP/IP* is checked, then press the *Configure* button next to it.

The following dialog box appears.


RAS Server TCP/IP Configuration
Allow remote TCP/IP clients to access:
Entire network
This computer only
OK
Cancel
Help
Choose Cancel if you do not want to allow remote TCP/IP clients to dial in.
Use DHCP to assign remote TCP/IP client addresses
Use static address pool:
Begin:
0 .0 .0 .0
End:
0 .0 .0 .0
Excluded ranges
From:
To:
Add >
< Remove
Allow remote clients to request a predetermined IP address

16 In the *Allow remote TCP/IP clients to access:* section of the dialog box, choose either: *Entire Network* or *This computer only.*

- *Entire Network* - allows routing between your entire network and the RAS device
- *This computer only* - allows routing only between the RAS device and this Windows server

The default selection is *Entire Network*. If this is not correct for your system, click the *This computer only* radio button.

17 In the next section of this dialog, choose either:

- *Use DHCP to assign remote TCP/IP client addresses*, or
- *Use static address pool*

Note DHCP is Microsoft's scheme for assigning IP addresses to clients on the LAN or connected through RAS. Consult with the local administrators to determine if DHCP is implemented at a given site. DHCP offers significant benefits if implemented correctly.

18 Skip this step if you have not selected *Use static address pool*.

Enter a range of at least two IP addresses into the static address pool.

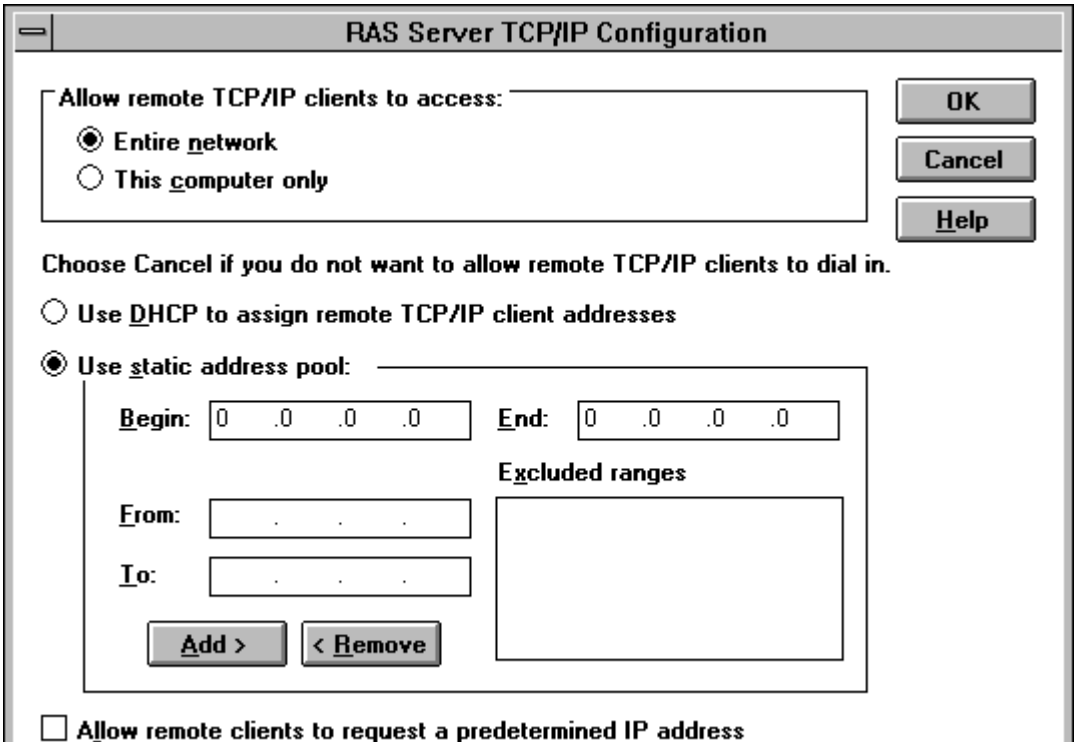
FileNet recommends that the IP address range start right after the last IP address assigned to the Windows Server itself.

For example, if you have a Windows Server with two network interfaces in it, assign the first card 135.0.73.98, the second card 135.0.73.99, and the RAS static pool from 135.0.73.100 to 135.0.73.101.

Note The IP addresses of the network cards should have already been installed and configured. In addition, the pool of addresses must not

conflict with any other devices which might be configured for your network.

Below is an example of a static addresss pool configuration.


RAS Server TCP/IP Configuration
Allow remote TCP/IP clients to access:
Entire network
This computer only
OK
Cancel
Help
Choose Cancel if you do not want to allow remote TCP/IP clients to dial in.
Use DHCP to assign remote TCP/IP client addresses
Use static address pool:
Begin: 0 .0 .0 .0
End: 0 .0 .0 .0
Excluded ranges
From:
To:
Add >
< Remove
Allow remote clients to request a predetermined IP address

19 When you are finished choosing RAS Server TCP/IP Configuration Settings, click the *OK* button.

Note More RAS Server Configuration dialog boxes may appear for other non TCP/IP protocols installed on your computer. If this happens, see RAS online *Help* for information about configuring these other LAN protocols for RAS use.

20 When you are finished setting up the port and network configurations, click the *Continue* button on the Remote Access Setup dialog box.

21 The RAS service will then copy any more needed files from your distribution and pop up a dialog for granting permissions to remote users. Click the *OK* button in the Confirmation dialog box.

22 Click the *OK* button in the Network Settings dialog box. The protocols will be bound to the RAS Service. If your site requires further information to complete the binding, choose the defaults that the system offers during the analysis.

23 Restart your computer for the Remote Access installation to take effect. A new program called Remote Access Service will be created.

For more information on configuring RAS, see RAS online *Help*.

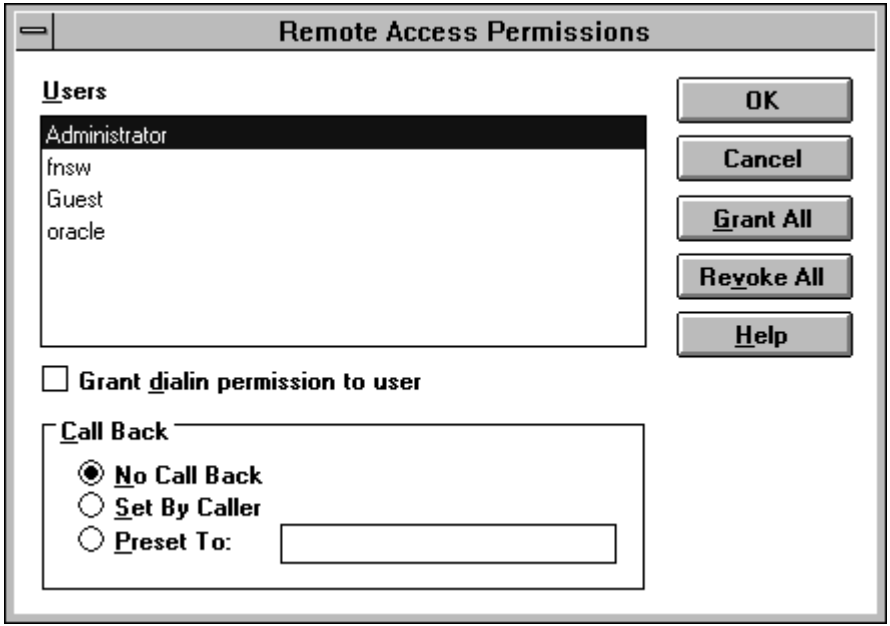
Granting Remote Access Rights to the FNADMIN User

After installing Remote Access software, you must grant Remote Access rights to certain users before they try to connect through Remote Access client software. Without permission users cannot successfully connect to the Remote Access computer, even if the Remote Access client software has been installed on their computers.

1. If you aren't already, log into the system as **fnsw** or Windows **Administrator**.

2. From the *Taskbar*, click the *Start* button, and point to *Programs,* Administrative Tools (common), and click the *Remote Access Admin* icon. The *Remote Access Permissions* dialog box opens.

3. From the *Users* menu, choose *Permissions*. The Remote Access Permissions dialog box displays.


Remote Access Permissions
Users
Administrator
fnsw
Guest
oracle
OK
Cancel
Grant All
Revoke All
Help
Grant dialin permission to user
Call Back
No Call Back
Set By Caller
Preset To:

4 Make sure that when the name **fnadmin** is highlighted, the *Grant dialin permission to user* box is checked. You might also want to ensure that the Administrator also has dialin permission. When finished, press **OK**.

For further instructions, choose the **Help** button in the dialog box.

Note Microsoft and FileNet do not recommend granting guest accounts dial-in permission. If you do, be sure to assign a password to the guest account.

pcAnywhere TCP Remote Control Service

Before completing the steps in this section, TCP/IP support must be setup on all Image Services servers where remote accessibility is required.

Complete the steps in this section to install pcAnywhere TCP remote control services.

Note FileNet has licensed pcAnywhere from Symantec Corporation for use in FileNet products but this license does not extend to FileNet customers. In order to use pcAnywhere, customers must obtain a license for this product from Symantec Corporation.

Why Use pcAnywhere?

The FileNet Customer Service and Support division has determined that there is a need for a reliable and robust tool that will enable FileNet engineers to remotely manage products that are installed on servers running a Windows Server operating system. The speeds afforded by

current dial-up connections are simply too slow to allow for efficient response.

Although several remote control packages are available on the market, FileNet Customer Service and Support recommends pcAnywhere which provides more timely support and problem resolution.

Installing pcAnywhere will allow field personal and the FileNet Response Center (FRC) to dial into your system, manipulate the controls, and view the display as if they were seated at the computer.

Note In some cases, the Image Services server may not be the most appropriate server to run Remote Access Services. Your particular system requirements may require that the RAS be installed on different server.

Installing pcAnywhere

The pcAnywhere software (Host Version) is contained on the CSS Technical Information CDROM.

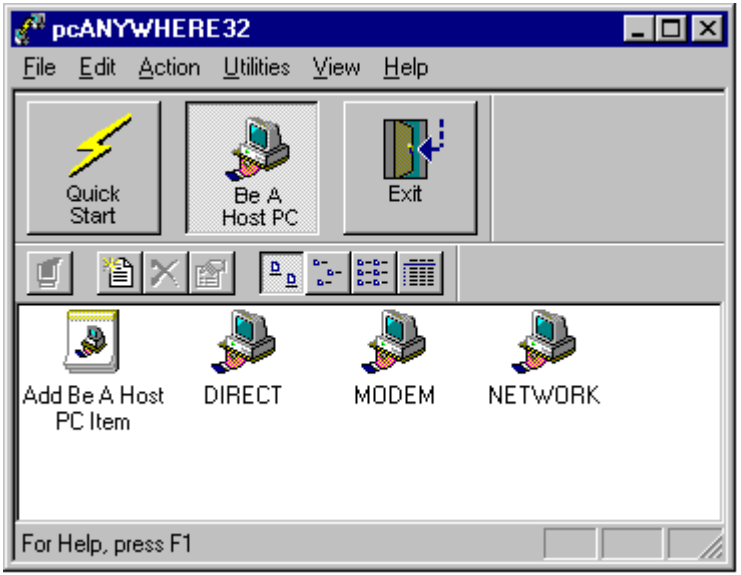
1. Refer to the *Norton pcAnywhere User's Guide* (Chapter 2), and install pcAnywhere on the Windows server(s) that will require remote control capabilities.

2. Accept the installation program defaults for the modem and direct cable connections.

Note Although the installation program defaults may not be used directly on the server you are configuring, accept them anyway. Accepting these defaults should not affect the outcome of the configuration.

3. When the installation is complete, start the pcAnywhere application.

   The pcAnywhere window opens.



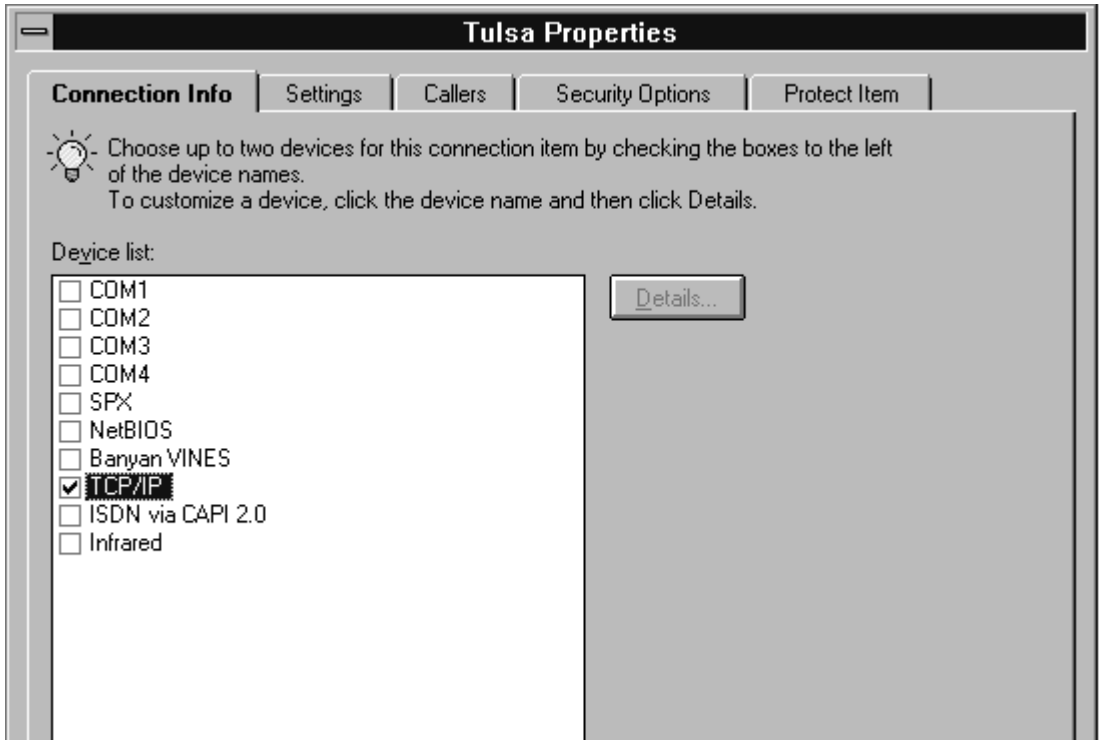
4 At the top of the pcAnywhere window, click the *Be A Host PC* button.

Note Since this server will be controlled by a remote PC, it is considered a host.

5 In the pcAnywhere window, right click the *NETWORK* icon.

6 A popup window appears. Click the *Properties* option in this window.

The Properties dialog box appears with the *Connection Info* tab opened by default.


Tulsa Properties
Connection Info
Settings
Callers
Security Options
Protect Item
Choose up to two devices for this connection item by checking the boxes to the left of the device names.
To customize a device, click the device name and then click Details.
Device list:
COM1
COM2
COM3
COM4
SPX
NetBIOS
Banyan VINES
TCP/IP
ISDN via CAPI 2.0
Infrared
Details...

7 From the *Device list* on the *Connection Info* tab, select *TCP/IP*.

8 Click the *Settings* tab in the Properties dialog box. The *Settings* tab appears as shown below.


Tulsa Properties
Connection Info
Settings
Callers
Security Options
Protect Item
Name:
Tulsa
Keyboard/Mouse active during session:
Host and Remote
Restart host computer after session
Minimize host when waiting for a call
Use Windows screen saver when waiting for a call
Launch host at startup
Run as a service
Modem connection callback delay:
10
Seconds

9 If you want to have the pcAnywhere host start when Windows starts up, check the *Launch host at startup* check box.

10 Click *Apply* to have your changes accepted, and then the click the *OK button.*

11 Reboot the server so the changes you made can take effect.

Note By default, the pcAnywhere service is set to startup *Manual* in Administrative Tools/Services after you install it. If you change this setting to startup *Automatic*, it may increase the time required to shutdown the Windows operating system by approximately 2 minutes.

Granting Users Permission to Logon

You now need to give proper permissions to those users you want to be able to perform remote logons.

1. If you aren't already, log into the system as **fnsw** or Windows **Administrator**.

2. Run the *User Manager for Domains* program located in the *Administrative Tools* program group.

3. If you want to allow users to logon remotely to the system on which you are running Advanced Server, make sure the tile bar on the User Manager for Domains window reads "User Manager -_Your_Domain_ name". If it does not, select the domain name of your system's Domain Controller by selecting the *Select Domain* item in the *User* menu.

4. Select the *User Rights* item in the *Policies* menu.

5. Click the *Show Advanced User Rights* check box, and then scroll the *Right:* pull down list until you get to the *Log on as a service* item.

6 Add the users and/or groups that you want to have remote logon capability.

7 User rights are assigned on a per system basis. On every system you want to allow remote logons, you must edit the user rights for that system. Editing the user rights for the domain affects only the user rights on the domain controllers for that domain. If the server that you have set up to install Image Services is not a domain controller, reference the pcAnywhere documentation for clarification, or contact the FileNet Response Center for specific instructions.