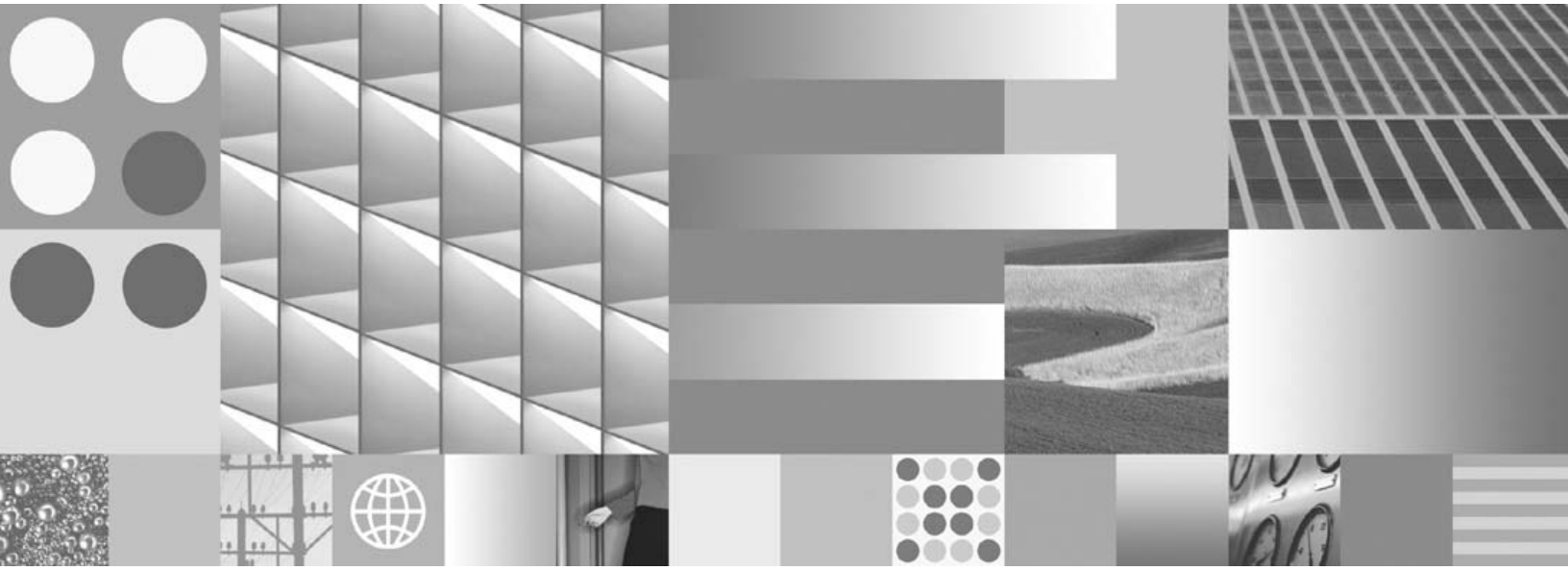
IBM FileNet Image Services

Version 4.1

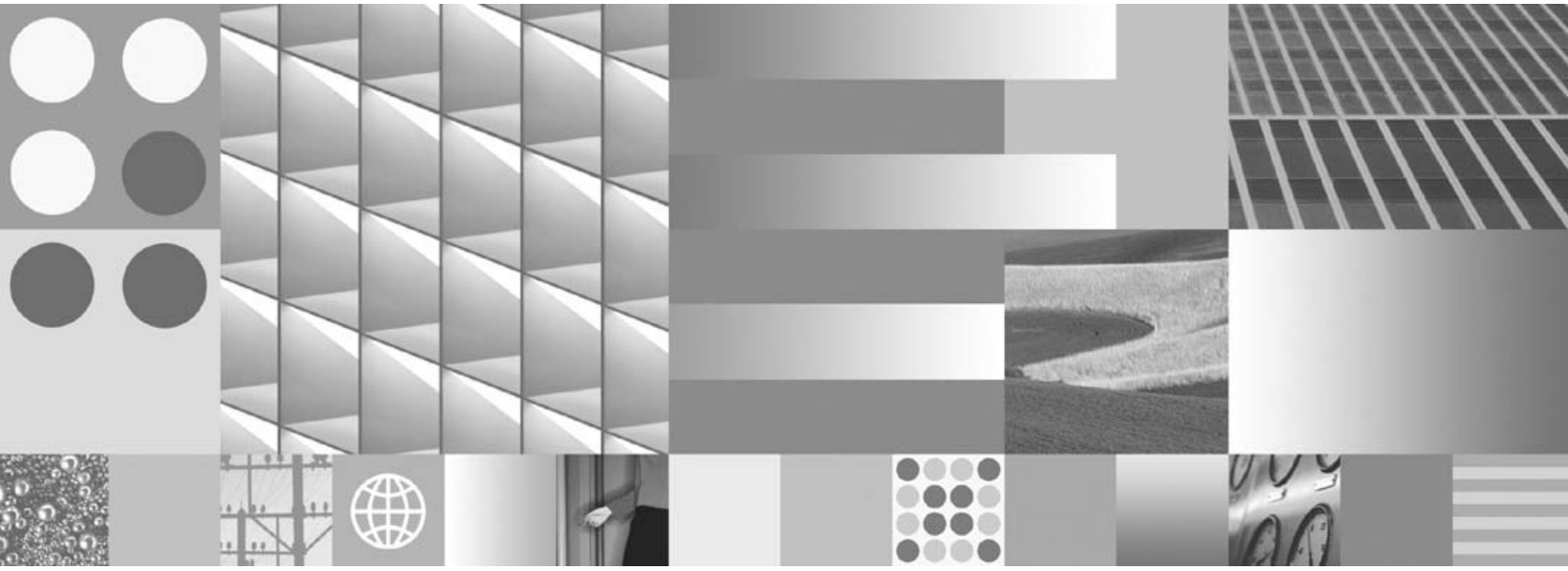


Installation and Configuration Procedures for Windows Servers

GC31-5558-02

IBM FileNet Image Services

Version 4.1



Installation and Configuration Procedures for Windows Servers

GC31-5558-02

Note

Before using this information and the product it supports, read the information in "Notices" on page 285.

This edition applies to version 4.1 of IBM FileNet Image Services (product number 5724-R95) and to all subsequent releases and modifications until otherwise indicated in new editions.

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1
Getting Started

This document describes how to install IBM® FileNet® Image Services Version 4.1 software with either Oracle 9i/10g RDBMS software, Microsoft® SQL Server or IBM DB2® RDBMS software server running the Windows® operating system. It also describes how to configure and initialize FileNet files and databases using initialization and configuration tools.

Overview

You can use the software installation and configuration procedures in this document to perform the following server-related tasks:

- Installing and configuring Image Services on either a Combined server system, Dual servers system, or Remote Entry System (RES)

- Adding a single Storage Library server to an existing Root/Index server
- Installing and configuring multiple Storage Library servers on an existing system
- Installing and configuring (adding services) an Application server on an existing system

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

Document revision history

IS version	Date	Comment
4.1	June 2008	Documentation refresh. Added tip about missing users and groups in the installer section, updated SSN origin information, Added IS uninstall appendix.
4.1	Nov. 2007	Documentation refresh. Bluewashing. Added MSSQL 2005 information (IS 4.1.1).
4.1	June 2007	Initial release.

Required Skills

Installation by a FileNet Certified Professional (FCP) is recommended. For more information about the FCP program, go to the IBM web site (http://www.ibm.com), Products > Software > Information Management > Training and certification > FileNet Certified Professional Program (FCP). You will need an IBM-issued login name and password to access the Web site.

If an FCP is used, at least **ten days** before the installation, the FCP should contact the Upgrade/Install Assurance Team to schedule the installation and access the team's latest list of current scheduling procedures.

This procedure assumes you have knowledge of:

- Windows Server operating environment
- Windows Server network models
- Text editor such as Notepad

- Windows Server Administrative Tools
- Oracle, DB2 or Microsoft SQL Server

Comments and Suggestions

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

New Features of the IS 4.1 Installation

This release of Image Services includes the following new features:

InstallShield Installer

This release of Image Services incorporates an InstallShield MultiPlatform Installer. Before installing the Image Services software, the Installer performs a series of system configuration checks to verify that the Windows server is ready for the Image Services installation.The Installer gives you two options:

- System Check only
- System Check and Install Image Services

If the Installer detects a problem at any point during the System Check, you can back up to the previous screen, correct the problem, and then go forward to rerun that check again. The Windows server must pass the Installer System Check successfully before the it installs the Image Services software.

IBM DB2 Universal Database Software

This release of Image Services supports IBM DB2 Universal Database™ V8.1/V8.2. The DB2 databases are site-controlled and must reside on remote AIX® 5.2/5.3 or Solaris 9/10 servers. For more information, see *Guidelines for Installing and Configuring IBM DB2 Software*.

To access this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

Oracle Database 10g Software

In addition to support for Oracle 9i, this release of Image Services includes support for Oracle Database 10g Standard or Enterprise Edition (32-bit).

Note The Oracle media are not supplied by IBM.

All installations of Oracle are Site-controlled. For more information, see the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers*.

To access this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

Microsoft SQL Server 2005 (IS 4.1.1 and later)

After you install Service Pack 1 on IS 4.1, MS SQL Server 2005 is supported.

Note SQL software media are not supplied by IBM. If you want yo use SQL Server 2005, you need to install SQL Server 2005 SP2 at a minimum.

Refer to the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers* for more information.

To access this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

SLAC Key Installation No Longer Required

In past IS releases, you had to install a Software License Access Control (SLAC) Key that was included with the IS software. Beginning with IS 4.1, this key is installed automatically by the Installer.

Improved Support for Oracle Features

- For Oracle users, Image Services release 4.1 allows you to separate Image Services tables and indexes into different tablespaces.
- Image Services release 4.1 supports Oracle password complexity functionality.

Support for User-defined Passwords

Image Services 4.1 allows you define and manage passwords for f_sw, f_maint, f_sqi and f_open relational database user passwords.

System Serial Number

The System Serial Number (SSN) is no longer supplied with new Image Services systems.

When installing new Image Services systems, you are now required to construct your own SSNs using any combination of numeric digits that you choose. The valid range of SSNs is 1000 through 2147483646.

This identifier is vital to Image Services, as the SSN is included in the metadata of each committed record. Each IS system must have its own unique SSN to configure peer systems in a cross-system committal environment, and to prevent potential problems if media are ever transferred from one IS system to another.

Note Current Image Services systems will continue to use their existing SSNs, which will always be valid.

IBM Customer Service and Support

The latest information concerning your update is available on the IBM Information Management support page (http://www.ibm.com/software/data/support).

You will need an IBM-issued login name and password to access the Web site.

Some of the documents that you can download include the Release Notes for Image Services 4.1, the Release Dependency Spreadsheet, and the Operating System Notes.

Accessing IBM FileNet documentation

To access documentation for IBM FileNet products:

1. Navigate to the Information Management support page (**www.ibm.com/software/data/support**).
2. Select the appropriate IBM FileNet product from the “Select a category” list.

3. From the Product Support page, click **Product Documentation** under Learn.

4. From the Product Documentation page

   a. If necessary, display the list of documents by clicking the Doc Link for the appropriate component product.

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

Release Notes for Image Services 4.1

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

Pay special attention to the fix packs mentioned in the Release Notes.

Release Dependency Spreadsheet

Review the Release Dependency spreadsheet for information that might pertain 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.

Operating System Notes

Review the Operating System Notes for your current version of Windows to determine if any patches need to be installed prior to this Image Services update. The System Administrator is responsible for obtaining and installing these patches.

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.

Minimum Hardware Requirements

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

Server Hardware

- Minimum Processor: 800Mhz Pentium® 32-bit processor
- 512 MB or more memory per CPU

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

- 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

Note Oracle9i and 10g software is compatible with 32-bit Windows servers.

- A DVD drive installed and configured for use on your Windows server.

Server Memory

- Root/Index and Application Servers with Oracle:

  9i/10g - 512 MB memory for each processor in the server.

- Root/Index and Application Servers with DB2:

  512 MB memory or more for each processor in the server.

- Storage Library and Application Servers without Oracle:

  512 MB memory or more for each processor in the server.

Total Disk Space

For FileNet software, minimum datasets:

- At least **1 GB**

These sizes include a 30% growth factor, but do not include space required for the Windows Operating System.

Available File System Space for Image Services Software

The FileNet Image Services software needs the minimum amounts of free disk space in the file systems shown here:

- **500 MB** total space in \fnsw.
- **500 MB** total space in \fnsw_loc

The Installer needs the following amount of temporary space for decompressing files:

- **500 MB** total space in temp

Tip If you don't have enough space in temp, you can direct the Installer to use another directory that has enough space.

Space for RDBMS Software

The amount of disk space required for RDBMS software depends on whether Server or Client software is installed and the products selected.

Refer to the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers* or *Guidelines for Installing and Configuring IBM DB2 Software* for additional information about space requirements for RDBMS software products.

To download these guidelines from the IBM support page, see **“Accessing IBM FileNet documentation” on page 26**.

The SCouT system configuration and output tool can help estimate the actual amount of disk space needed for FileNet and RDBMS datasets on this Image Services system.

Software Requirements

Your system must meet the following requirements to complete this Image Services software installation.

Windows Operating System Software

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

- Windows 2003 SP1 and SP2 (32-bit OS only)
- Windows 2003 Release 2 SP2 (32-bit OS only)

Image Services Software

- **Image Services 4.1 for Windows** (eSD image or software CD). This media contains the Image Services 4.1 software including COLD 4.1 software.

IBM DB2 Universal Database Software

Refer to the *Guidelines for Installing and Configuring IBM DB2 Software* for more information on acquiring and installing the media.

To download this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

Oracle RDBMS Software

Note Oracle 10g software media are not supplied by IBM.

Refer to the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers* for more information.

To download this document from the IBM support page, see **“Accessing IBM FileNet documentation” on page 26**.

SQL RDBMS Software

Refer to the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers* for more information on acquiring and installing MS SQL Server software.

To download this document from the IBM support page, see **“Accessing IBM FileNet documentation” on page 26**.

Communication Software

In order to enable FileNet engineers to remotely manage products that are installed on servers running a Windows 2003 operating system, we recommend you install pcANYWHERE32 software on your server.

Debugger

The debugger program is recommended for Image Services 4.1 and, if present, must be installed on each Image Services server. The debugger enables your service representative to troubleshoot both FileNet software and Windows-related problems.

Server Naming Convention

Properly naming Image Services servers is an important step when setting up your Image Services system. Server domain names can have a maximum of 128 characters and should only contain ASCII alpha-numeric characters and hyphens. Do not use non-alphanumeric or underscore characters.

The reason for this convention is to prevent server names from changing when NCH crosses a router to find a server. When NCH crosses 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 under-score character. In fact, all non-alphanumeric or underscore characters are eliminated. If these characters were in the servers name, the name would not be correctly converted.

Domain Security and Planning

Although Image Services 4.1 can be installed on both Windows 2003 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 2003 domains can be in mixed or native mode.

FileNet Users and Groups

FileNet users and groups must be created on the local machine. To facilitate centralized security, you can create Global Groups on the domain controller and then add the Global Groups to the local FileNet groups.

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.

For information regarding group membership for using IS tools, see the *System Administrator's Handbook*.

To download this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

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 **"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 36**.

   - Each IP address should contain four numbers separated by decimals [for example, 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 a maximum of 10 digits between 1000 and 2147483646.

Note After installation, you can determine your SSN 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 **"Compatible System Information" on page 48**. For information on naming servers, see **"Server Naming Convention" on page 36**.

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 **"Printer Information" on page 50**. For information on naming servers, see **"Server Naming Convention" on page 36**.

6 Configure Remote Access Service (RAS) on your Windows server. RAS will allow your service representative to dial in to your system and perform remote problem diagnosis.

National Language Support

It's important that the character set you select for one product matches the character sets you select for all the others.

Choose the same character system when you install Image Services, the operating system and the relational database software.

And 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/ Oracle 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 Oracle 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 Image Services 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. Choose an ISO character set for Oracle and Image Services that has a corresponding Windows code page.

Related Documentation

As you read this document you may see references to other documentation, or Online Help, that you might need to consult, as shown below.

- *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers*
- *System Administrator's Companion for Windows Server*
- *System Administrator's Handbook*

Note To download IBM FileNet documentation from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

- *FileNet Image Services - System Configuration Editor* Online Help

Note For information on Microsoft or Oracle 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 RDBMS 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 prerequisites are satisfied before updating your software.

Installation Worksheet

This worksheet contains 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)	
System Serial Number (ssn) (Valid range: 1000 - 2147483646)	
NCH Domain Name	
Organization Name	

Important The ssn 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 (for example, ODU, OSAR 96, OSAR 125, and so on)				
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 (for example, Hitachi_II)				
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 analysis report and complete the following table appropriately for your system.

Dataset Name	RDBMS	Required Minimum Size	Actual System Size (Mb)
cache0	Oracle/SQL/DB2	100 Mb	
permanent_db0	Oracle/SQL/DB2	100 Mb	
permanent_rl0	Oracle/SQL/DB2	64 Mb	
transient_db0	Oracle/SQL/DB2	320 Mb	
transient_rl0	Oracle/SQL/DB2	256 Mb	
sec_db0	Oracle/SQL/DB2	64 Mb	
sec_rl0	Oracle/SQL/DB2	64 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.

Create FileNet Users and fnusr Group

Important After you add all the users to the groups, you have to log out and then log back in for the group settings to take effect.

To add the following users and groups, click Start > Control Panel > Users and Groups.

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

Group Name	Required Members	Group Description
fnadmin	<fnsw>, root	Members can perform administrative functions. Administrators must belong to this group to change configuration, perform diagnostics, or restore backups.
fnop	<fnsw>	Members can start and stop all FileNet software (including COLD). Administrators must also belong to this group.

Note If you want to log in as a specific user and want to run the FileNet tools and software, you need to add the user into the **fnadmin** and **fnop** groups.

If Oracle software is installed on the local server, you also need to create a <dba group>, such as **oragrp**.

Group Name	Members	Group Description
<dba group>	<dba user>, <fnsw>	The Database Administration group <dba group> and user <dba user> are created by the Database Administrator. The FileNet user, fnsw, needs to be a member of the <dba group>.

System Cache Information

You must determine the minimum and maximum cache sizes (in%) for the following caches. Refer to your SCouT analysis 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%		
System Print	10% / 20%		
Application Print	10% / 30%		
Batch	10% / 60%		

System Configuration Issues

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

Check/Configure Paging File Size

1. Open the Control Panel, and double-click *System*. The System Properties window opens.
2. Click the *Advanced* tab of the System Properties window and click Performance.
3. In the Virtual Memory section, click the *Change* button. The Virtual Memory dialog box opens.
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 1 GB. 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 60**.

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 *Set* to accept the new settings.

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

8 Click *OK* 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 more efficiently when the system is optimized for network applications.

1 From the Taskbar, click *Start* > Settings > *Network and Dial-up Connections*.

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

   The Local Area Connection Properties dialog box opens.

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

4. Select *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 might 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*.

To download this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

Install Relational Database Software

Server Types

Perform the steps in this section on these servers:

Root/Index server during a Dual server installation.

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

Application server with WorkFlo Queue services or SQL services.

The Database Administrator is responsible for installing the appropriate version of the Relational Database Management software.

Image Services on Windows server supports three Relational Database Management Systems. Skip to the section for the one that is going to be installed on this FileNet Image Services system:

- **"Oracle 9i and Oracle 10g" on page 64**
- **"IBM DB2 V8.x" on page 66**.
- **"MS SQL Server Software" on page 70**

Oracle 9i and Oracle 10g

If the Oracle software and datasets are going to reside on the local FileNet Image Services server, refer to the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers*.

To download this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

The Database Administrator also has the option of installing Oracle software and datasets on a dedicated remote Oracle server. Refer to Chapter 3 of the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers* for further information.

To download this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

Give the Oracle Guidelines document to the Database Administrator.

Oracle Database Information

After Oracle 9i or Oracle 10g has been successfully installed, the Database Administrator must provide the following Oracle variables and tablespace names and sizes to the System Administrator and your service representative.

Oracle Variables

<Oracle Version>: _____ _
$ORACLE_HOME: _____
$ORACLE_SID: _____
<Oracle User name>: _____
<DBA Group>: _____
f_sw password: _____
f_sqi password: _____
f_maint password: _____
f_open password: _____

Tablespace Names and Sizes

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

After you have this information, you're ready to install the FileNet Image Services software. Continue with **Chapter 4, "Configuring FileNet Image Services Software," on page 111**.

IBM DB2 V8.x

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. Refer to the *Guidelines for Installing and Configuring IBM DB2 Software* for further information.
- The ***DB2 client*** software needs to be installed on the AIX Image Services server and linked to the remote DB2 database. Refer the *Guidelines for Installing and Configuring IBM DB2 Software* for details.

To download these documents from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

The Guidelines document can be given to the Database Administrator.

DB2 Database Information

After DB2 has been successfully installed, the Database Administrator must provide the following information to the System Administrator and your service representative.

	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	

Recommended Tablespace	Tablespace Name Actually Assigned	Minimum Size (MB)	Tablespace Size Actually Created
userspace1		200	

f_sw password: _____
f_sqi password: _____
f_maint password: _____

f_open password: _____

DB2 Database Alias Name: _____
(indexdb, for example)

User Tablespace Location: _____
(userspace1, for example)

After you have this information, you're ready to install the FileNet Image Services software. Continue with **Chapter 3, "Installing FileNet Image Services Software," on page 71**.

MS SQL Server Software

SQL Database Information

After SQL has been successfully installed, the Database Administrator must provide the following information to the System Administrator and your service representative.

f_sw password: _____
f_sqi password: _____
f_maint password: _____
f_open password: _____

After you have this information, you're ready to install the FileNet Image Services software. Continue with **Chapter 3, "Installing FileNet Image Services Software," on page 71**.

3

Installing FileNet Image Services Software

This chapter explains how to Install the Image Services software. It covers software installation issues that include:

- Verifying links to the database
- Installing FileNet Image Services software
- Verifying TCP/IP parameter settings

Note If you want to log in as a specific user to run the FileNet tools and software, you must add this user to the **fnadmin** and **fnop** groups.

Check the Link to the Remote Oracle Database

Server Types

Perform the steps in this section only on **servers with Oracle Client software**.

If the Oracle database is located on a remote server, set a system environment variable, **LOCAL equals**, to the GLOBAL_DBNAME set in the tnsnames.ora file. Check the connection between the Oracle Client and the remote Oracle database.

Verify that the internal Oracle networking is active and functional, by entering an sqlplus command in this format:

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

For example, you might enter:

sqlplus sys/<sys_password>@Michigan_IDB.world

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

Tip As a double-check, you can enter:

tnsping Michigan_IDB.world

Check the Link to the DB2 Database

Server Types Perform the steps in this section only on **servers with DB2 Client software**.

Since the DB2 database is located on a remote AIX server, use the Command Line Processor (CLP) to check the connection between the DB2 Client and the remote DB2 database.

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

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.

Check the Link to the Remote SQL Server Database

Server Types

Perform the steps in this section only on **servers with SQL Server Client software**.

If the SQL Server database is located on a remote server, check the connection between the SQL Server and the remote Oracle database.

Verify that the remote SQL Server is a trusted SQL. That means you can use Windows authentication to connect form an IS server to the remote SQL Server. This is done by entering a command in this format:

```
osql -E -S <remote server>/<instance_name>
```

For example, you might enter:

osql -E -S hawaii/volcano

If there are no errors, the connection is working successfully.

Run the Installation Installer

Server Types

Perform the steps in this chapter on **all servers**.

If you're installing a multi-server system, verify the Root server is installed and running first.

The IS Installer performs two tasks.

- It runs a System Check to verify configuration prerequisites.
- It installs the Image Services software.

You can choose to run both, or just the System Check only.

Note The Image Services software can be running when performing only the System Check. To run both the System Check and the installation Installer, the FileNet Image Services software must not be running.

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

- Pop-up windows on your screen.
- Report and log files in the \fnsw_loc\logs\install\ directory.

Note COLD 4.1 is included on the Image Services eSD image or software CD. However, you must be licensed to use the COLD application.

Launch the Image Services Installer

The Image Services Installer can be run in graphical or silent mode.

- Graphical mode is the default graphical interface and is described later in this section.

- Silent mode displays nothing on the screen while the installer is running. The user should review the Silent install log file for access to the progress and results of the installation.

1 Log on as the local Windows **Administrator**.

2 Load the **Image Services 4.1 for Windows Server** eSD image or software CD.

3 **For Silent Installation only**, locate the appropriate option.txt file. The option file contains the standard responses to the installer's prompts. Copy the file to a local directory on your server. (You can rename it to something shorter, like **opt.txt**.) Use your preferred text editor to make any appropriate changes and save the file. The options and their default values are fully described in the file.

4 Locate the installer executable on the eSD image or software CD.

- In graphical mode run:

  is_4.1.0_win.exe

- In console mode run:

  is_4.1.0_win.exe -console

- In silent mode - If you copied and modified the option.txt file, the command might look like this:

  is_4.1.0_win.bin -silent -options <drive>:\tmp\opt.txt

  where \tmp\opt.txt is the location of the text file you modified. Specify its full path on the command line. For example, "... -options C: \fnsw_loc\tmp\opt.txt".

  If you do not specify -options and the file path, the installer uses the standard defaults from the option.txt file.

Note If you run the System Check in silent mode, check the log file in \fnsw_loc\logs\install\4.1.0\ to determine the results. The name of the log file is IS_4.1.0.log.

If you determined earlier that the \tmp directory does not have enough space, specify an alternate directory. Add

-is:tempdir <directory> to the command line to override the default directory, as long as the <directory> you specify already exists. This optional temporary directory must be outside the fnsw directory structure. For example, you might enter:

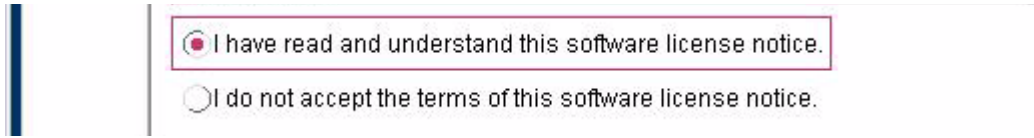
```
is_4.1.0_win.bin  -is:tempdir othertmp
```

where othertmp is the specific temporary directory you want to use.

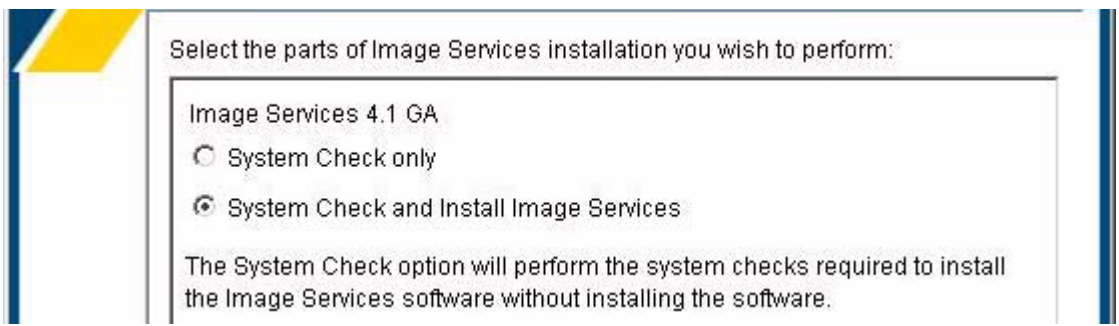
5 In graphical mode, you'll see the Welcome screen. It might take a few minutes to display.


Image Services
Welcome to the Installer for
FileNet Image Services
The installer will install a fresh copy of Image Services 4.1 GA on your computer.

6 Read and accept the Notice to End Users. IS 4.1.1 users should skip this step.



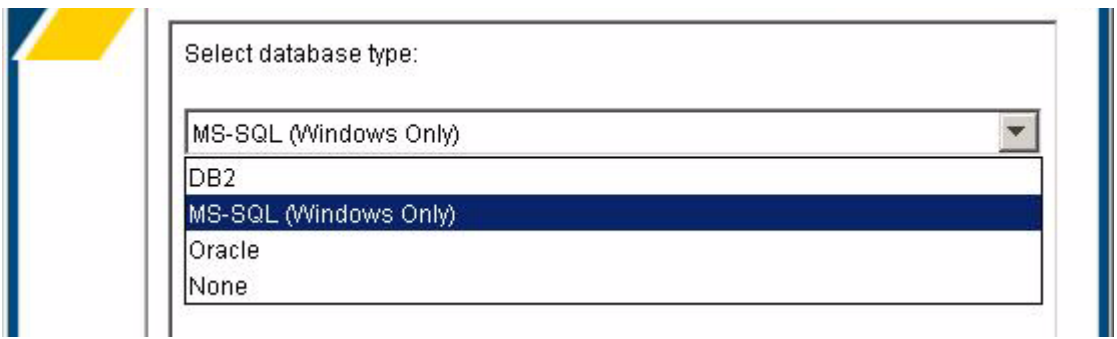
7 Select the parts of the Image Services Installation you want to perform. Run either the **System Check only** or the **System Check and Install Image Services**.



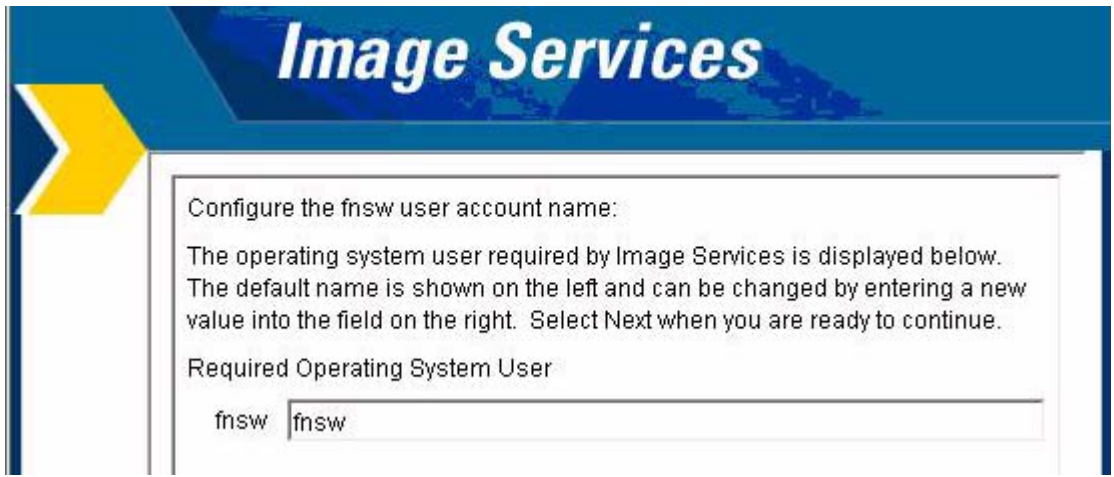
Select the appropriate radio button and click **Next**.

- If you select **System Check only,** skip to **Step 13 on page 87**.
- If you select **System Check and Install Image Services,** continue with the following steps.

8 On the Select database type screen, select the type of relational database installed on this server. If this is a Storage Library server or an Application server without an RDBMS, select None.



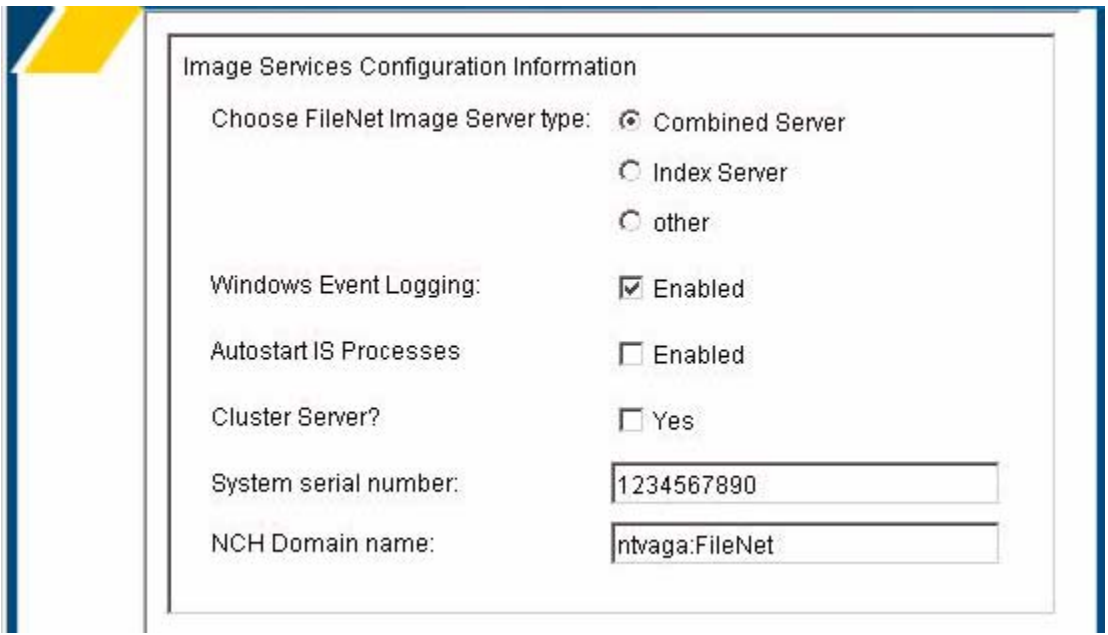
9 To configure the FileNet software user account name, enter the name of the user account you created earlier for the FileNet software user, such as **fnsw**.



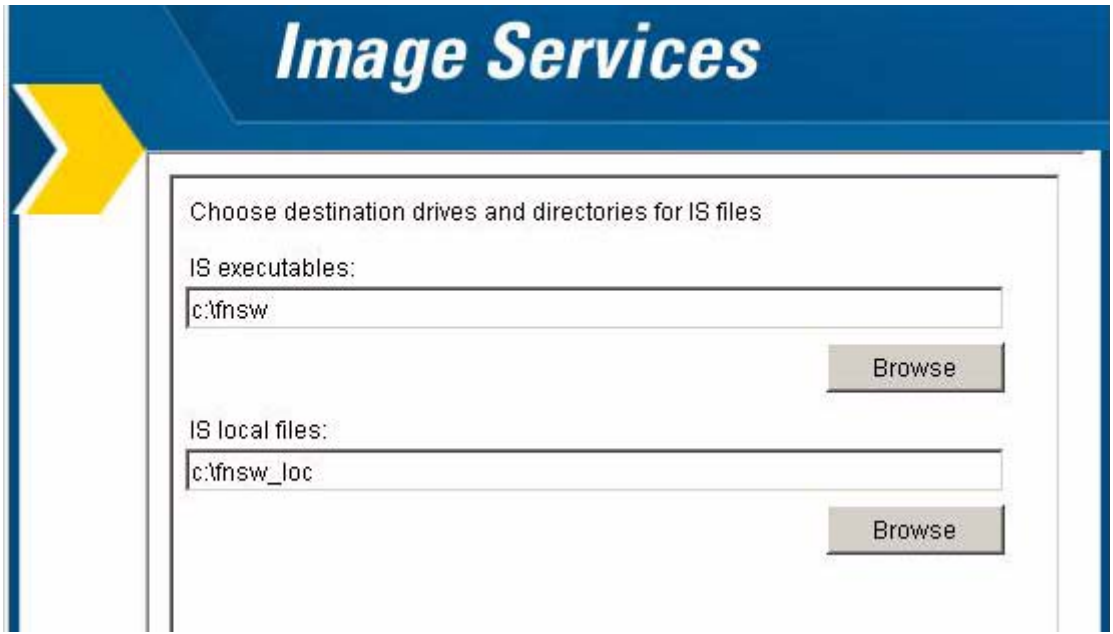
10 Enter the password.

The installer will check for the existence of this user and the default IS groups later in the installation. If the user or the groups do not exist, the installer will not install the IS software.

11 Select the server type, enable options and enter the serial number and the NCH Domain name.



12 Choose the destination drives and directories for the IS files.



13 During the System Check, the Installer verifies the status of server characteristics in these categories:

- Hardware checks
- Operating System checks
- FileNet users and groups

The same checks are performed for both the **System Check only** and the **System Check and Install Image Services** options. Items in the status column are color coded to indicate:

- **Green** indicates the check has passed.
- Yellow indicates that the item has failed but the installer can continue
- **Red** indicates that a check has failed and the installer cannot continue

Some Installer System Checks produce only warnings while others prevent the installation of the Image Services software:

Condition	Severity
Not logged on as superuser	Will prevent install
Insufficient file system space	Will prevent install
Insufficient swap space	Warning only
Incompatible host name	Will prevent install
Incompatible O/S	Will prevent install
Missing debugger	Warning only
Kernel parameter out of range	Warning only
Missing FileNet user/group	Will prevent install
Incorrect FileNet user/group membership	Will prevent install
Image Services running	Will prevent install

Hardware Checks

The first System Check screen displays:

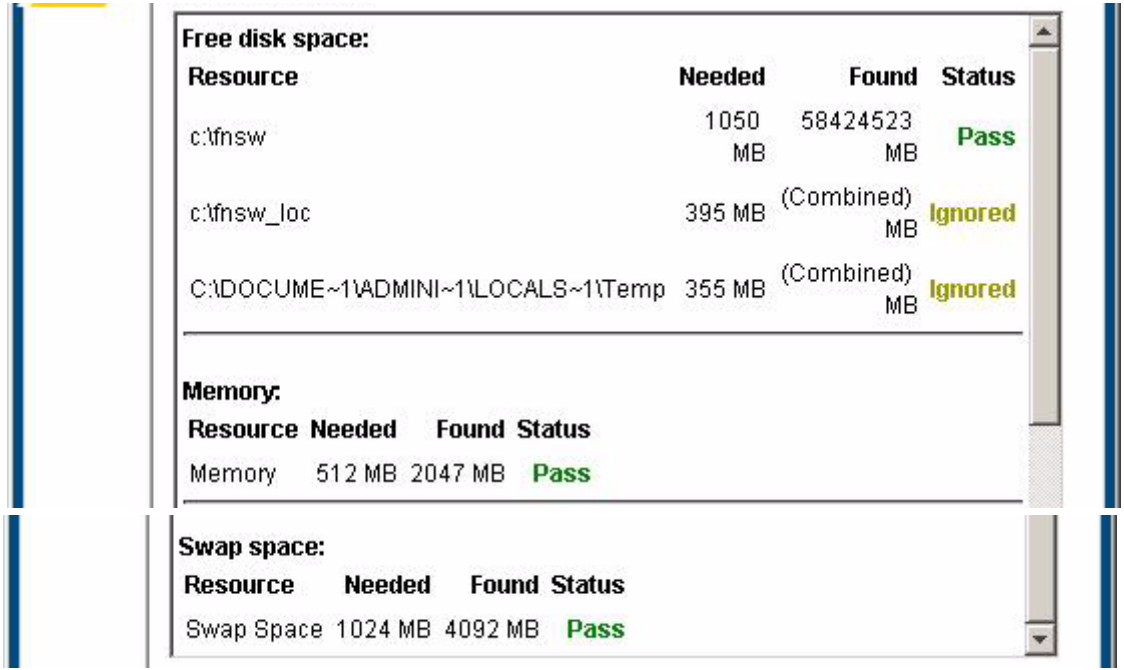
- Free disk space
- Memory
- Swap Space

The Installer lists the resource, how much you need, how much you have, and either Pass or Fail.

If a configuration item, such as “insufficient file system space” or “kernel parameter out of range” does not pass the System Check, you can correct it while the Installer is still running.

a In a separate window, make the necessary change.

b Then, click the **Back** button on the Installer display to return to the previous screen, and click **Next** again to rerun the check.



Free disk space:

Resource	Needed	Found	Status
c:\fnsw	1050 MB	58424523 MB	Pass
c:\fnsw_loc	395 MB	(Combined) MB	Ignored
C:\DOCUME~1\ADMINI~1\LOCALS~1\Temp	355 MB	(Combined) MB	Ignored

Memory:

Resource	Needed	Found	Status
Memory	512 MB	2047 MB	Pass

Swap space:

Resource	Needed	Found	Status
Swap Space	1024 MB	4092 MB	Pass

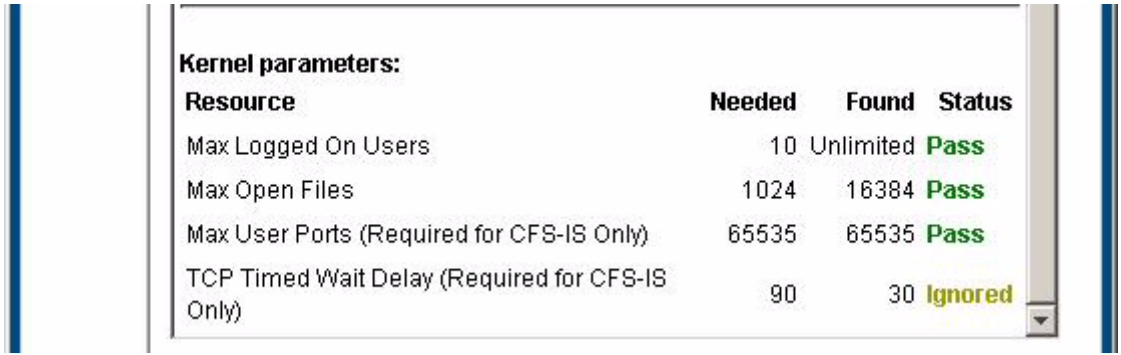
Click **Next** to continue.

Operating System Checks

The Operating System Checks screen displays:

- Host name
- O/S version
- Debugger
- Registry entries

As you scroll down the display you see the minimum and current kernel parameter settings.



Kernel parameters:

Resource	Needed	Found	Status
Max Logged On Users	10	Unlimited	Pass
Max Open Files	1024	16384	Pass
Max User Ports (Required for CFS-IS Only)	65535	65535	Pass
TCP Timed Wait Delay (Required for CFS-IS Only)	90	30	Ignored

Tip If any registries values (kernel parameters) fail the system check, click the **Back** button to return to the previous screen.

Enter the correct values.

Click **Next** on the installer screen to run the hardware check again.

FileNet Users and Groups Check

The FileNet Users and Groups Check screen displays the required user and group memberships for FileNet Image Services.

- FileNet groups
- FileNet users
- Database user and group (Oracle only)

FileNet users and groups check

FileNet groups:

Name	Purpose	Required members	Status
+fnadmin	FileNet administrators	+fnsw, +administrator	Pass
+fnop	FileNet operators	+fnsw	Pass
+fnusr	FileNet users	+fnsw, +administrator	Pass
+Administrators	System administrators	+fnsw, +administrator	Pass

FileNet users:

Name	Purpose	Required groups	Status
+fnsw	FileNet user	+fnusr, +fnadmin, +fnop, +Administrators	Pass
+administrator	super user	+fnusr, +fnadmin, +Administrators	Pass

InstallShield

+ green indicates the group and member users are present;
– red indicates the group or member users are missing.

The Status column indicates whether the group in the Name column exists and contains the appropriate users listed in the Required Members column.

Tip Click the **Back** button, create the missing users and add the users to the appropriate groups. After creating the missing users and adding them to the groups, exit the installer, log out, and log back in for the new users and groups to take affect. Then, restart the installer. Then click **Next** again to rerun this check.

Note Oracle requires an additional user and group (DB2 does not). Since the Installer doesn't know whether Image Services will be configured to use Oracle or DB2, it shows a place holder for the Oracle user and group. This is for informational purposes only, and does not prevent the System Check from completing successfully.

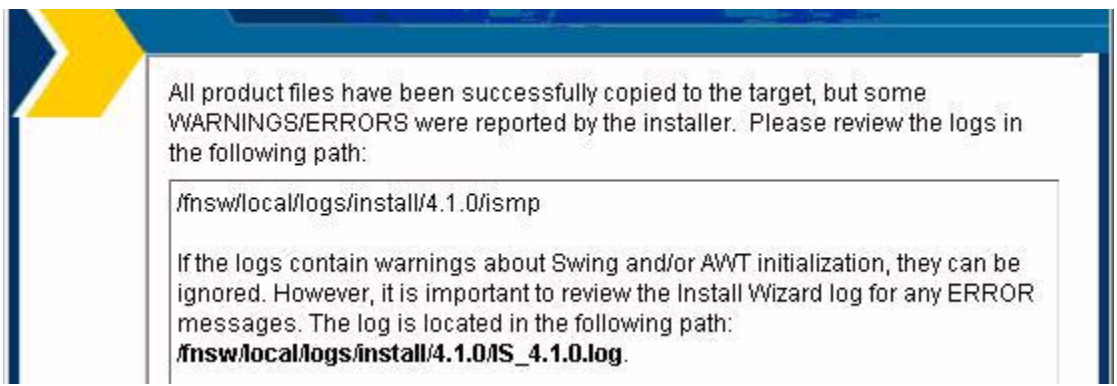
Click **Next** to continue.

Finishing the System Check

When the System Check is complete it has either passed or failed.

If the System Check failed with errors, you must fix all the error conditions reported. You can then run the System Check again.

If the System Check passed all its tests, but generated warnings for the swap space, debugger, or kernel parameter tests, the following screen displays.



Check the log file if you're not sure which additional items you need to correct.

If the Installer System Check completed successfully and you selected the option to install Image Services software, the Installer continues with the section, **"Installing Image Services 4.1" on page 98**.

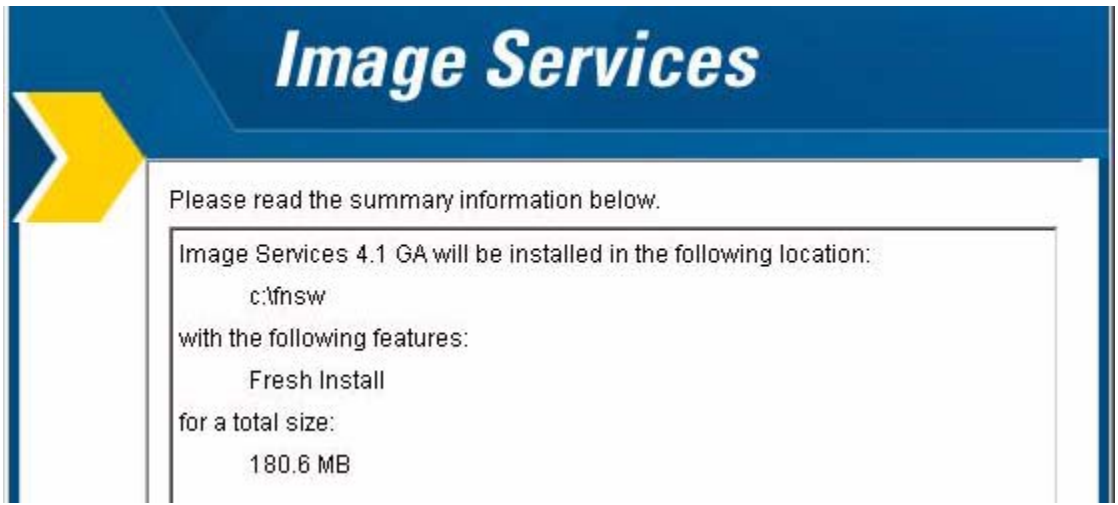
Rerunning the Image Services Installer

If the Installer System Check does not pass, review the log file in the \fnsw_loc\logs\install\4.1.0\ directory. The most recent information is appended to the end of this file.

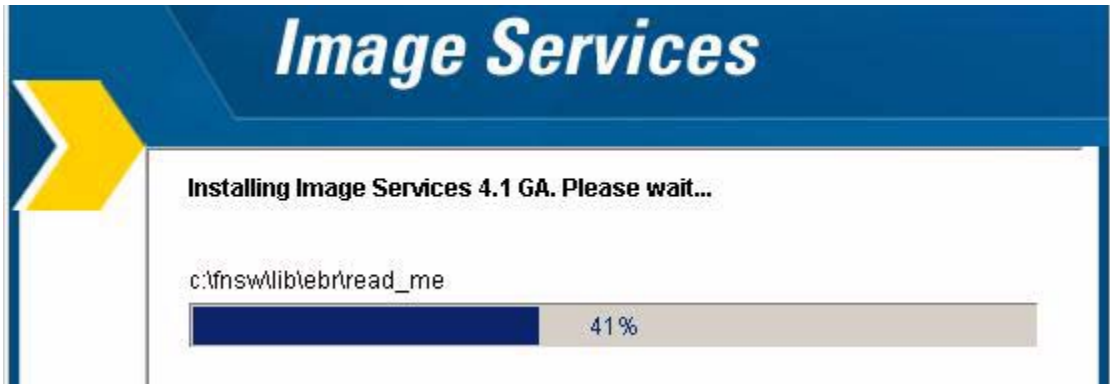
After you have made the changes required by the Installer System Check, return to **"Launch the Image Services Installer" on page 76** and run the System Check again.

Installing Image Services 4.1

1 As the Image Services installer continues, the Summary screen displays. Verify that the information is correct for your system.



2 As the Image Services software installs, a progress bar displays.



Depending on your server's processor speed, expect the installation to take approximately **20 minutes**. (If you're installing image Services on several servers simultaneously from the same location, it might take a while longer.)

3 When the software installation is finished, the InstallShield Installer creates an uninstaller (\fnsw\etc\uninstaller\uninstall_is.exe) and verifies the version information.

4 The final screen indicates success. It also reminds you to check the Installer log and the IBM Information Management support page (www.IBM.com/software/data/support).

You will need an IBM-issued login name and password to access the Web site.

Grant “Logon as Service” Right to the fnsw User

"Logon as Service" right will automatically be granted when the user manually re-enters the password in the Service properties panel for the IS ControlService. A '1069 logon failure' error will occur if the IS ControlService user does not have that right. This should be done whether the user is local or a domain level user.

To guard against this error, the System Administrator, must reset the password for the user with fnsw privileges in the Service Control Panel for the IS service (ISControlService).

1. Logon as the FileNet software user, such as **fnsw**, if you aren’t already.
2. From the Control Panel, open the Administrative Tools folder, and double-click the *Services* icon.
3. Right-click *IS ControlS*ervice and the IS ControlService Properties dialog opens.
4. In the IS ControlService Properties window, complete the following:

a Select the Logon tab.

b Re-enter the password and confirm the password.

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

5 Close the Services window.

Verify TCP/IP Parameter Settings (Optional)

In this section you will verify the maximum number of available temporary ports and the length of time the server waits before reusing a closed socket ID. If either of these parameters do not yet exist, this section provides steps to define them.

Note These modifications are not required, but they have been found to be favorable for optimal FileNet performance. Unless you have set these parameters differently for other system reasons, we suggest you use these parameter settings.

- The **MaxUserPort** parameter determines the number of temporary ports that can be assigned on the server. These temporary ports are assigned by a server's IP stack from a designated range of ports for this purpose. When network traffic is extremely heavy, it's possible to run out of temporary ports unless you increase the MaxUserPort setting.

- The **TcpTimedWaitDelay** parameter determines the length of time the server waits before reusing a closed socket ID. Although the default value is typically around 240 seconds (four minutes), this

parameter can safely be reduced to as little as 30 seconds on high-speed networks.

1 From a Command Prompt window, enter the following command to open the Registry editor:

REGEDT32

Note You can also enter the above command in the taskbar Run dialog box.

2 In the HKEY_Local_Machine on Local Machine window, open the *System* folder and navigate to the Tcpip Parameters folder using this path:

SYSTEM>CurrentControlSet>Services>Tcpip>Parameters

3 Locate the MaxUserPort Parameter.

- If this parameter is already set to 65534 (decimal) or FFFE (hex), skip to **Step 4 on page 106**.
- If this parameter is less than 65534 (decimal) or FFFE (hex), you need to increase it.

a Double-click on the entry to open the DWORD Editor dialog box.

b In the DWORD Editor dialog box, set the Radix to decimal or hex, and change the value to 65534 (decimal) or FFFE (hex).

c Click *OK*, and skip to **Step 4 on page 106**.

- If this parameter does not exist, you need to define it.

  a From the Registry Editor Edit menu, select *Add Value.*

  The Add Value dialog box opens.

  b Enter MaxUserPort in the Value Name box, and select REG_DWORD from the Data Type box drop-down list; then click *OK.*

  The DWORD Editor dialog box opens.

  c Set the Radix to decimal or hex, enter 65534 (decimal) or FFFE (hex) in the Data box, and click *OK*.

  The Registry Editor now shows the new MaxUserPort in hex.

4 Locate the TcpTimedWaitDelay parameter.

- If this parameter is already set to 30 seconds (decimal) or 1E (hex), skip to **Step 5 on page 107**.
- If this parameter is more than 30 seconds (decimal) or 1E (hex), you need to reduce it.

  a Double-click on the entry to open the DWORD Editor dialog box.

  b In the DWORD Editor dialog box, set the Radix to decimal or hex, and change the value to 30 (decimal) or 1E (hex).

  c Click *OK*, and skip to **Step 5 on page 107**.
- If this parameter does not exist, you need to define it.

  a From the Registry Editor Edit menu, select *Add Value.*

  The Add Value dialog box opens.

b Enter TcpTimedWaitDelay in the Value Name box, and select REG_DWORD from the Data Type box drop-down list; then click *OK.*

The DWORD Editor dialog box opens.

c Set the Radix to decimal or hex, enter 30 (decimal) or 1E (hex) in the Data box, and click *OK.*

The Registry Editor now shows the new TcpTimedWaitDelay entry in hex.

5 Close the Registry Editor window.

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 the FileNet software user, such as **fnsw,** with the appropriate password.

Install Required Pre-Startup Fixes

Server Types

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

At this time, install only the fixes that directly relate to Image Services 4.1 initial configuration issues. (You'll install any general Image Services 4.1 fix packs in a later section.)

Note

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

You can retrieve these fixes either from the Tech Info media or from the IBM Information Management support page (www.ibm.com/software/data/support.

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 111**

If you're adding an **Application server**, skip to the section, **"Configure the Root Server" on page 192**, in Appendix A.

If you're adding a **Storage Library server**, skip to the section, **"Configure the Root Server" on page 222** 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.

Note If you want to configure Image Services with SQL Server 2005, you must install IS 4.1 SP1 **BEFORE** completing any of the configuration steps.

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”) to 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.

Logon to the Configuration Database

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

Root/Index server during a Dual server installation

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

Application server running WorkFlo Queue Services or SQL Services.

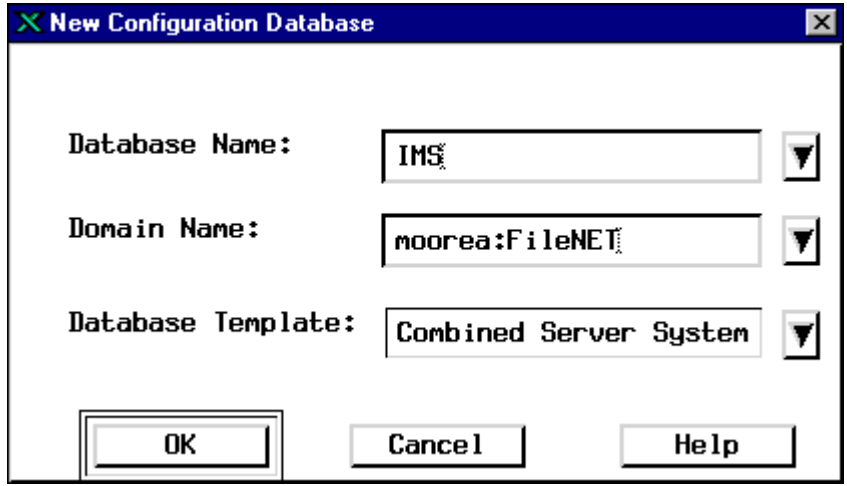
Follow the procedures in this section to create the configuration database.

1. If you have not already done so, logon as the FileNet software user, such 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.

If you are installing Image Services software on the system for the first time, the Configuration Editor program will detect that no databases exist and will open a New Configuration Database automatically. Otherwise, Configuration Editor will determine your database name and use it, along with your Domain Name.

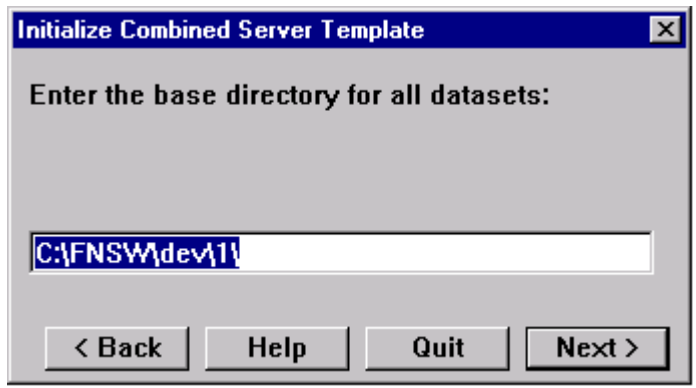
3 Verify that the two-part domain information is correct in the New Configuration Database dialog box. (The proper syntax is: <Domain>:<Organization>.)

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 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.

Tip Use the on-line help for more instruction on answering the prompts for each template type. Select the Help menu option in the Configuration Editor.

When you're prompted for information about your Relational Database Management system, Oracle or DB2, use the information that was supplied to you by the Database Administrator when the RDBMS software was installed.

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

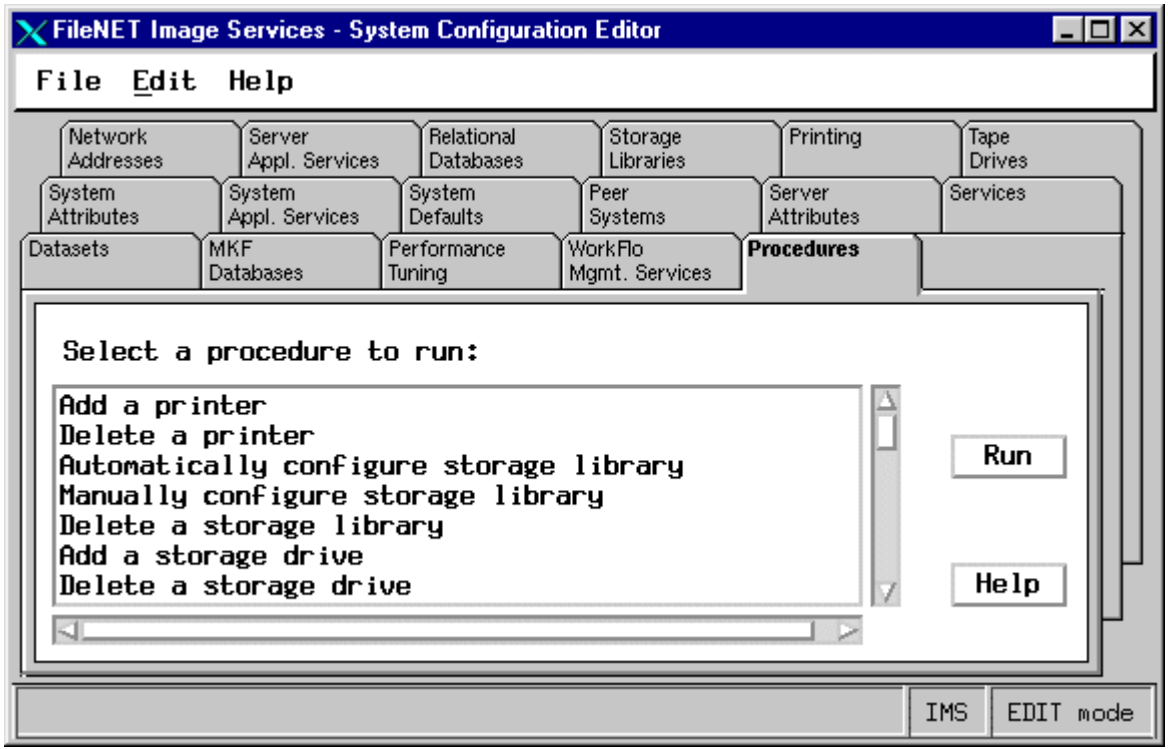
- Select the relational database type (Oracle9i/10g, DB2 8.1/8.2).
- For DB2, enter and verify the passwords assigned to:
  - f_sw
  - f_maint

- 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.

8 When your configuration is complete, a Configuration Complete message appears. Click *Next* to continue. The Configuration Editor opens. You can select tabs in the Configuration Editor to verify that you entered the information correctly


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 When using the various configuration tabs in the System Configuration Editor window, you will click on a tab, complete the fields as instructed, and immediately click on the next tab (without exiting), as directed.

Each screen and pop-up window has an on-line help button designed to provide information you might need to complete the screen or window.

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

Select and Configure Relational Database Instance (if applicable)

Important This procedure assumes that the tablespaces and databases that you specify in the System Configuration Editor either already exist or that you will create them before you initialize the FileNet databases. For more information, see the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers* or *Guidelines for Installing and Configuring IBM DB2 Software*. To download IBM FileNet documentation **"Accessing IBM FileNet documentation" on page 26**.

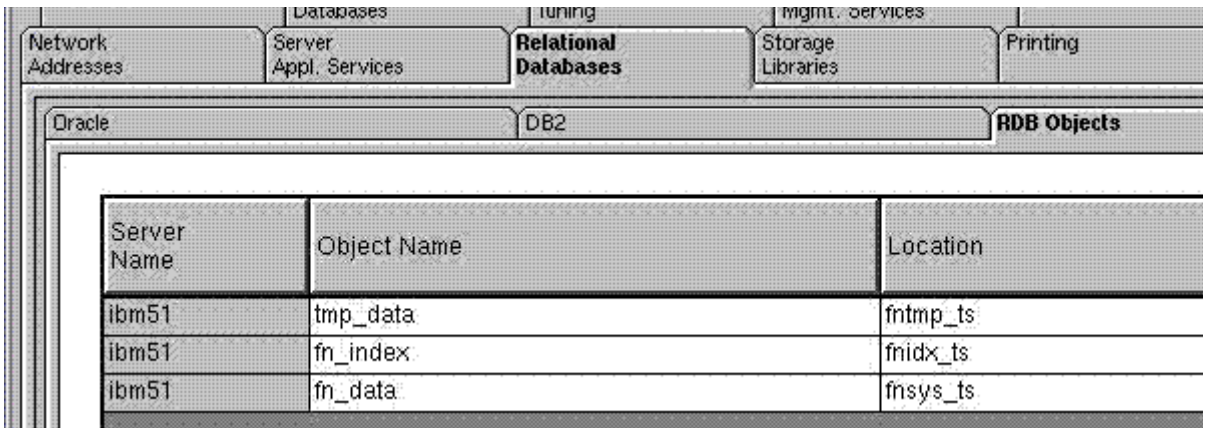
Continue with the appropriate sub-section:

- **"Oracle 9i/10g" on page 122**
- **"DB2 V8.x" on page 124**
- **"MSSQL 2000 SP4" on page 127**

Oracle 9i/10g

Define the Tablespace Names

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



2 In the Location column of the RDB Objects window, click on a cell and replace the default FileNet tablespace names with the site-specific table names. While replacing the tablespace names, use the following criteria:

- Change all occurrences of **fnsys_ts** to the name of your dedicated FileNet default tablespace.
- Change all occurrences of **fntmp_ts** to the name of your dedicated FileNet temporary tablespace.
- If an optional **fnusr_ts** was created for WorkFlo Queue Services, change all occurrences of the name to your dedicated FileNet user tablespace.
- If an optional **fnidx_ts** was created for indexes, change all occurrences of the name to your dedicated FileNet index tablespace.

The Image Services software will use the tablespace names entered in the RDB Objects subtab.

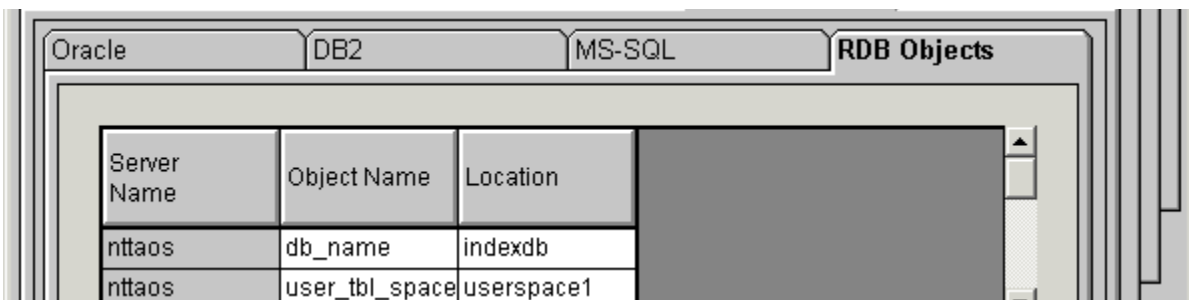
Note The tablespace names specified in the RDB Objects list must exist before you initialize the FileNet Image Services databases.

3 Skip to the section, **"Verify the Image Services Character Set" on page 129**.

DB2 V8.x

Verify the Database and User Tablespace Names

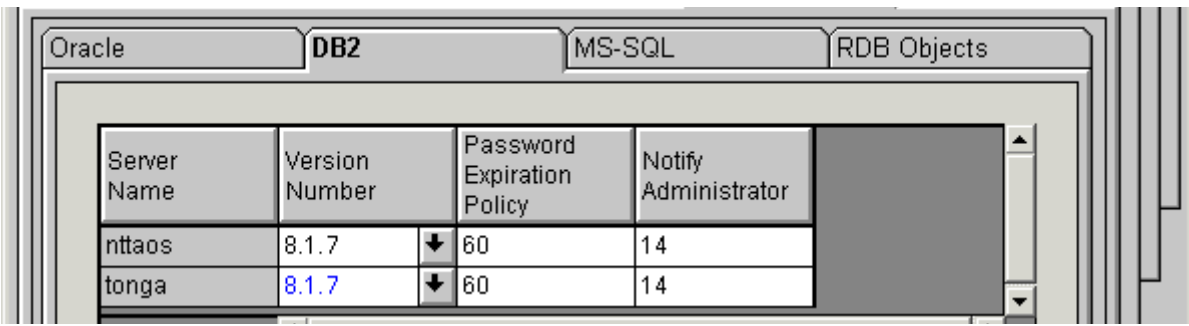
1 Click the Relational Databases tab, then click the RDB Objects subtab.



2 On the RDB Objects subtab, verify the database name and the tablespace name in the Location column:

- **Database name**, such as indexdb.
- **User Tablespace name**, such as userspace1.

3 On the DB2 subtab, verify the following fields:



- **Version** - must be **8.1.12** or later (DB2 version 8.1.0 plus FixPak 12 or later), or **8.2.5** or later (DB2 version 8.2.0 plus FixPak 5 or later). DB2 version 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 Administrator** 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.

MSSQL 2000 SP4

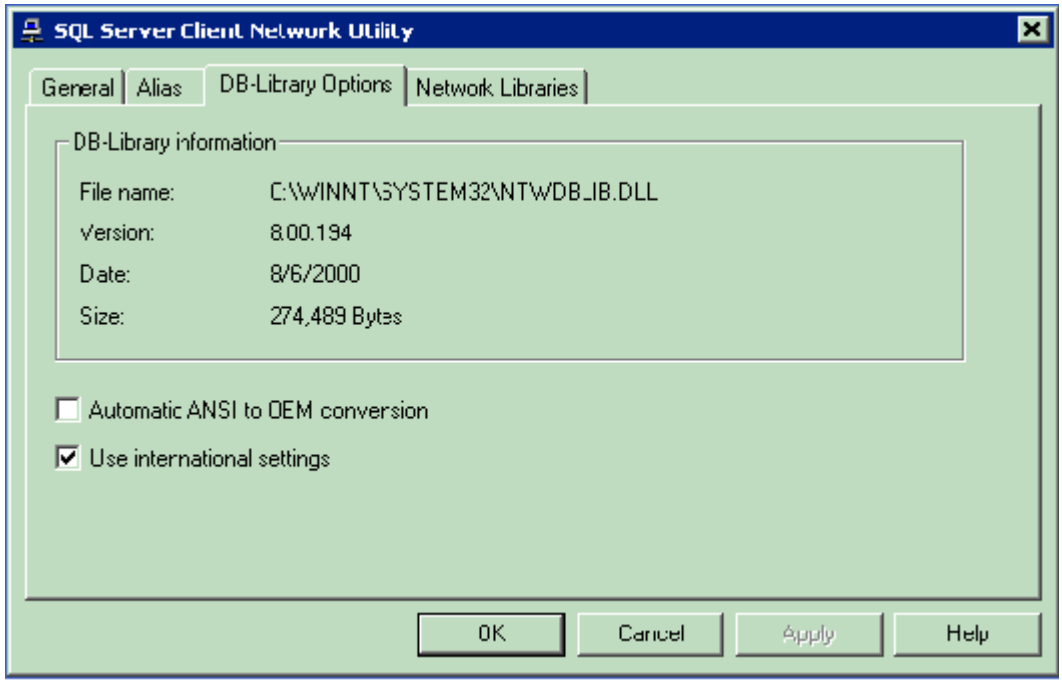
Follow the procedures in this section to configure the SQL 2000 software on your server.

1 On the server, click Start --> MicroSoft SQL Server and

Client Network Utility OR

Server Network Utility

The SQL Server Client Network Utility dialog box appears.


SQL Server Client Network Utility
General
Alias
DB-Library Options
Network Libraries
DB-Library information
File name:
C:\WINNT\SYSTEM32\NTWDB_IB.DLL
Version:
8.00.194
Date:
8/6/2000
Size:
274,489 Bytes
Automatic ANSI to OEM conversion
Use international settings
OK
Cancel
Apply
Help

2 On the DB-Library Options tab, verify that the Automatic ANSI to OEM conversion option is NOT checked.

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 41** for more information.

Optional Configuration Procedures

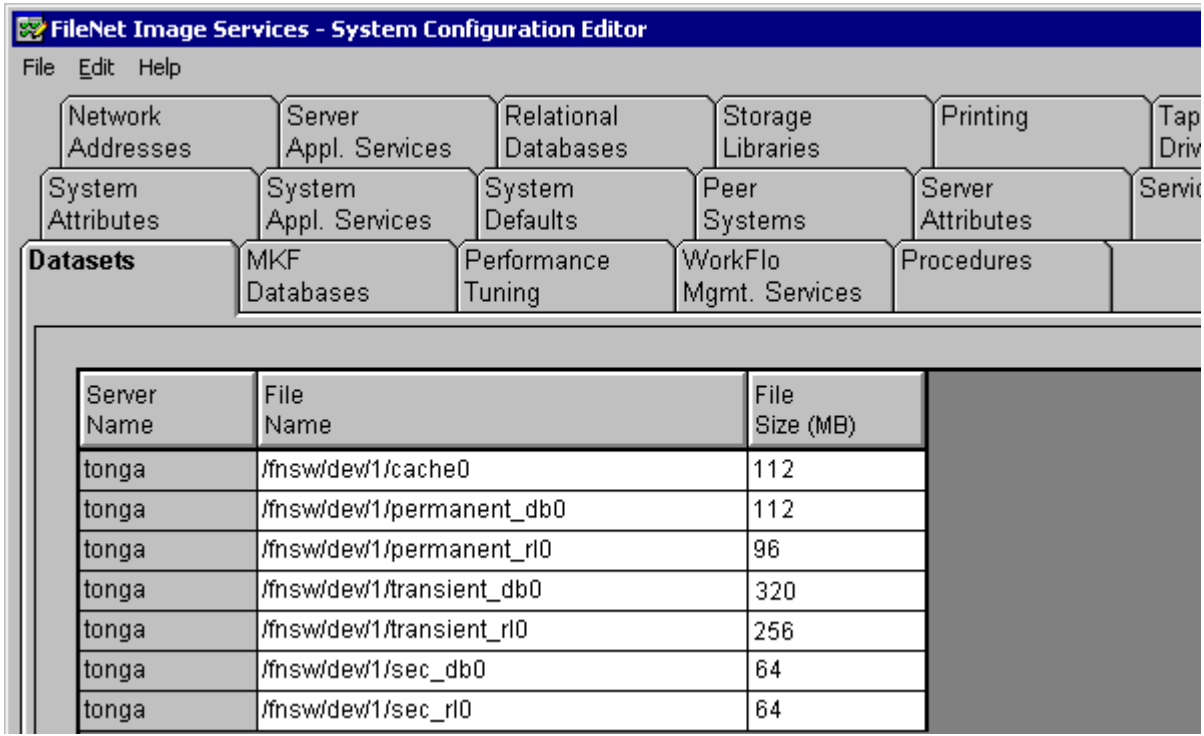
The following configuration procedures are optional:

- **“Modify Dataset File Sizes” on page 130**
- **“Configure Logical Cache (Optional)” on page 133**
- **“Configure System Document Services Parameters (Optional)” on page 135**
- **“Configure the Database Parameters (Optional)” on page 136**

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

Modify Dataset File Sizes

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	320
tonga	/fnsw/dev/1/transient_rl0	256
tonga	/fnsw/dev/1/sec_db0	64
tonga	/fnsw/dev/1/sec_rl0	64

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. It is recommended that you leave these default values 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 4.1 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 139**
- **"Connect/Configure Storage Library Devices (Optional)" on page 141**
- **"Configure Third-Party Access to Optical Libraries (Optional)" on page 143**

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 147**.

Note Procedures for configuring a **Dual server** (separate Root/Index and Storage Library servers) are found in **"Setup Storage Library Server (Optional)" on page 154**. To configure an MSAR System, refer to the *MSAR Procedures and Guidelines* document for information. To download this document from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

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 the FileNet software user, such 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 the FileNet software user, such 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 147**.

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 Relational Database Software

Use the procedures below to initialize the FileNet databases.

As the FileNet software user such as **fnsw**, initialize the index database and all the MKF databases (includes permanent, transient, and security databases) by entering the following commands on the Image Services server:

fn_setup_rdb -f

fn_util init -y > \fnsw_loc\logs\init.log

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

Note View the **init.log** file after initializing to verify that there were no errors in the database initialization process.

Initialize the Server Software

This section includes the procedure for initializing the server software. Verify that you perform the correct procedures for your system.

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

Initialization Procedures for Local Installations

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

1. If you aren't already, logon as the FileNet software user, such 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:

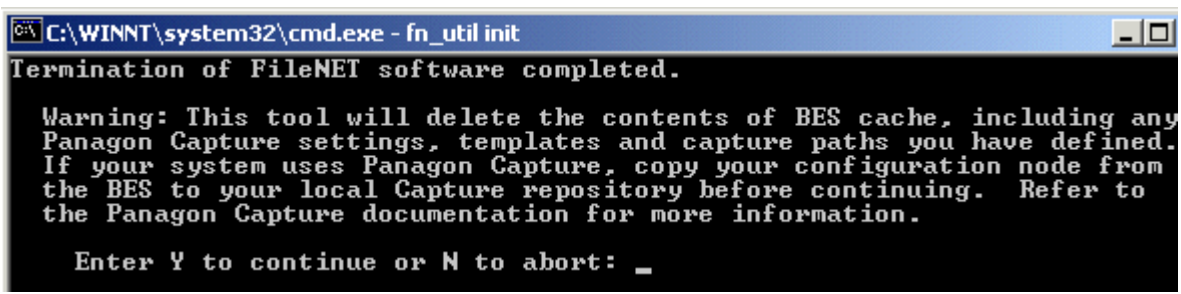
   fn_build -a

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 following files to verify that there were no errors in the database initialization process:

- \fnsw_loc\logs\fn_util\init.log and/or
- DB2.log (for DB2), or
- oracle.log (for Oracle), or
- FileNet.log (for SQL Server)

Note The init.log file does not always display.

Tip You can monitor the progress of the initialization by viewing the fn_util.log, and init.log, DB2.log, or FileNet.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
\fnsw_loc\logs\fn_util\init.log
\fnsw_loc\logs\fn_util\FileNet.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 the FileNet software user, such as **fnsw**, 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 169**.

Note If your system is not configured for Dual server operation, skip this section, and proceed to **"Start Image Services" on page 172**.

Install Image Services Software on Storage Library Server

Refer to the chapter, **Chapter 3, "Installing FileNet Image Services Software," on page 71** 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 the FileNet software user, such as **fnsw**.

4 Before running the command in this step, verify 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 the FileNet software user, such 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 162**.

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 the FileNet software user, such 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 (for example, **\fnsw\dev\1**).

6. Look at the directory contents. 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 the FileNet software user, such 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 multiple 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 the FileNet software user, such 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 the FileNet software user, such 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 Image Services" on page 172** 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 171**.

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

To download IBM FileNet documentation **"Accessing IBM FileNet documentation" on page 26**.

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 ssn, which is assigned to you, 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 Image Services

Important If you are installing SQL Server 2005 on this system, you need to first install IS 4.1.1 before starting the Image Services software. Refer to the FileNet Image Service 4.1.1 Mod Readme for information.

Use these procedures to start the IS ControlService and the Image Services software.

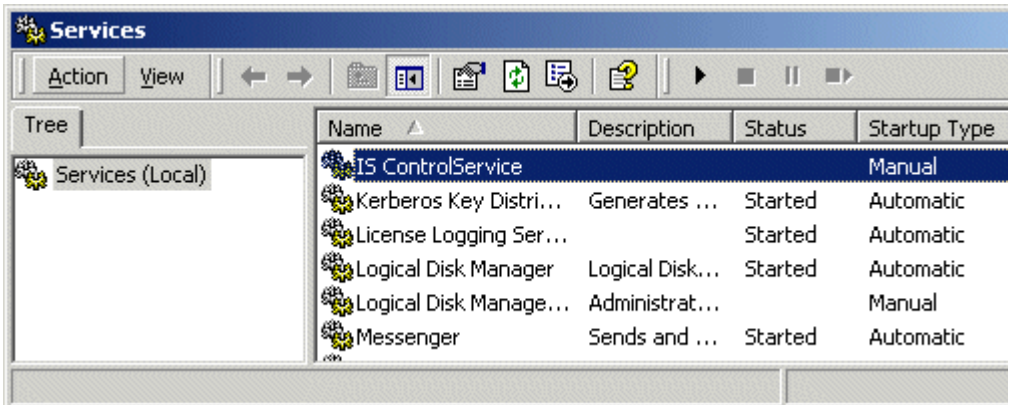
Note If you configured your system as a Dual server, verify that the FileNet Image Services software in started first on the Root/Index server and then on the Storage Library server. Complete the steps in this section on both servers.

Start the IS ControlService

1. Logon as the FileNet software user, such 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 174**.

4 If the properties are **not** correct, right-click *IS Control*Service. 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

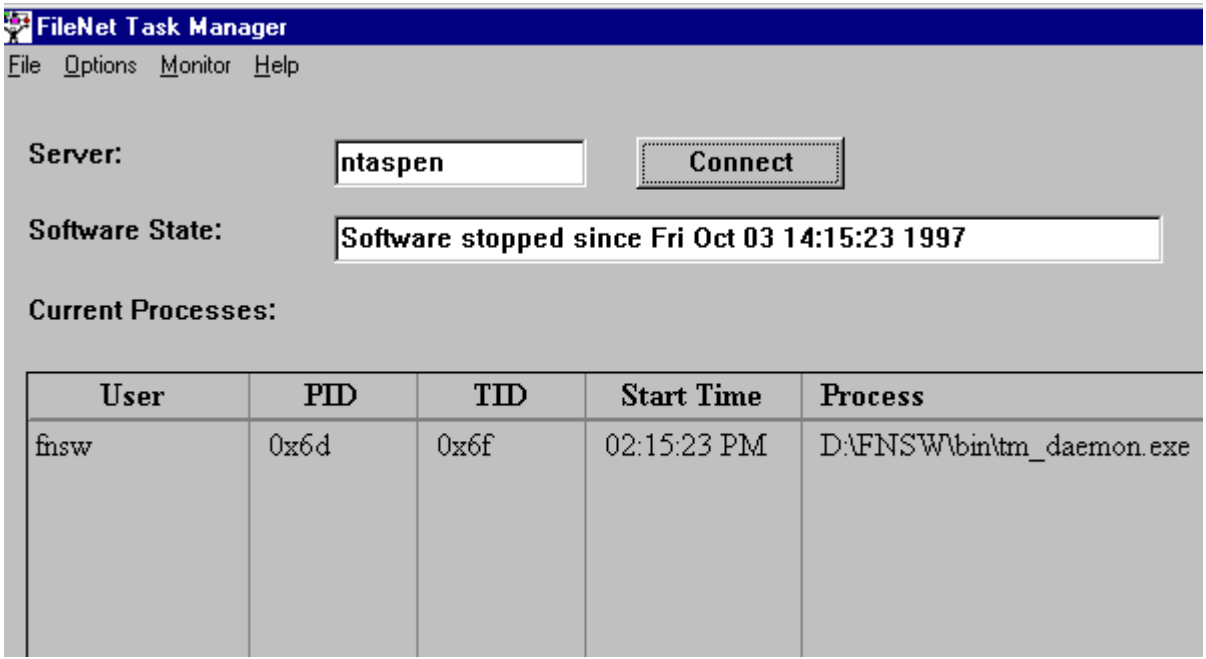
c Click *OK* to exit the IS ControlService Properties window

6 Close the Services window.

Start the Image Services Software

1 Open the FileNet Task Manager.

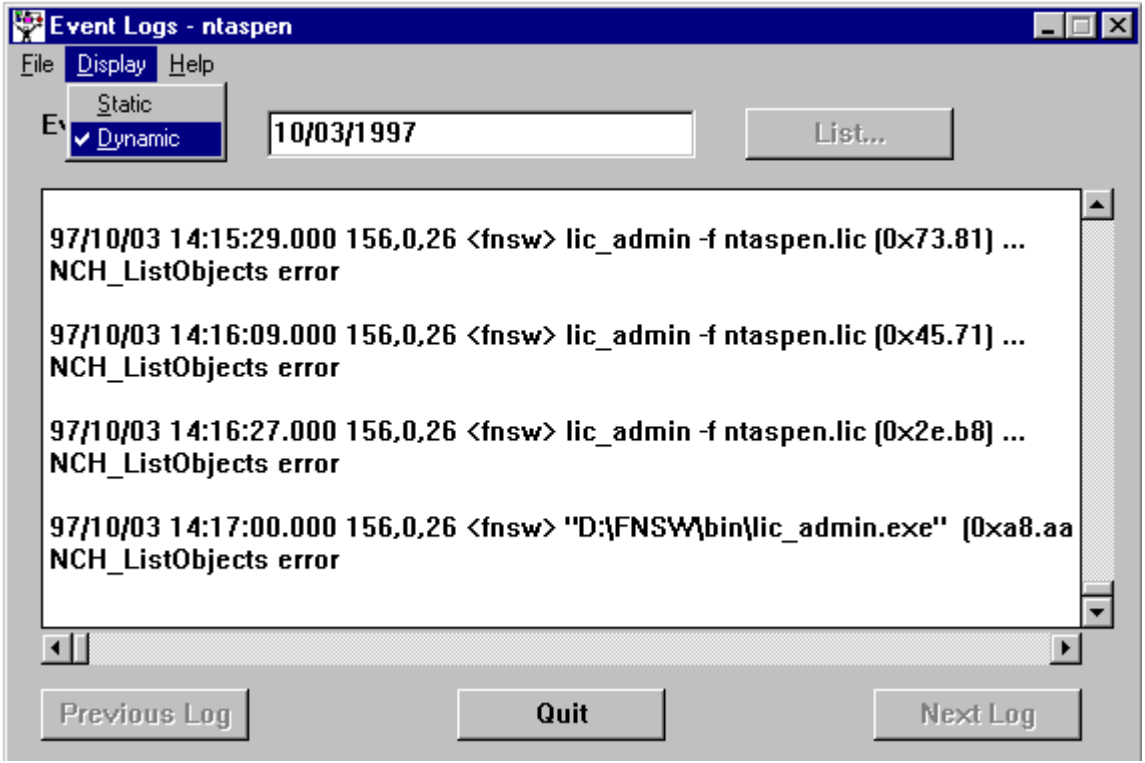
From the *Taskbar*, point to *Programs*, *FileNet Image Services, Server Applications*, and click the *Task Manager* icon.



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

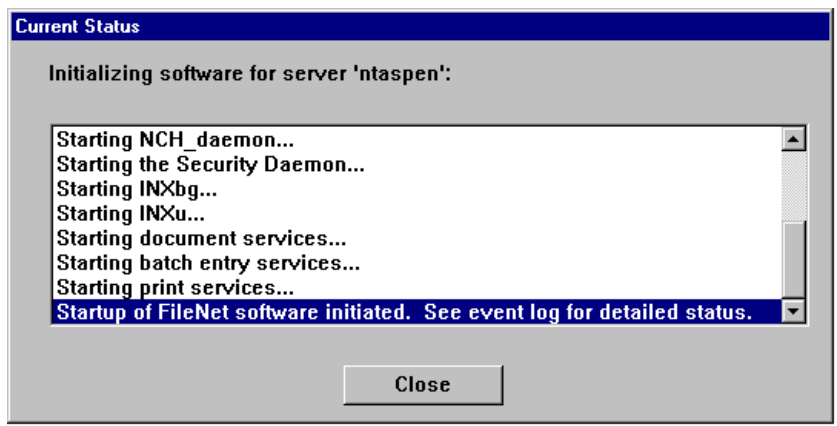
2 Click the *Monitor* pull-down menu and select the *Event Logs...* option.

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

3 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.

4 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.



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

6. View the Event Logs window to verify that there are no error messages.

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

Install Mods and Fix Packs (Optional)

Now you can install any mods and fix packs that apply to Image Services 4.1. Be sure to read the accompanying Readme file, which contains the instructions for installing the software.

Mods and fix packs are available on the IBM Downloads Web site.

If you have not already set up an account on the IBM Downloads Web site, you will be asked to create an account before downloading any of the mods or fix packs that have been posted. Follow the prompts on the Web site to create an account.

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 the FileNet software user, such 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, verify that 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. Logon as the FileNet software user with **root** privileges and run the fn_setup utility as follows:

   \fnsw\bin\fn_setup

2. Answer all the prompts with information related to your system. Reply to the prompts with the requested information. Answer **y** at the following prompt:

   ```
   Autostart IS Processes (y=yes, n=no) [y]:
   ```

MSAR Systems

The Magnetic Storage and Retrieval (MSAR) storage library 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.

To download IBM FileNet documentation, see **“Accessing IBM FileNet documentation” on page 26**.

Start the Application Executive

To begin customizing your IS system by defining media families and document classes, launch the IS Application Executive (Xapex).

1. Click *Start* on the Taskbar, and point to Programs > FileNet Image Services Server Applications.
2. Click the *Application Executive* icon.
3. Log on as **SysAdmin**. (The default password is SysAdmin.)

See the *IS System Administrator's Handbook* for complete information about using the Application Executive.

To download IBM FileNet documentation, see **“Accessing IBM FileNet documentation” on page 26**.

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 197**.
- 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 4.1 and RDBMS 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 IBM DB2 Software* document (for DB2 users) or the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers* document (for Oracle or SQL Server users).

Note To download these guidelines from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

Also refer to **Chapter 3, "Installing FileNet Image Services Software," on page 71** 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 29** 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 38** 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 RDBMS 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, Oracle Client software or SQL Server software. Refer to the *Guidelines for Installing and Configuring IBM DB2 Software* document to install the DB2 software or refer to the *Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software on Windows Servers* document to install the Oracle or SQL Server software.

To download these guidelines from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

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 191**.

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 71** 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)

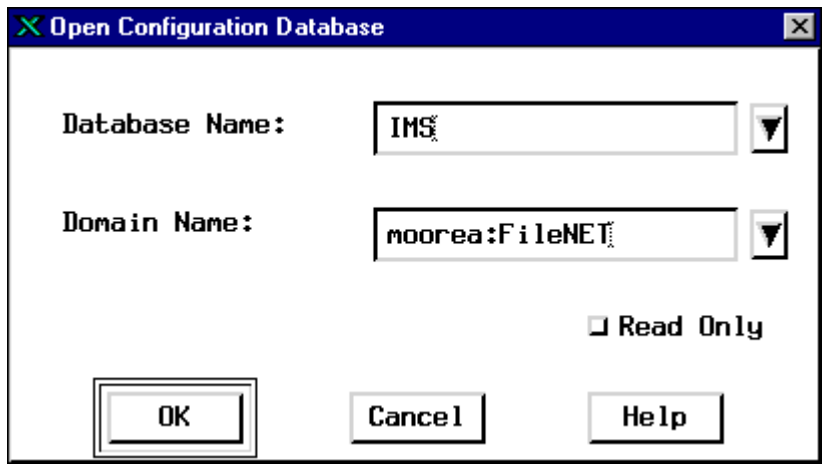
Add Application Server(s)

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

1. Logon as the FileNet software user, such 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.

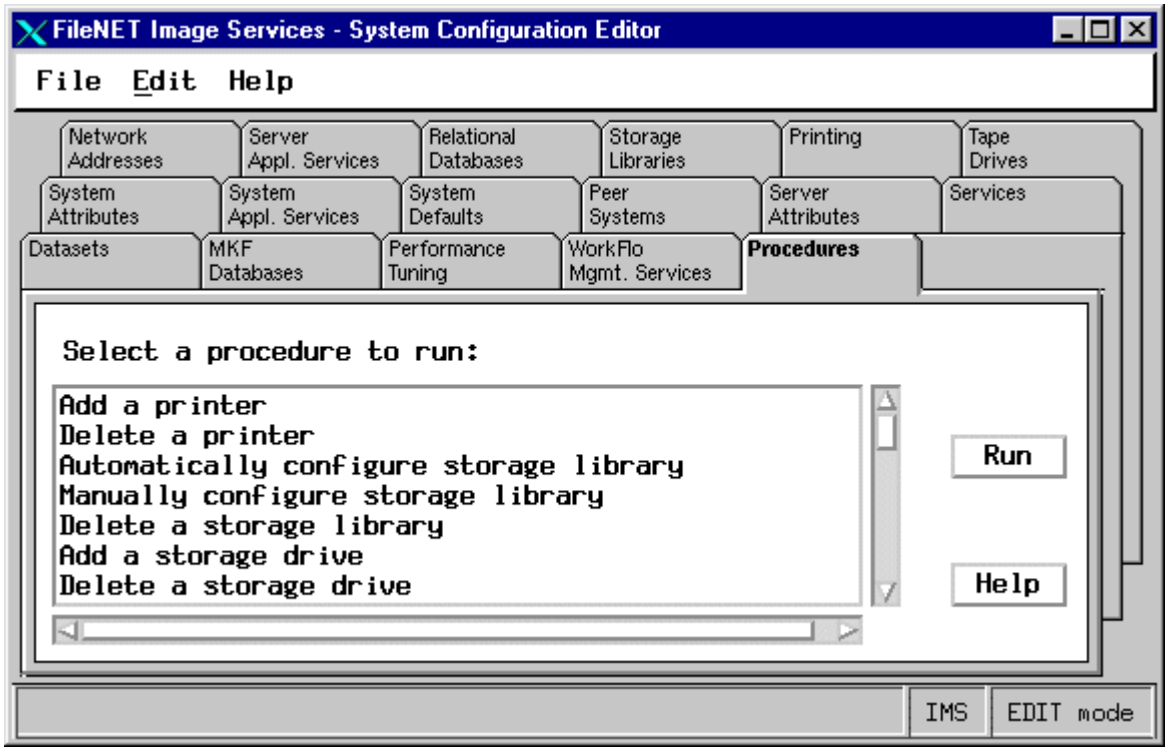


Note The configuration database on the root server contains configuration information for the entire NCH domain of this FileNet system. Since this is an Application server, it does not have its own configuration database.

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. (for example, 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. To download the handbook from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

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 207**.

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 207**.

Add an SQL Service

Follow the steps below to install an SQL Service.

Note If you add SQL services to your system, you MUST install RDBMS software on the Application server, or on a site-controlled remote RDBMS 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 RDBMS passwords have already been set using the “Add WorkFlo Queue Service” procedure, prompts for Step 5 and Step 6 will not be appear. In this case, skip to **Step 7 on page 202**.

5 **For Oracle or SQL servers**, go to the RDB Object Tab and verify that the correct tablespace name associated with the Application server appear.

6 **For DB2 servers**, complete the following when prompted:

- f_sw password
- f_maint password
- f_sqi password
- DB2 Database Alias Name
- User Tablespace Location

7 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 207**.

Add a WorkFlo Queue Service

Follow the steps below to add a WorkFlo Queue Service.

Note If you add WorkFlo Queue Services to your system, you MUST install RDBMS software on the Application server, or on a site-controlled remote RDBMS 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 RDBMS passwords have already been set using the “Add SQL Service” procedure, prompts for Step 5 and Step 6 will not be appear. In this case, skip to **Step 7 on page 204**.

5 **For Oracle or SQL servers**, go to the RDB Object Tab and verify that the correct tablespace name associated with the Application server appear.

6 **For DB2 servers**, complete the following when prompted:

- f_sw password
- f_maint password
- f_sqi password
- DB2 Database Alias Name
- User Tablespace Location

7 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 207**.

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 207**.

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, verify 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 the FileNet software user, such 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 Verify that the 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 the FileNet software user, such 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 generates a special file that fn_util init needs when it's run in the next section.

3 Verify that **fn_build** ran successfully by checking that no errors have occurred. If you get an error, enter the following commands, then repeat the steps in this sub-section:

echo <domain:Organization> nch_<domain>
killfnsw -A -D -y

4 On all servers with SQL services or Workflo Queue Services, create the relational databases by entering the following command:

fn_setup_rdb -f

Initialize FileNet Databases

1. As the FileNet software user, such 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 the FileNet software user, such 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 verify that 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 Library 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 additional 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 verify 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 29** 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,” on page 71** 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 verify 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.

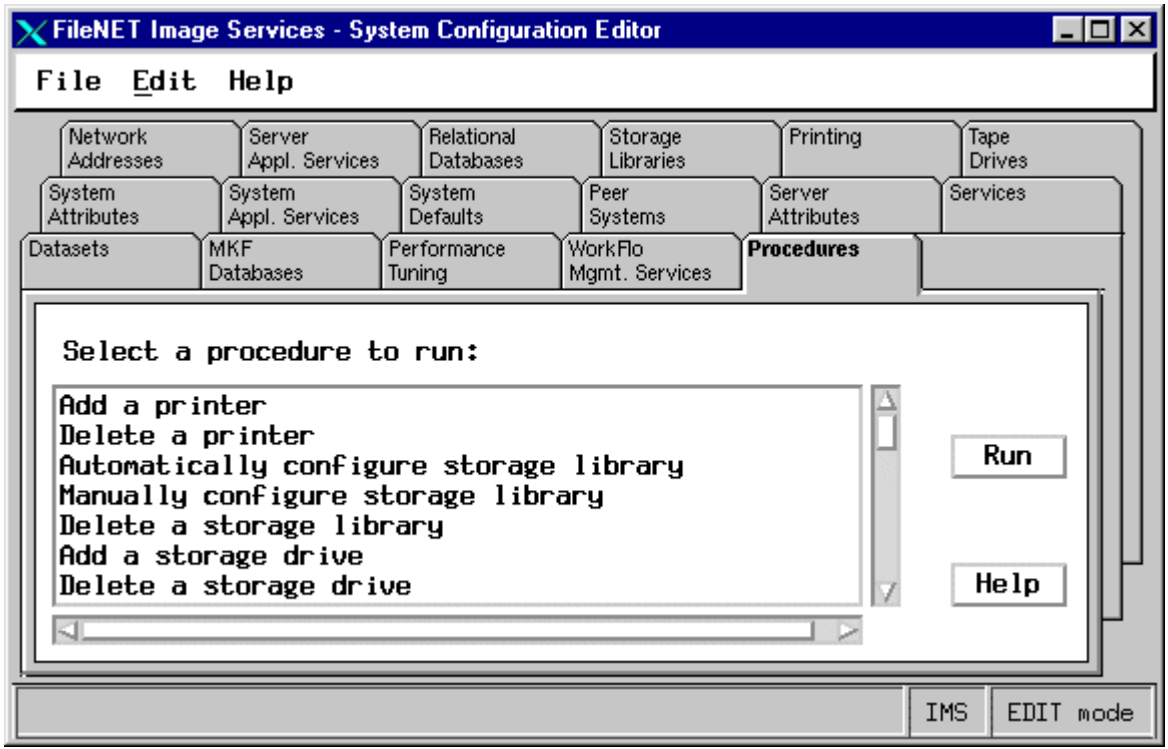
7. Close the Cache Export/Import application, and the FileNet Application Executive.

Add Storage Library Servers

1. As the FileNet software user, such as **fnsw**, 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.

To download documentation from the IBM support page, see **“Accessing IBM FileNet documentation” on page 26**.

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 verify that 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, verify 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 the FileNet software user, such 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 **the** FileNet software user, such 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 storage library 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 Image Services” on page 172** 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 the FileNet software user, such 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 beginning with: “osarDesc, 0 3 ...” 3 is the number used for the add_osvr command, which you will run in **Step 12 on page 237**.

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 Step 7and Step 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 237**.)

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*.

To download this manual from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

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 180** 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*.

To download this manual from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

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

To download this document from the IBM support page, see **“Accessing IBM FileNet documentation” on page 26**.

CAUTION Whenever any change in Storage Library configuration occurs, especially when a Storage Library is deleted, it’s extremely important to re-save 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.

To download this handbook from the IBM support page, see **“Accessing IBM FileNet documentation” on page 26**.

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*.

Note To download this handbook from the IBM support page, see **“Accessing IBM FileNet documentation” on page 26**.

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 *Image Services System Administrator's Handbook*.

Note To download this handbook from the IBM support page, see **"Accessing IBM FileNet documentation" on page 26**.

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 reference 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. Verify that 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 your service representative 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. It is strongly recommended 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 the FileNet software user, such as **fnsw** or Windows **Administrator**.

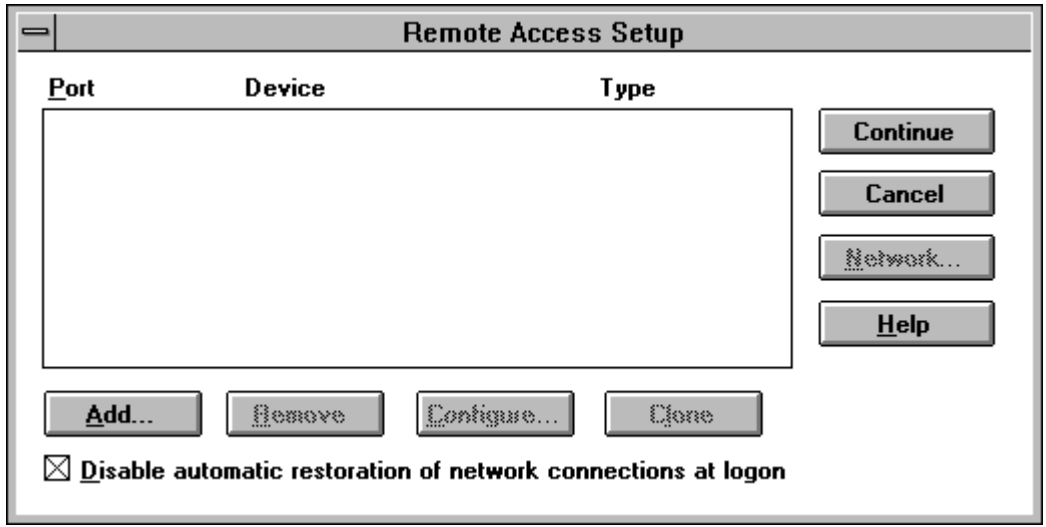
2. In Control Panel, choose the *Network* option.

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 following.



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.

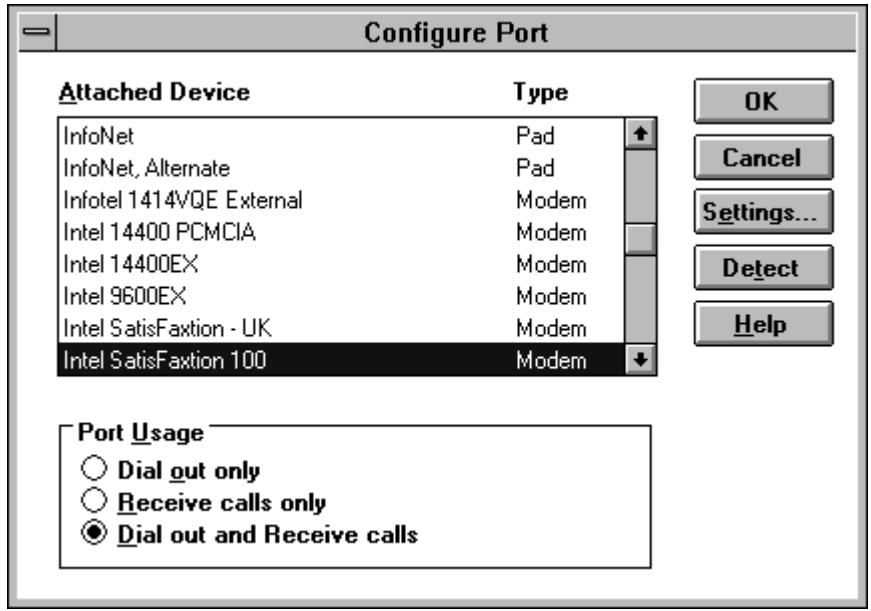
7 Select the port you will use for remote access and choose the *OK* button

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.

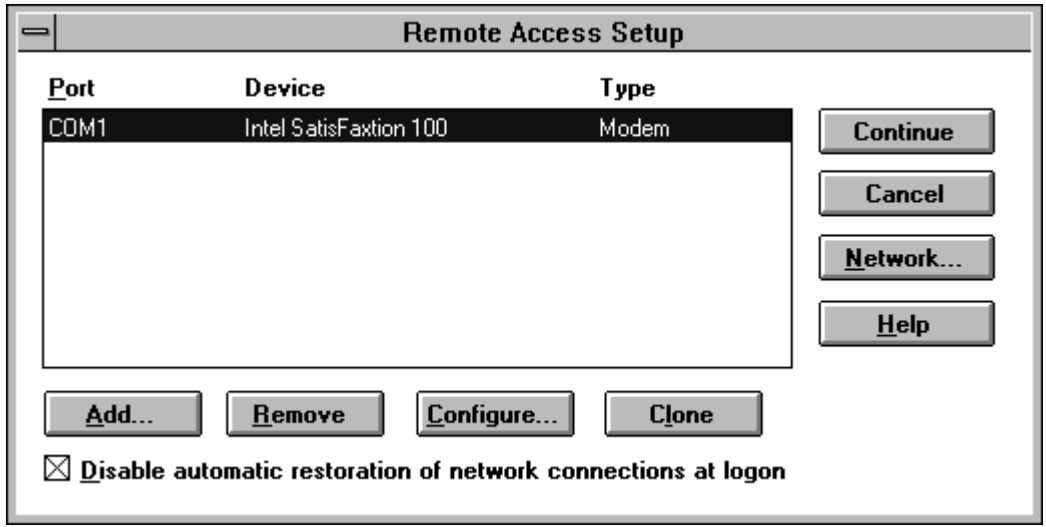
b If you are adding a port after initial RAS installation, you can use the *Detect* button to automatically detect the modem connected to the new port.

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.



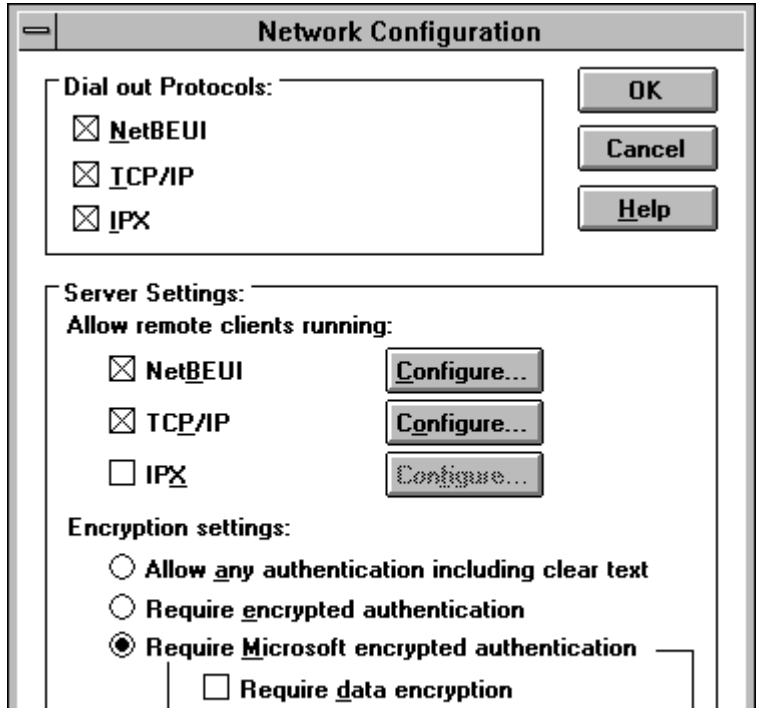
13 In the Remote Access Setup dialog box, configure or reconfigure the ports by highlighting a port and using the buttons along the bottom of the dialog box.

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

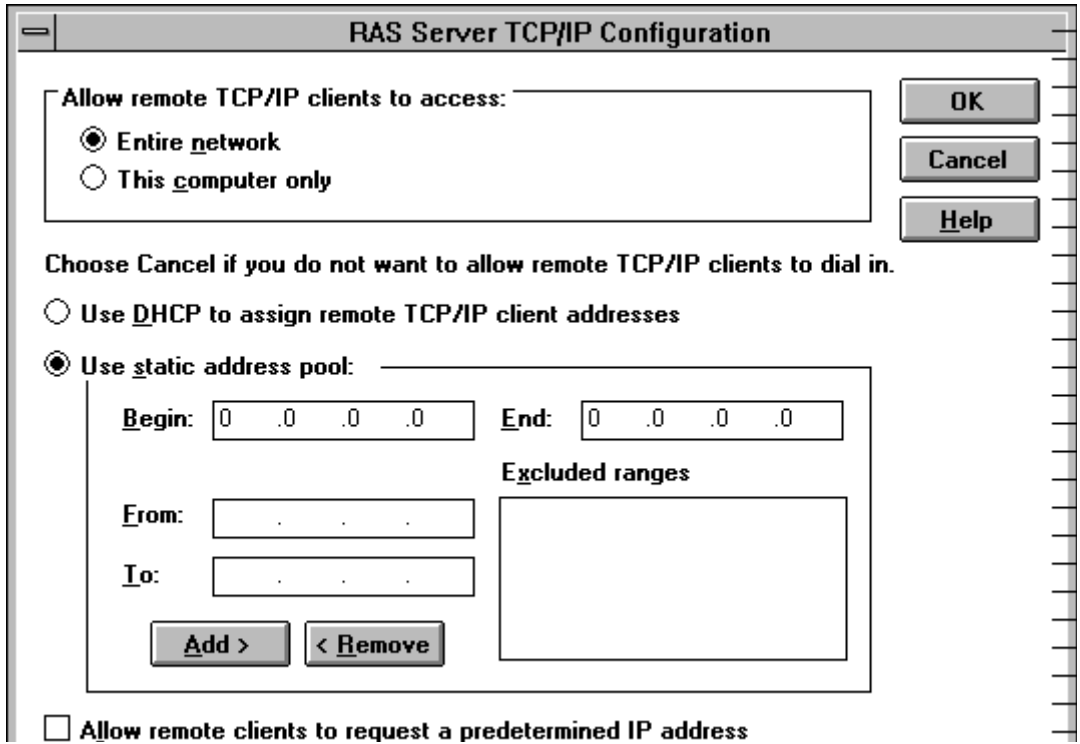
14 Choose the *Network* button to configure the network settings for the port and modem that is highlighted.

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, Verify 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.

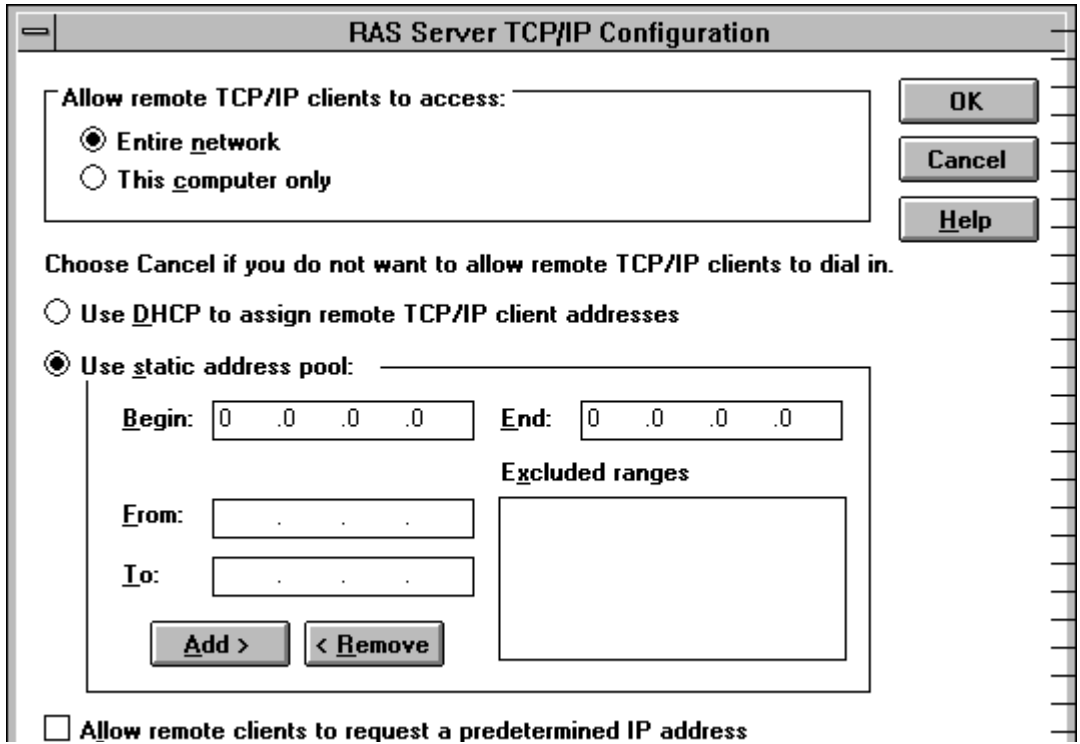
It is recommended that the IP address range start right after the last IP address assigned to the Windows Server itself.

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 address 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*.

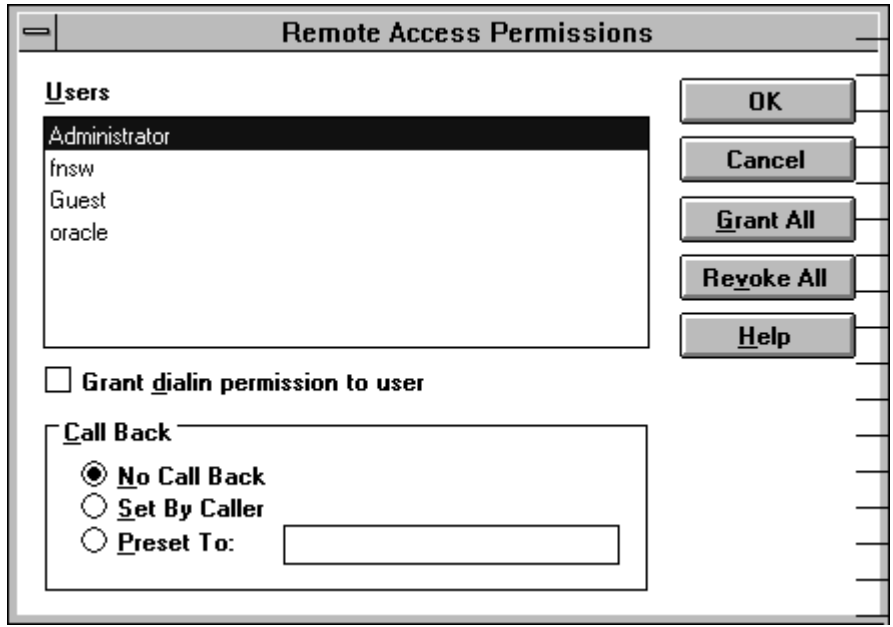
Granting Remote Access Rights to the FNADMIN User

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 the FileNet software user, such 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 Verify 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 Consider carefully whether to grant 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 To use pcAnywhere, customers must obtain a license from Symantec Corporation.

Why Use pcAnywhere?

A reliable and robust tool enables your service representative 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, pcAnywhere provides timely support and problem resolution.

Installing pcAnywhere will allow your service representative 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 Tech Info media.

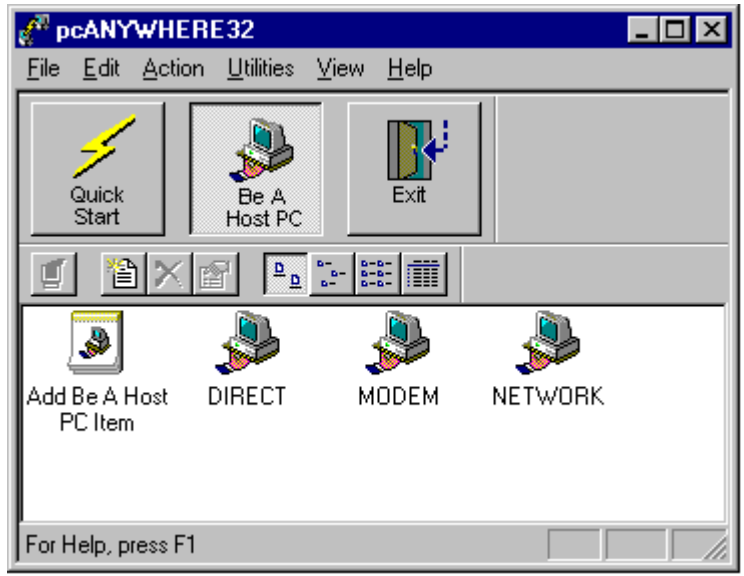
1. Refer to the *Norton pcAnywhere User's Guide* (Chapter 2), and install pcAnywhere on the Windows server(s) that will require remote control capabilities.

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.



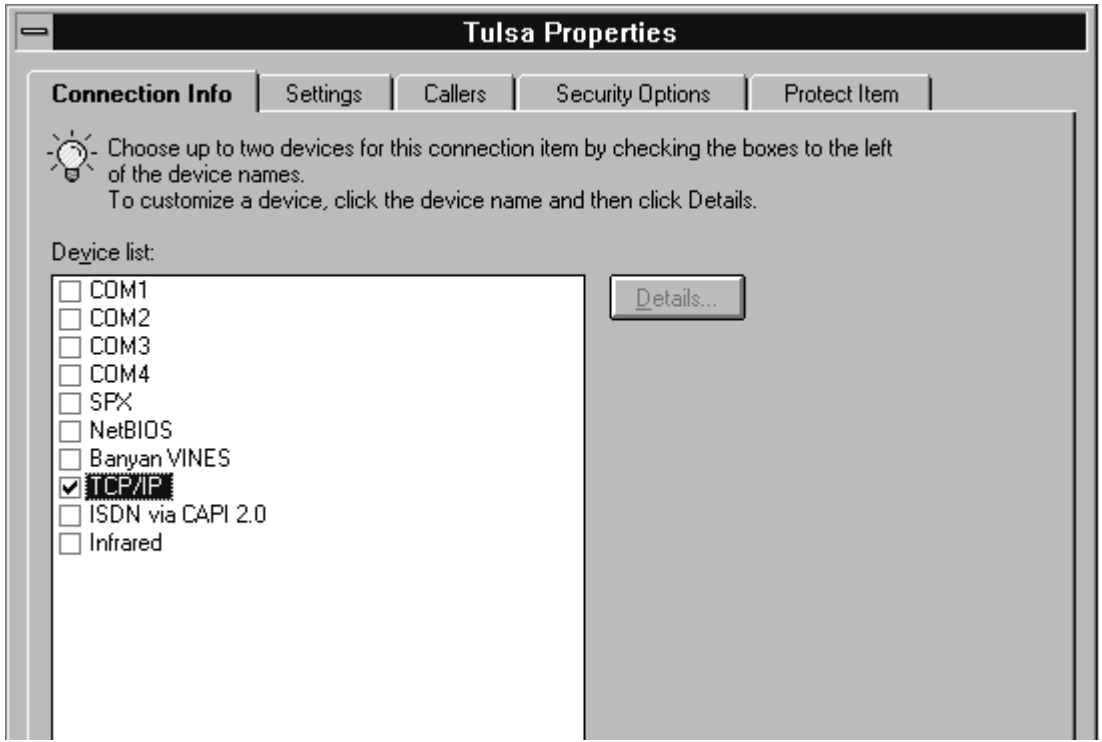
4 At the top of the pcAnywhere window, click the *Be A Host PC* button.

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 the FileNet software user, such 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, verify that 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 your service representative for specific instructions.

Appendix D – Uninstalling Image Services

To remove the Image Services software from your server, follow these steps:

1. Verify that you're logged on with **root** privileges.
2. Stop the Image Services software.
3. Back up any log files or other data in the \fnsw and \fnsw_loc directories that you want to save.
4. Change to the root directory and run the uninstaller by entering:
   - Graphical mode – standard, graphical interface:

     <drive>:\fnsw\etc\uninstaller\uninstall_is.exe &

   - Console mode – plain text interface:

     <drive>:\fnsw\etc\uninstaller\uninstall_is.exe -console

- Silent mode – no screen display:

  <drive>:\fnsw\etc\uninstaller\uninstall_is.exe -silent

Important You must use the uninstall_is.exe command if you decide to uninstall the Image Services software. You cannot use the Operating System tools to remove Image Services.

5 The uninstaller will lead you through the necessary steps and prompt you when finished.

Note The uninstaller leaves certain critical directories intact to protect existing data.

6 After the uninstaller has finished, go to the \fnsw directory and examine the remaining contents. Manually remove any unwanted files and directories.

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