IBM FileNet Image Services
Version 4.2

Upgrade Procedure for Windows Server

SC19-3333-00

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Note
Before using this information and the product it supports, read the information in "Notices" on page 41.

This edition applies to version 4.2 of IBM FileNet Image Services (product number 5724-R95) and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

ibm.com and related resources

Product support and documentation are available from ibm.com.

Support and assistance

Product support is available on the web. Click Support from the product website at:

FileNet Image Services Support
http://www.ibm.com/software/data/content-management/filenet-image-services/

PDF publications

You can view the PDF files online using the Adobe Acrobat Reader for your operating system. If you do not have the Acrobat Reader installed, you can download it from the Adobe website at http://www.adobe.com.

See the following PDF publications website:

Product	Website
Product Documentation for FileNet Image Services	http://www.ibm.com/support/docview.wss?rs=3283&uid=swg27010558

How to send your comments

Your feedback is important in helping to provide the most accurate and highest quality information.

Send your comments by using the online reader comment form at https://www14.software.ibm.com/webapp/iwm/web/signup.do?lang=en_US&source=swg-rcf.

Consumability survey

You are invited to tell IBM how to improve the consumability of software products. If you want to help IBM make IBM® FileNet® P8 easier to use, take the Consumability Survey at http://www.ibm.com/software/data/info/consumability-survey/.

Contacting IBM

To contact IBM customer service in the United States or Canada, call 1-800-IBM-SERV (1-800-426-7378).

To learn about available service options, call one of the following numbers:

- In the United States: 1-888-426-4343
- In Canada: 1-800-465-9600

For more information about how to contact IBM, see the Contact IBM website at http://www.ibm.com/contact/us/.

Chapter 1. Upgrade planning and procedures

There are several upgrade planning steps that need to be completed before you can start to upgrade your IBM FileNet Image Services system.

The following procedures guide you through the process of upgrading your FileNet Image Services system.

Upgrade Paths

The following upgrade starting points have been tested and approved to upgrade to FileNet Image Services 4.2.0. Make sure that the server you are updating is at one of these FileNet Image Services starting points before beginning this upgrade.

- 4.0.SP5
- 4.1.0
- 4.1.1
- 4.1.2

For information about supported operating systems and databases see, *IBM FileNet Image Services, Image Services Resource Adapter, and Print Hardware and Software Requirements*.

To download these guidelines from the IBM support page, see "ibm.com and related resources" on page v.

Strategy for multiserver upgrades

When upgrading a multiserver FileNet Image Services system, you should upgrade your server types in a specific order and you should be familiar with some basic technologies to accomplish this.

When upgrading the software on a multiserver FileNet Image Services system, upgrade the servers in the following order:

- Root/Index server or Root/Index/Storage Library server
- Storage Library servers
- Application servers

After you have finished upgrading the new software on the first server, you can begin upgrading the software on the next server while you complete the configuration steps on the first server. In this manner, the upgrade of one server can overlap the upgrade of the next server, and so on.

For the Windows operating system you should be familiar with:

- Knowledge of the Windows operating environment
- Knowledge of Windows network models
- Experience with Windows Administrative Tools
- Peripheral device configuration methods (for example tape drives, printers, and storage libraries)
- DB2, Oracle, or Microsoft SQL Server Database Administration

Chapter 2. Upgrade planning considerations

The prerequisites for upgrading IBM FileNet Image Services are included in the following sections.

General prerequisites for all IBM FileNet Image Services operating systems

You need to be aware of the hardware and software requirements that are common to all FileNet Image Services platforms.

The hardware and software requirements include the following:

Hardware settings

Each of the operating systems supported in this version of FileNet Image Services, have specific hardware settings that must be obtained before upgrading the FileNet Image Services software.

Server memory

- Root/Index and Application Servers with Oracle:
  - 10g - 1024 MB memory for each processor in the server.
  - 11g - 1024 MB memory for each processor in the server.
- Root/Index and Application Servers with DB2:
  - 512 MB memory for each processor in the server.
- Storage Library and Application Servers without RDBMS:
  - 512 MB memory for each processor in the server.

Total disk space

The amount of disk space required for RDBMS software depends on whether Server or Client software is installed and the products selected. For more information refer to the following guidelines:

- *IBM FileNet Image Services Guidelines for Installing and Updating Site-Controlled Oracle Software on UNIX Servers*
- *IBM FileNet Image Services Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software for Windows Server*
- *IBM FileNet Image Services Guidelines for Installing and Configuring IBM DB2 Software*

To download these guidelines from the IBM support page, see "ibm.com and related resources" on page v.

Space for FileNet Image Services software

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

- 500 MB total space in `\fnsw`

Temporary space

The FileNet Image Services installer also needs a certain amount of temporary disk space in addition to the downloaded FileNet Image Services software modules. Check the following table for the amount of temporary space you will need on your servers and for the name of the directory where the installer intends to place the temporary files.

Operating system	Size in MB	Temporary directory
Windows	420	On Windows servers, the installer determines the temporary file path in the following order: • The path specified by the TMP environment variable. • If TMP is not defined, the path specified by the TEMP environment variable. • If both TMP and TEMP are not defined, the Windows directory. However, the installer does not verify that the directory specified by the TMP or TEMP environment variables exists.

- On Windows servers, this optional temporary directory must be outside the `\fnsw` and `\fnsw_loc` directory structures.

Operating system-specific prerequisites

Each of the operating systems supported in this version of IBM FileNet Image Services, have specific prerequisites that must be met for upgrading the FileNet Image Services software.

See the Hardware and Software requirements guide for the FileNet Image Services software, titled *IBM FileNet Image Services, Image Services Resource Adapter, and Print Hardware and Software Requirements*.

To download these guidelines from the IBM support page, see "ibm.com and related resources" on page v.

Hardware requirements

Each of the operating systems supported in this version of FileNet Image Services, have specific hardware requirements that must be met for upgrading the FileNet Image Services software.

Operating System	OS-specific Prerequisites
Windows	Server Hardware • An NTFS file system with the required amount of disk space as described in the Total Disk Space section. To see how much disk space is available, use the Windows Explorer, and select the drive where you plan to install FileNet Image Services. The available disk (free) space appears in the message area at the bottom of the window. See the FileNet Disk Sizing Spreadsheet for actual dataset sizes. **Note:** Oracle 10g software is compatible with 32-bit Windows servers. • A DVD drive is optional for use on your Windows server. **Important:** Upgrade to the Windows operating system before you upgrade the FileNet Image Services and RDBMS software.

Software requirements

An IBM FileNet Image Services system has specific software that is installed as part of the upgrade of the FileNet Image Services software.

FileNet Image Services software

Each operating system that is supported with FileNet Image Services is packaged separately and also includes the COLD software.

IBM FileNet Image Services 4.2 includes COLD 4.2 software and is titled as follows:

- *FileNet Image Services & COLD 4.2 for Windows*

RDBMS software

The IBM FileNet Image Services release contains several supported relational database management system software options depending upon the operating system running on the server.

IBM DB2 RDBMS software

See the following document for more information:

- *IBM FileNet Image Services Guidelines for Installing and Configuring IBM DB2 Software*

To download this document from the IBM support page, see "ibm.com and related resources" on page v.

Oracle RDBMS Software (FileNet-controlled)

Attention: The Database Administrator must install the appropriate version of Oracle and must supply the information described in the Oracle Guidelines to the System Administrator before FileNet Image Services can be upgraded.

See the following documents for more information:

- *IBM FileNet Image Services Oracle 10g Installation and Upgrade Procedures (FileNet-Controlled)*
- *IBM FileNet Image Services Oracle 11g Installation and Upgrade Procedures (FileNet-Controlled)*

To download these guidelines from the IBM support page, see "ibm.com and related resources" on page v.

Oracle RDBMS Software (Site-controlled)

Attention: The Database Administrator must install the appropriate version of Oracle and must supply the information described in the Oracle Guidelines to the System Administrator before FileNet Image Services can be upgraded.

See the following document for more information:

- *IBM FileNet Image Services Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software for Windows Server*

To download these guidelines from the IBM support page, see "ibm.com and related resources" on page v.

MS-SQL RDBMS software

See the following document for more information:

- *IBM FileNet Image Services Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software for Windows Server*

To download this document from the IBM support page, see "ibm.com and related resources" on page v.

Debugging software

Debugging software must be installed on each server. A debugger enables support personnel to troubleshoot both FileNet Image Services and operating system problems.

Debugging Windows:

Debugging software is recommended for IBM FileNet Image Services and, if present, must be installed on each server. Use the debugging software that was packaged with the Windows operating system.

Microsoft Visual C++ 2005 Redistributable Package

The IBM FileNet Image Services 4.2 binaries for Windows are compiled with the Microsoft Visual C++ 2005 Redistributable Package (x86) English version.

The FileNet Image Services installation program automatically installs this package. If during the course of using FileNet Image Services the Microsoft Visual C++ 2005 Redistributable Package is uninstalled, the FileNet Image Services administrator is required to manually download and install the package from the Microsoft website.

Important: Do not use the Service Pack version of the Microsoft Visual C++ 2005 Redistributable Package. Any mismatch in the versions could result in undesirable behaviors in the FileNet Image Services applications.

Installations running content services

When running IBM FileNet Content Services and IBM FileNet Image Services software on the same server, it is important that you upgrade the software in a specific order.

Procedure

To ensure a successful upgrade when your system is running Content Services and FileNet Image Services software on the same server with Microsoft SQL Server:

1. Upgrade the Microsoft SQL Server and FileNet Image Services software first .

2. Upgrade the Content Services software after upgrading the Microsoft SQL Server and FileNet Image Services software.

Related documentation

IBM FileNet Image Services has a variety of reference and procedural documents that you can download from the IBM support site.

To access the related documents, see "ibm.com and related resources" on page v.

- *IBM FileNet Image Services System Administrator's Handbook*
- *IBM FileNet Image Services System Administrator's Companion for Windows Server*
- *IBM FileNet Image Services Installation and Configuration Procedures*
- *IBM FileNet Image Services Enterprise Backup and Restore User's Guide*
- *IBM FileNet Image Services Third-Party Backup/Restore Guidelines*
- *IBM FileNet Image Services Guidelines for Installing and Configuring IBM DB2 Software*
- *IBM FileNet Image Services Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software for Windows Server*
- *IBM FileNet Image Services MSAR Procedures and Guidelines*
- *IBM FileNet Image Services Integral Single Document Storage Procedures and Guidelines*
- *IBM FileNet Image Services Oracle 10g Installation Procedures (FileNet-controlled)*

Chapter 3. Preparing to upgrade FileNet Image Services on a Windows server

There are several tasks you must complete in order to upgrade the IBM FileNet Image Services software on a Windows server.

Windows operating system

If necessary, you must upgrade the server to a supported version of Windows before installing IBM FileNet Image Services. If you are running Windows 2000 or Windows 2003, upgrade your operating system BEFORE you upgrade your RDBMS and FileNet Image Services software.

Update the \etc\hosts file

The \etc\hosts file must contain the four-part NCH service name of the local server. If an entry for your local server does not exist, you can add one now.

About this task

The location of the hosts file can change, depending on where the Windows Server software is installed. The general format of a hosts file entry is:

```
IP_address_of_IS_Domain IS_server NCH_four_part_service_name
```

Important: Your hosts file might contain a combination of the familiar IPv4 network addresses and the more recent IPv6 network addresses. The IPv6 addresses contain up to eight groups of hexadecimal numbers separated by colons (for example, 2001:DB8:FE80::2C0:FE35:9FFF:D28).

The hosts file is typically located in C:\WINDOWS\system32\drivers\etc\.

Procedure

Root/Index server IP address: 192.0.2.14

Example

For the following entries:

```
Root/Index server IP address: 192.0.2.2
Root/Index server name:  titian
Domain name: Titian:ExampleCo
```

The hosts file entry looks like this:

```
192.0.2.2        titian           titian-exampleco-nch-server
```

If your FileNet Image Services system will be communicating with other FileNet Image Services domains, your `\etc\hosts` file might resemble the following example:

```
192.0.2.2                        titian          titian-exampleco-nch-server
192.0.2.5                        bassanio        bassanio-exampleco-nch-server
192.0.2.6                        atelier         atelier-exampleco-nch- server
```

```
2001:DB8:FE80::2C0:FE35:9FFF:D28     atelier         atelier-exampleco-nch-server
192.0.2.7                            sienna          sienna-exampleco-nch-server
192.0.2.8                            vermeer         vermeer-exampleco-nch- server
2001:DB8:927:2638::927::2638         vermeer         vermeer-exampleco-nch-server
2001:DB8:fe80::fefe::0927:2638       vermeer         vermeer- exampleco-nch-server
```

Running Spacerpt (Oracle only)

You can run `spacerpt` to generate information about your database configuration and verify that the Oracle RDBMS objects are correct. You must know the f_maint password to run `spacerpt`.

Procedure

To run `spacerpt`:

1. As the IBM FileNet Image Services user, use the Windows Task Manager to verify that Oracle is running. To start the Windows Task Manager, right-click the Task Bar and select **Task Manager** from the menu. When the Task Manager window opens, select the **Processes** tab. If Oracle is running, you see at least four Oracle processes. If not, start the Oracle software.
   - If Oracle is Site-controlled, ask the DBA to start Oracle.
   - If Oracle is FileNet-controlled, and there are no Oracle processes running, start Oracle by entering:

     ```
     fnutil startrdb
     ```
2. Run spacerpt and send the results to a file. At the `spacerpt >` prompt enter:

   `output_file_name` where *output_file_name* can be any name you choose.
3. Print a copy of this file and keep it in a safe place. You can compare this copy with the spacerpt that you run at the end of this upgrade procedure.

Back up the server configuration file

You need to make a copy of the `\fnsw\etc\serverConfig` file and the `\fnsw\etc\serverConfig.custom` file, if it exists.

Procedure

To back up the server configuration file:

1. Logon as an FileNet Image Services user.
2. Make a copy of the `\fnsw\etc\serverConfig` file by entering commands similar to the following:

   ```
   cd \fnsw\etc
   copy serverConfig serverConfig.save
   ```
3. If the `\fnsw\etc\serverConfig.custom` file exists, then make a copy of that file by doing the following:

   ```
   cd \fnsw\etc
   copy serverConfig.custom serverConfig.custom.save
   ```

Results

After the FileNet Image Services upgrade, the `serverConfig.save` and, if applicable, the `serverConfig.custom.save` files are moved to the `\fnsw\install\backup\fnsw\etc` folder.

What to do next

After the upgrade procedure is complete, verify that the server configuration parameters are unchanged by comparing the saved files with the installed `serverConfig` files.

Configure Windows firewall with advanced security - Windows 2008 only

After installing IBM FileNet Image Services on a Windows 2008 server, you need to confirm that the inbound rules are configured correctly.

Procedure

To confirm that the inbound rules are configured correctly:

1. As Administrator, start the **Configuration** > **Server Manager**, select **Windows Firewall with Advanced Security** and click **Inbound Rules**.
2. Click **New Rule** in the **Actions** column on the right side, then select the **Port** option on the Rule Type window and click **Next**.
3. On the Protocol and Ports window, select TCP for the port type, and enter 32768, 32769 in the **Specific local ports** field and click **Next**.
4. On the Action window, select **Allow the connection** and click **Next**.
5. On the Profile window, verify that all of the boxes are checked and click **Next**.
6. On the Name window, enter a Name for this rule (such as FN_COR_TMS), an optional description, and click **Finish**.
7. Repeat Steps 2 through 6 to create a new rule. This time select **UDP** instead of **TCP** and enter **32770** in the **Specific local ports** field in Step 3. Also give the rule a new name (such as FN_NCH) in Step 6.
8. When you are done, double-click each rule to confirm it has the correct settings for your system.
9. For the inbound rules to take effect, stop FileNet Image Services and run killfnsw. Restart the server and then restart FileNet Image Services.

Turn off user account control - Windows 2008 only

The User Account Control (UAC) feature of Windows 2008 must be turned off for IBM FileNet Image Services.

Procedure

To turn off UAC, follow these steps:

1. Open the Control Panel.
2. Double-click the **User Accounts** icon.
3. Click **Turn User Account Control** on or off.
4. Clear the check box. The new setting will take effect after you restart the server.

Shut down the software

There are several things you must do to shut down the IBM FileNet Image Services and the associated processes as part of this upgrade.

About this task

Notify all users on the system to logout before you continue with the upgrade procedure. Warn them you are about to shut down the FileNet Image Services software and kill all processes.

Attention: Startup must be in the opposite order with the root server first, followed by the storage library servers, and finally the application servers.

Exiting FileNet Image Services Toolkit applications

As part of the shutdown procedure, you must exit any IBM FileNet Image Services Toolkit applications you have running.

About this task

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

Stopping the software

You need to enter a single command to shutdown the IBM FileNet Image Services software. On a multi-server system, the command must be entered and the different server types in a specific sequence.

Procedure

To shutdown the FileNet Image Services software:

1. Log in as a FileNet Image Services user.
2. Stop Oracle:
   - For Site-controlled Oracle, ask the DBA to stop Oracle.
   - For FileNet-controlled Oracle, enter:

     ```
     fn_util stoprdb
     ```
3. Stop the FileNet Image Services software:

   ```
   initfnsw -y stop
   ```

   In a multi-server system, stop the software in the following order:
   a. The application server(s)
   b. The storage library server(s)
   c. The root server
4. Stop all remaining processes displayed:

   ```
   killfnsw -D y
   ```

   - The **-D** option kills daemons (such as, TM_daemon).
   - The **-y** option automatically answers Yes to subsequent `killfnsw` prompts.

   The killfnsw command also stops the IS ControlService.
5. Stop the SNMP process by entering:

   ```
   net stop "SNMP"
   ```
6. Use the Windows Task Manager to verify that all the FileNet Image Services processes have been killed. If any fnsw processes remain active, including `TM_daemon and COR_Listen`, select each one and click **End Process**.

Performing a System Backup

It is important to have a recent full backup of the IBM FileNet Image Services system, perform a system backup.

About this task

If you do not have a recent full backup of the FileNet Image Services system, especially the `\fnsw` and `\fnsw_loc` file systems, backup the system datasets. See the *IBM FileNet Image Services System Administrator's Companion for Windows Server*, for complete information on performing a system backup. To download this document, see "ibm.com and related resources" on page v.

Upgrading the Windows operating system (optional)

If necessary, you must upgrade the server to a supported version of Windows before installing IBM FileNet Image Services. If you are running Windows 2000 or Windows 2003, upgrade your operating system BEFORE you upgrade your RDBMS and FileNet Image Services software.

About this task

If you are not running a supported Windows release, upgrade your operating system before you install the Relational Database software and FileNet Image Services. See the Microsoft documentation and installation procedures to upgrade your operating system and install the required service pack.

Download the Help Viewer (Windows 2008 only)

When you install FileNet Image Services on a Microsoft Windows 2008 server, you must also download the `WinHlp32.exe` file from the Microsoft Download Center.

About this task

This file is needed to view 32-bit HLP files. `WinHlp32.exe` was included in previous versions of Windows, but it was not included in the Windows 2008 release. To download `WinHlp32.exe`, visit the Microsoft website.

Chapter 4. Upgrading the relational database software

Verify that the relational database software has been upgraded, if necessary.

Obtain the necessary parameters from the Database Administrator. See the following documents for more information:

- *IBM FileNet Image Services Oracle 10g Installation and Upgrade Procedures (FileNet-Controlled)*
- *IBM FileNet Image Services Oracle 11g Installation and Upgrade Procedures (FileNet-Controlled)*
- *IBM FileNet Image Services Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software for Windows Server*
- *IBM FileNet Image Services Guidelines for Installing and Configuring IBM DB2 Software*

To download these documents, see "ibm.com and related resources" on page v.

Chapter 5. Upgrading the FileNet Image Services software

At this point, compatible versions of the operating system software and the relational database software have already been installed on your FileNet Image Services system. Perform the steps in this section on all servers.

Before you start the installation program

Complete the tasks in this section before you start the IBM FileNet Image Services installation program.

Before you begin

Important: If you are planning to upgrade the FileNet Image Services software on Windows using the Microsoft Systems Management Server (SMS) to install the FileNet Image Services software from a central site server, skip to Microsoft Systems Management Server (SMS) Procedures.

Starting the installation program

Run a System Check to verify the configuration prerequisites and upgrade the FileNet Image Services software.

About this task

You can choose to run both the System Check and FileNet Image Services installation program, or the System Check only.

Important: The current version of FileNet Image Services can run while you are performing the System Check.

The 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 `drive:\fnsw_loc\logs\install\4.2.0\` directory or equivalent location that you specified.

The FileNet Image Services Installation program can 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 installation program is running. Review the install log file for access to the progress and results of the installation.

Procedure

To start the FileNet Image Services installation program:

1. Log on as a user with Administrative privileges.
2. For Silent Installation only, locate the appropriate options.txt file. The option file contains standard responses to the installation program prompts. Copy the

file to a local directory on your server. (You can rename it to something shorter, such as opt.txt.) The options and their default values are fully described in the file. Use your preferred text editor to make changes and save the file.

3. As a user with Administrative privileges, change to the directory where the FileNet Image Services software is located and invoke the appropriate installation program.
   - Graphical mode: `is_4.2.0_win.exe`
   - Silent mode - no screen display: `is_4.2.0_win.exe -i silent -options` *`drive`*`:\tmp\opt.txt`

   Important: `\tmp\opt.txt` is the location of the text file you modified in step 2 on page 17. Specify its full path on the command line. For example, `-options \fnsw_loc\tmp\opt.txt .`

   If you run the System Check in silent mode, check the log file in `\fnsw_loc\logs\install\4.2.0` to determine the results. The name of the log file is IS_4.2.0.log.

   If you determined earlier that the `\tmp` directory does not have enough space, specify an alternate directory. Adding `-is:tempdir directory` to the command line overrides the default `\tmp` 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_4.2.0_win.exe -is:tempdir <drive:>\othertmp`

   Important: `\othertmp` is the specific temporary directory you want to use.
4. In graphical mode, you will see a series of screens. It might take a few minutes to display.
5. When prompted by the Installer, select the **Upgrade** option.
6. Run either the System Check only or the System Check and Install FileNet Image Services.

   During the System Check, the installation program verifies the status of server characteristics in these categories:
   - Hardware checks
   - Operating system checks

   The same checks are performed for both the System Check only and the System Check and Install FileNet Image Services options. Items in the status column are color-coded to indicate:
   - **Pass** (green) indicates that the check has passed.
   - **Optional** (yellow) indicates that the check encountered a value that might affect the performance of the FileNet Image Services system, if it is not corrected. However, the installation program can continue.
   - **Fail** (red) indicates that a check has failed and the installation program cannot continue.

   Some System Checks produce only warnings, while others prevent the installation of FileNet Image Services:

Table 1. System check warnings and errors

Condition	Severity
Not logged on as superuser	Prevents installation
Insufficient file system space	Prevents installation
Insufficient swap space	Warning only

Table 1. System check warnings and errors (continued)

Condition	Severity
Incompatible host name	Prevents installation
Incompatible O/S	Prevents installation
Missing debugger	Warning only
Kernel parameter out of range	Warning only
Image Services is running	Prevents installation

Upgrade FileNet Image Services

Depending on the processor speed of your server, expect the upgrade to take approximately 20 minutes.

As the FileNet Image Services upgrade progresses, check the log file to verify that the information displayed is correct for your system.

When the software upgrade is finished, the upgrade installation program creates an uninstaller, and then verifies the version information. After a successful upgrade, the final screen prompts you to restart your computer so that the upgrade can take effect.

Important: Do not start any server until the Root/Index server upgrade is complete.

Tip: If you have several FileNet Image Services servers to upgrade in a multiserver environment, you can begin installing the FileNet Image Services software on the next server while you continue to configure the FileNet Image Services software on the current server. Upgrade the FileNet Image Services servers in the following order:

1. Root/Index server
2. Storage Library server
3. Application server

Chapter 6. Completing the upgrade on Windows servers

Depending upon the relational database software installed on your server, you need to continue with the appropriate next step.

- If you are upgrading Oracle, see *IBM FileNet Image Services Guidelines for Installing and Updating Site-Controlled Oracle and MS SQL Software for Windows Server*. To download these guidelines from the IBM support page, see "ibm.com and related resources" on page v.
- If you are upgrading an Application Server that does not have a relational database, such as a batch entry server, continue with "Completion procedure for application servers without an RDBMS" on page 26.

Upgrading the FileNet Image Services RDBMS-related files

If the IBM FileNet Image Services system is configured with a site-controlled relational database (on a local or on a remote database server), verify that the relational database is started before running the fn_setup_rdb command.

Non-clustered FileNet Image Services system

To upgrade the relational database for a non-clustered IBM FileNet Image Services system, do the following procedure.

Procedure

1. Shutdown the FileNet Image Services software. Use the following commands:

   ```
   initfnsw -y stop
   killfnsw -ySD
   ```

2. As FileNet Image Services software user, enter the following command to upgrade the FileNet Image Services configuration files and relational database-related files:

   ```
   fn_setup_rdb -u
   ```

3. Follow the prompts to enter the requested information, such as the MS SQL Server home directory and the path (for example, C:\Program Files\Microsoft SQL Server\90) for your relational database.
4. If your system uses Oracle or DB2 relational databases, skip to "Verify the server configuration" on page 26

Clustered FileNet Image Services system

When upgrading a clustered system to IBM FileNet Image Services 4.2, the configuration command must not be run until all nodes have been installed. To upgrade the relational database for a clustered FileNet Image Services system, do the following procedure.

Procedure

1. Shutdown the FileNet Image Services software. Use the following commands:

   ```
   initfnsw -y stop
   killfnsw -ySD
   ```

2. As FileNet Image Services software user, enter the following command to upgrade the FileNet Image Services configuration files and relational database-related files:

```
fn_setup_rdb -u
```

The configuration command issues the following warning prompt when it is started.

```
WARNING: If this is a cluster installation, fn_setup_rdb -u must NOT be run
until all nodes of the cluster have been upgraded. Enter Y to continue or N to abort:
```

3. Follow the prompts to enter the requested information, such as the MS SQL Server home directory and the path (for example, C:\Program Files\Microsoft SQL Server\90) for your relational database.
4. If your system uses Oracle or DB2 relational databases, skip to "Verify the server configuration" on page 26

Completion procedure for Microsoft SQL Server systems

Start the Microsoft SQL Server Service.

Before you begin

Perform the following procedures on systems with Microsoft SQL Server relational databases. If your system uses Oracle or DB2 relational databases, skip to "Start FileNet Image Services" on page 27.

Procedure

To start the Microsoft SQL Server service:

1. From **Administrative Tools**, locate and double-click the **Services** icon.
2. Locate and double-click **SQLserver(MSSQLServer)** service.
3. Change the **Startup type** to **Automatic**, if necessary.
4. Click the **Start** button to start the MSSQLServer service, and click **OK**.

Shared memory

FileNet Image Services software makes extensive use of shared memory. This is memory that is accessible to all FileNet Image Services processes. Shared memory is used to share data among FileNet Image Services processes, one process writes data to shared memory and another process reads the data. The ipc_tool utility is used to monitor FileNet Image Services shared memory.

Shared memory segments

Shared memory is allocated in units called segments. The total shared memory used for FileNet Image Services is determined by two factors: the number and size of the segments. Both of these can be configured. Shared memory segments are attached to processes, so that the data saved in these segments can be shared across multiple processes.

FileNet Image Services shared memory segment types

FileNet Image Services uses shared memory for the following segments:

- Process log segment, which contains information on FileNet Image Services operation
- Circular buffer debug log segment, an optional segment used only when certain kinds of debugging are enabled. This segment is not created by default.
- Address manager segment, which contains a list of addresses used by the shared memory data segments

- Shared memory data segment , which contains Image Services working data

Process log segment, Circular Buffer Debug log segment, and Address Manager Segment each use a single small segment and do not require special attention.

The remainder of this document deals with the Shared Memory Data Segment. FileNet Image Services allocates at least one data segment on the system. The FileNet Image Services subsystems (such as MKF, DOC, CSM, and so on) store their working data in data segments.

To display information on shared memory segment usage run

```
ipc_tool –A
```

The following is an example. The output can vary depending upon the hardware platform and release

```
astro(fnsw)/fnsw/local/logs/elogs> ipc_tool –A

  ipc_tool VERSION 4.2.0.9      2011/01/20 16:31:00

  Shared memory information for Image Services:

  Shared memory data segment size: 67108864 bytes (64 MB)

  Software shared memory limit:  10 data segments (640 MB)
  Tested shared memory maximum:   9 data segments (576 MB)

  The "Software shared memory limit" is the theoretical maximum
  amount of shared memory that could be allocated given the current
  Image Services configuration and system imposed limits.

  The "Tested shared memory maximum" is the actual maximum amount of
  shared memory that was allocated by a test during Image Services startup.
  This is the practical upper limit on shared memory for this system
  using the current shared memory configuration.  The memory allocated
  for this test was released after the test.  The actual shared memory
  currently in use is displayed below.

Address Manager segment: (segment size = 200 bytes)

       Address     Shm id     Creator
  0 0xc0000000  101711876  Shared addrmgr

Shared memory data segments:

    Address     Shm id    Creator             Used Bytes       Free Bytes
  1 0xb0000000  30408717  FileNet server    67061940  99%          0   0%
  2 0xa0000000  40894476  FileNet server           0   0%    67108816 100%
  3 0x90000000 587202570  FileNet server    53138548  79%    13959732  20%

Total Image Services allocated shared memory data segments: 3

  Note: Used + Free is less than the segment size because some
  "overhead" bytes are used for shared memory maintenance and
  these are not recorded as Used or Free.  The percentages may
  not add up to 100 due to rounding.

Image Services shared memory usage (totals):

                  Bytes    MB
  Allocated:  201326592   192
  Used:       120200488   114  59.7%
  Free:        81068548    77  40.2%
  Overhead:       57556     0   0.0%
```

```
The following table lists the addresses used for the shared memory segments.

System's fixed shared memory address table (derived):

  0: 0xc0000000  Allocated
  1: 0xb0000000  Allocated
  2: 0xa0000000  Allocated
  3: 0x90000000  Allocated
  4: 0x80000000  Not used
  5: 0x70000000  Not used
  6: 0x60000000  Not used
  7: 0x50000000  Not used
  8: 0x40000000  Not used

The size of a data segment, the number of allocated segments, and the amount of free memory in
the segments is shown.
```

To summarize SHM usage by Image Services subsystem run:

```
ipc_tool –t

Abstract Total Avg Block Total Bytes
-------- ----- --------- -----------
ARM     3   5270.67  15812
ASH     1   56.00   56
BES     3   881.33  2644
BESl     1   132.00  132
. . .
WQS     1   36.00   36
WQSl      2   524.00  1048
WRT     1   20.00   20
```

The output determines which subsystems are using the most shared memory.

To display detailed SHM subsystem usage run:

```
ipc_tool –a
```

Shared memory usage is broken down into the individual chunks used by the various subsystems.

Setting shared memory for Microsoft SQL Server

There is a potential memory conflict between FileNet Image Services and Microsoft SQL Server. This release of FileNet Image Services now supports using an address list for setting and managing shared memory automatically and only requires a reboot to remove the conflicting address.

Important: The addr_list feature was introduced in releases 4.1.1 FP 11 and 4.1.2 FP 8.

The allocation of shared memory on Windows systems is more complicated than on UNIX, and requires additional configuration. FileNet Image Services was designed to store virtual memory addresses within shared memory data. For example, this allows placing linked lists in shared memory. However, storing addresses in shared memory forces a restriction – that all processes must map (attach) a particular shared memory data segment at the same virtual memory address. For example, if shared memory segment #1 is mapped to virtual address 0x45000000 in one process, then it must be mapped at this same address in all other FileNet Image Services processes. This creates a problem because an address that is available for shared memory in one process may not be available in another process – it might be used (occupied) by a vendor software DLL, or for a thread stack, and so on.

The addresses that are available for FileNet Image Services shared memory vary between processes and systems, and can change over time. For example, installing a new Windows update may include a new DLL file whose base address conflicts with one or more addresses previously used for shared memory. This requires changing the FileNet Image Services memory layout to avoid the conflict. Shared memory allocation is very dynamic, and the mechanism to handle the addresses must be flexible.

- If your system uses Oracle or DB2 relational databases, skip to "Verify the server configuration" on page 26.
- If Microsoft SQL Server is accessed remotely and not installed on the same system as FileNet Image Services, this procedure is not necessary. Before following this procedure check with your FileNet Image Services technical support representative.
- The following event log error is created when a shared memory conflict occurs:

  ```
  2010/04/09 13:20:51.063 202,0,24 <fnsw> vwtool (4596.7584.0 0x11f4.1da0) ...
  [CRITICAL]
  fnc_shmat failed for key=0x464a0000 from_catch_segv=0 err=487

  2010/04/09 13:20:51.281 202,0,2005 <fnsw> vwtool (4596.7584.0 0x11f4.1da0) ...
  [CRITICAL]
  SysV: Error 487 mapping file view. Process Aborting...
  This is most likely due to a shared memory conflict.
  ```

  Due to the complex nature of shared memory conflict issues, the types of error messages generated in the event log can vary, and thus the above error may not actually appear. The event log should be analyzed by IBM Support Services to determine the cause.

FileNet Image Services shared memory addresses on Windows

FileNet Image Services checks each of its processes to build a list of virtual addresses that can be used for shared memory.

This list is stored in a file:`\fnsw_loc\sd\1\addr_list`

The addresses are saved as ASCII text, so the file can be examined. The file is automatically created and updated by FileNet Image Services.

The addr_list file is initially created by the first FileNet Image Services process that starts up after a new install. That process scans its virtual memory map for free areas large enough to contain a shared memory segment. The addresses for these areas are saved for use by other FileNet Image Services processes. All FileNet Image Services processes periodically check the list against their own memory usage to determine if each address is free in that process. If an address is not free, then it is removed from the list. The new, revised address list is saved in the addr_list file during a recycle (the previous version of the file is renamed so it is not lost).

This method has the advantage of creating an address list that is uniquely tailored to each individual system and continually updated when necessary. However, when the addr_list file is first created the list may not yet be stable because it has not yet been modified by all FileNet Image Services processes to remove the in-use addresses.

Important: The system should be recycled multiple times after a new FileNet Image Services installation or update. This will help stabilize the list of addresses used for shared memory.

Minimizing shared memory conflicts on Windows

The allocation and use of memory on Windows systems is very dynamic and changes over time. It is possible that a new shared memory conflict will occur and this will cause FileNet Image Services to fail.

When FileNet Image Services processes start up, they attach to all existing shared memory segments as part of the process initialization before they begin doing any real work. Once the segments are all attached, the addresses used for the attaches are no longer free – these addresses are now "locked in" and no conflict can occur with them. It is thus advantageous to perform all shared memory mapping as soon as possible at process startup.

However, addresses that are not "locked in" may still get used for something else, such as loading a DLL or allocating a new thread stack, and so on. If a new shared memory data segment is created dynamically because of an increased need for shared memory, then the address used to map the segment may not be available in all processes and a conflict will occur. This conflict is more serious, because it can happen in a process that is already doing work and cause the process to abort.

The chance for this kind of conflict can be reduced by configuring shared memory to have enough free space to handle an increase in performance without needing to dynamically allocate a new segment. Shared memory usage should be periodically monitored and adjusted to provide this ability to expand.

Completion procedure for application servers without an RDBMS

You can rebuild the system configuration files on an application server that does not have a relational database.

Procedure

To rebuild the system configuration files on an application server:

1. Log on as the IBM FileNet Image Services software user.
2. In a Command Prompt window, type:

   ```
   fn_build -a
   ```

Verify the server configuration

The processes that use the `serverConfig` file search for a file named `serverConfig.custom`. If it does not exist, the processes use the default `serverConfig` file.

Before you begin

When the installation program upgrades the `serverConfig` file, it copies the existing `serverConfig` file to a temporary `serverConfig.bak` file and installs the new `serverConfig` file in its place.

- If the contents of the two files are different (except for the file stamps), the installation program renames the temporary file to `serverConfig.custom`.

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

About this task

Perform the steps in this section on all servers. At the beginning of this upgrade procedure, you made a backup copy of the `\fnsw\etc\serverConfig` file as `serverConfig.save` and, if applicable, the `\fnsw\etc\serverConfig.custom` file as `serverConfig.custom.save`. These `.save` files were saved in the `\fnsw\install\backup\fnsw\etc` folder.

Compare the files for the following circumstances:

- If a `\fnsw\etc\serverConfig.custom` file was **not** in use before the FileNet Image Services upgrade, then compare the new `\fnsw\etc\serverConfig` to the `\fnsw\install\backup\fnsw\etc\serverConfig.save` file. If they are different, change the values of the new `\fnsw\etc\serverConfig` with the ones from the `\fnsw\install\backup\fnsw\etc\serverConfig.save` file.
- If a `\fnsw\etc\serverConfig.custom` file was in use before the FileNet Image Services upgrade, then compare the new `\fnsw\etc\serverConfig` to the `\fnsw\install\backup\fnsw\etc\serverConfig.custom.save` file. If they are different, change the values of the new `\fnsw\etc\serverConfig` file with the ones from the `\fnsw\install\backup\fnsw\etc\serverConfig.custom.save`. file.

Important: A new request handler has been introduced called password encryption and decryption (PED). If you are using a `serverConfig.custom` file, verify that it includes the following entry:

```
PEDs            0134231080 1 12 0 0
```

Procedure

To verify the `serverConfig` file, compare the values in the `\fnsw\etc\serverConfig` file with the`\fnsw\install\backup\fnsw\etc\serverConfig.save` file:

1. Open each file in a separate WordPad window.
2. Copy any new or increased values from the `serverConfig` file to the `serverConfig.save` file.
3. Verify that the `serverConfig.save` file contains an entry for the new PED request handler.
4. Rename the resulting file `serverConfig.custom`.

Start FileNet Image Services

Start the IBM FileNet Image Services software and monitor the event log.

Procedure

To monitor the event log:

1. Open **Administrative Tools** and double click the **Services** icon.
2. Double-click **IS ControlService**.
3. In the IS ControlService Properties window, set the startup type to Automatic and close.
4. From the Taskbar, open the IS Task Manager window.

5. Once you see the TM_daemon.exe process message appear in the **Process** column, open the Event Logs window.
   - Click the **Monitor** pull down menu and select **Event Logs....**
6. From the Event Logs window, select the option to automatically refresh the window when messages are logged.
   - Click the **Display** pull down menu and select **Dynamic**.
7. To start FileNet Image Services, return to the IS Task Manager window and click **Start**.
8. When FileNet Image Services is started, close the Current Status window.
9. View the Event Log window to verify that there are no error messages.

   Important: If the Event Log contains any errors, resolve them before you continue with the upgrade. For example, you might see the following message:

   ```
   MKF_ddl D:\FNSW_LOC\sd\1\transient.ddl - compare failed.
   illegal parameter value  exit code = 3
   ```

   To resolve this error, you could reduce the Transient Buffer Pool Size to 50000 (the default value is 100000 KB) by using the System Configuration Editor > Performance Tuning tab.

   You could also resolve this error by increasing the size of the transient recovery logs by using the System Configuration Editor > Procedures > Add an Additional Dataset procedure. Then return to step 4 and start FileNet Image Services again.

Test the FileNet Image Services and user applications

Verify that IBM FileNet Image Services is running properly by testing the system in native mode. Verify that you can scan, index, commit, fax, and print manually using IBM FileNet Capture Professional or IBM FileNet IDM Desktop.

Before you begin

Native mode is preferred in this case for two reasons:

- Only FileNet Image Services errors will be displayed. API-oriented errors can be tested after FileNet Image Services processes have been tested.
- IS errors will display during their specific stage of document entry or retrieval. This reduces your troubleshooting time.

Procedure

To test the FileNet Image Services software and user applications:

1. If COLD is installed, run COLD preview to test it.
2. Test user applications on the server to verify that they run successfully.

Configuring FIPS mode - optional

The US Federal Information Processing Standard 140-2 (FIPS 140-2) is a validation program that defines security standards for validating cryptographic modules that encrypt user credentials (user name and password) between servers. If you do not want to configure FIPS mode, skip to the next section.

About this task

The cryptographic modules are certified through the National Institute of Standards and Technology (NIST). The IBM Tivoli group has built certified cryptographic libraries, which are now included with IBM FileNet Image Services.

FIPS mode controls which cryptographic modules will be used by FileNet Image Services. Enabling FIPS mode allows you to run FileNet Image Services in a FIPS compliant mode by using NIST certified cryptographic modules.

Configuring FIPS mode on your FileNet image Services system is optional. You can configure FIPS mode on your FileNet Image Services system now or at any time in the future. You can also turn off FIPS mode at any time.

For more information about FIPS 140-2 support, see the *IBM FileNet Image Services System Administrator's Handbook*.

Procedure

To configure FIPS mode on your server, perform the following steps from a Command Prompt window:

1. If the FileNet Image Services software is running, as the FileNet software user, stop it by entering:

   ```
   initfnsw –y stop
   ```

2. Kill all remaining FileNet Image Services processes by entering:

   ```
   killfnsw  –D -y
   ```

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

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

   The killfnsw command also stops the IS ControlService on Windows servers.

3. Enter the following command at the system prompt:

   ```
   convert2fips xxxx_xxxx
   ```

   where xxxx_xxxx is one of the following FIPS modes:

   FIPS_NONE – turn off FIPS encryption. This is the default mode.

   FIPS_PREFERRED – use FIPS encryption unless the server is communicating with a server that does not have either FIPS_PREFERRED or FIPS_ONLY encryption configured.

   FIPS_ONLY – use only FIPS compliant encryption. Rejects connections from other FileNet Image Services clients or servers that do not have FIPS compliant encryption supported and configured. FIPS_ONLY mode strictly enforces the use of FIPS compliant encryption between this server and any clients or other servers.

   Your choice is stored in the Network Clearinghouse (NCH) database.

4. Restart FileNet Image Services by entering:

   ```
   initfnsw start
   ```

5. Verify the current FIPS mode by entering:

   ```
   convert2fips
   ```

Tip: You can determine the current FIPS mode at any time, even while FileNet Image Services is running, by entering the convert2fips command with no options.

Install fix packs - optional

Install any fix packs that apply to this release of IBM FileNet Image Services. Perform the steps in this section on all servers.

Procedure

To install any FileNet Image Services fix packs:

Read the accompanying `README` file, which contains the instructions for installing the software. Retrieve the latest fixes from the IBM Information Management support page at "ibm.com and related resources" on page v.

Upgrade storage library servers and application servers

Repeat these procedures to upgrade any additional storage library servers or application servers.

Procedure

To upgrade storage library servers and application servers:

1. If you have not already begun to upgrade any additional storage library servers or application servers, return to Chapter 3, "Preparing to upgrade FileNet Image Services on a Windows server," on page 9 and repeat these procedures for each server that needs to be upgraded.
2. When you have upgraded all the servers in your IBM FileNet Image Services system, continue with the next section.

Backup the system

After you have upgraded the root/index server and any other storage library or application servers, you should make a full system backup.

About this task

See the *IBM FileNet Image Services System Administrator's Companion for Windows Server* for information on performing a full system backup. To download this document from the IBM support page, see "ibm.com and related resources" on page v.

The FileNet Image Services upgrade is complete

You have completed the IBM FileNet Image Services Upgrade procedure. You can now start FileNet Image Services software and return to production mode.

About this task

After you have verified that FileNet Image Services and the RDBMS run successfully, you can remove the old versions of the software as long as no other applications are using them.

Appendix A. Microsoft Systems Management Server (SMS) Procedures

Use the Microsoft Systems Management Server (SMS) Version 2.0 product for updating IBM FileNet Image Services Software on your FileNet Image Services servers. SMS Version 1.2 is not supported in this FileNet Image Services release.

Only a brief description of SMS is provided in this section. For detailed information or instructions, see the Microsoft SMS documentation and the Readme file that is contained on the FileNet Image Services 4.1.3 for Windows Server eSD image or software CD.

If you are updating the FileNet Image Services software on a Dual server system, update the Root/Index server first and then update the Storage Library server.

What is Microsoft systems management server (SMS)?

Microsoft Systems Management (SMS) is a Windows product that is designed to make it easier for you to centrally manage, support, and maintain a distributed network of computers.

SMS is an integrated system that is part of the Microsoft BackOffice[a] family of business products.

This section uses only the Software Distribution portion of the SMS product to update IBM FileNet Image Services software. With SMS, you will be able to update software from a single, central location. The basic structure of SMS uses a site server, which controls and distributes software to client servers that are part of the SMS system.

The software contained on the FileNet Image Services release media is loaded onto the SMS site server and distributed to client servers from there.

Overview

To use Microsoft SMS to distribute and update software, you must perform a several basic steps.

For detailed information, see the Microsoft SMS documentation and the Readme file that is contained on the IBM FileNet Image Services 4.2.0 for Windows Server eSD image or software CD.

- Microsoft SMS software must be installed and setup on a server that you designate as the SMS Site Server. This process enables you to create workstation packages that are necessary to distribute the software to individual FileNet Image Services (client) servers. See your SMS documentation for information on setting up your SMS site server.
- FileNet Image Services provides a template Package Definition File (or PDF file) called IS.pdf. This file, which is located in the root directory of the eSD image or software CD, must also be installed on the SMS site server. Workstation packages for software distribution are created using the IS.pdf file.

- On the SMS site server, an advertisement must be created for each FileNet Image Services (client) server. Advertisements can be created for new installations, upgrades, or to uninstall software.

Configuring the SMS site server package

Follow the procedures in this section to configure packages on your SMS Site Server. You will run jobs to upgrade the software on your client servers from the SMS Site Server.

Copy the FileNet Image Services software to your SMS site server

Procedure to create a directory folder on your SMS site server.

Procedure

1. Log on to your SMS Site Server as Windows Administrator.
2. Create a directory folder on the Site Server drive where you want FileNet Image Services to reside.
3. If you are installing the FileNet Image Services software from media, load the FileNet Image Services for Windows Server image media into the drive.
4. Copy the FileNet Image Services software from the media to the directory location that you created.

Modify the Usetup.iss file

Modify the usetup.iss file to point to the client server where you want to install FileNet Image Services.

Procedure

1. Open the directory where you copied the FileNet Image Services software and locate the Usetup.iss file.
2. Open the *Usetup.iss* file in Wordpad or Notepad.
3. Locate the **IPath=** and **IPathLocal=** entries and change the drive letter `c:` to the drive letter on your Client Server where you want to install the FileNet Image Services software.
4. Rename the `Usetup.iss` file to `setup.iss` and save it.

Create a package

Create a package using the FileNet Image Services source directory as a base.

Procedure

1. On the SMS Site Server, click **Start** > **Programs** > **Systems Management Server** > **SMS Administrator Console**.
2. Double-click on **Site Database**.
3. Select **Packages** and click **Action**.
4. Click **New** and select **Package From Definition**.
5. In the next window, click on the **Publisher** drop-down list and select **SMS.PDF**.
6. Click **Browse** and navigate to the location where you copied the FileNet Image Services software to your local hard drive.
7. Select **IMS.PDF** and click **Open**.

8. In the Source Files window, choose the **Always obtain files from a source directory** radio button.
9. In the **Source Directory** window, select the appropriate Source directory location radio button and enter the Source directory where the FileNet Image Services media was copied.
10. Complete the Wizard.

Configure the distribution points for your site

Allows you to send a package to specified distribution points.

Procedure

1. In the Systems Management Server Site Database window, select **Packages** > **FileNet Image Services** > **Distribution Points**, and then click **Action**.
2. Select **New** from the drop-down list.
3. Select **Distribution Points** to start the New Distribution Points Wizard.
4. Check the box next to the name of the Distribution points, and click **Finish**.
5. In the Systems Management Server\Site Database window, open the **Programs for the Image Services** package.
6. Right-click on **Upgrade Installation** and click **All Tasks**.
7. In the Package window, choose the **Distribute an existing package** radio button, select the package that you want to distribute.
8. In the Distribution Points window, confirm the name of the distribution points you selected.
9. In the Advertise a Program window, select the **Yes** radio button to advertise a program to a collection and select **Upgrade Installation in - - -** .
10. In the Advertisement Target window, select **Advertise the program - - -** or **Create a new collection - - -** as appropriate for your site.
11. In the Advertisement Name window, use the default name or enter an advertisement name and comment.
12. In the Advertise to Subcollections window, select the appropriate radio button for your site.
13. In the Advertisement Schedule window, enter the schedule information as needed for your site.
14. In the Assign Program window, enter the information appropriate for your site.
15. Complete the Wizard and close all windows.

    Important: The Advertisement Wizard icon will appear at the far right side of the Task bar while the Advertisement Wizard is running. Do not restart your computer until this icon disappears. This could take approximately 15 minutes.

Updating the IBM FileNet Image Services software

When the New Advertised Manager alerts you that a new Advertisement has arrived, follow this procedure to update the FileNet Image Services software.

Procedure

To update the FileNet Image Services software:

1. At the client server, log on as the FileNet Image Services user.

2. Stop the Performance Monitor tool if it is currently running.
3. Open the Control Panel and double-click the **Advertised Programs** to start the Advertised Programs Wizard.
4. Select the box next to the advertised program that you want to run.
5. In the next window, enter the appropriate schedule information for when you want to run the program.
6. Complete the Wizard.

Restarting the server

After you finish updating the IBM FileNet Image Services software, restart the server so that the newly installed device drivers can take effect.

Procedure

To restart the server:

1. When you finish updating the FileNet Image Services software, restart the server so that the newly installed device drivers can take effect.
2. After the system restarts, log on as the FileNet Image Services software user.
3. After logging on to the server, return to Chapter 6, “Completing the upgrade on Windows servers,” on page 21 to continue.

Appendix B. Uninstalling FileNet Image Services

Uninstall the FileNet Image Services software from your server.

Procedure

To uninstall the FileNet Image Services software:

1. Verify that you are logged on with administrator privileges.
2. Stop the FileNet Image Services software.
3. Back up any log files or other data in the `\fnsw` and `\fnsw_loc` directories or equivalent location that you specified .

   Tip: Unless you specify otherwise, the uninstallation program uses the same mode that you used during the installation. For example, if you installed FileNet Image Services using Silent mode, the uninstallation program automatically defaults to Silent mode, too, even if you do not specify the **silent** option.
4. Click **Start** > **Control Panel** > **Add or Remove Programs** > **IBM FileNet Image Services 4.2.0**.

   As an alternative, you can also uninstall FileNet Image Services at a command prompt. The uninstallation program defaults to the same mode that you used for installation, unless you choose a different mode.

   - Graphical mode

     drive:*IS_HOME_LOCATION*\IS_uninstaller\uninstall_is.exe
   - Silent mode

     drive:*IS_HOME_LOCATION*\IS_uninstaller\uninstall_is.exe -i silent

   Where *drive* is the letter designation of the disk drive and *IS_HOME_LOCATION* is the name of the directory in which the FileNet Image Services software is installed.
5. The uninstallation program leads you through the necessary steps and prompts you when it is finished.

   Tip: The uninstallation program leaves certain critical directories intact to protect existing data.
6. After the uninstallation program has finished, go to the *drive*:*IS_HOME_LOCATION*\fnsw folder and examine the remaining contents. Manually remove any unwanted files (such as the uninstall-output.txt file) and folders.

   Important: Microsoft Visual C++ 2005 and Federal Information Processing Standards (FIPS) are not uninstalled when you uninstall the FileNet Image Services software.

What to do next

The Tivoli GSKit cryptographic libraries that are used for FIPS compliance are in the *drive*:\Program Files (x86)\IBM\gsk8 folder. If no other applications, such as FileNet Image Services Toolkit, use the GSKit modules, you can remove the GSKit by using the **Windows Add/Remove Programs** control panel. Select **GSKIT 8 Crypt 32**.

Appendix C. Installing FileNet Image Services in non-English Environments

IBM FileNet Image Services supports several languages for installation, configuration, error reporting, and indexing.

Refer to the *IBM FileNet Image Services System Administrator's Handbook* for setting the supported language preference for the operating system, databases, and the FileNet Image Services software.

Appendix D. Troubleshooting the installation program

If you encounter any problems during the IBM FileNet Image Services software installation, see the following problems and solutions for additional help.

Problem

Some of the FileNet Image Services files did not copy onto the server correctly.

Solution

Verify that all FileNet Image Services-related programs are shut down.

Then run the installation again.

Problem

The FileNet Image Services installation program cannot find enough temporary space to proceed with the installation. In Graphical mode, a message displays on the screen and is logged in the log file. In Silent mode, the installation program returns to the command prompt and no log file is created.

Solution

The installation program uses the directory specified by the TEMP environment variable for extracting files. The program looks for free disk space that is three times the size of the installation package on the volume that the TEMP variable indicates. If enough free space is not available, the installation program prompts you for an alternate location.

For example, if the installation is 10 MB, and the TEMP variable is set to `C:\Temp`, the installation program looks for 30 MB of free space on the C: drive. If there is not 30 MB of free space, the installer prompts you for another location.

After the installation is finished or canceled, the temp space is cleaned and only a single directory holding a single file about 35 KB in size (`remove.exe`) remains.

Problem

When upgrading a clustered FileNet Image Services system to FileNet Image Services version 4.2, the configuration command `fn_setup_rdb –u` was run before all nodes of a clustered FileNet Image Services system were installed.

Solution

FileNet Image Services on a clustered node can encounter and log read errors regarding the`rdbup.bin` and `filenet.podf` files. To correct the problem the`rdbup.bin` file and the `filenet.podf` file (if it exists) must be restored to their old formats through the following steps before continuing upgrades of other nodes:

- Create the trigger file `\fnsw_loc\tmp\HOLD_CONVERSION`. The trigger file is a touch file only. This file causes the creation of the `rdbup.bin` file to be written in a format prior to the FileNet Image Services version 4.2.

- Force the `rdbup.bin` file to be written by running Xdbconnect -r and entering the user password.
- Runfn_pso_encrypt_podf -p -o [full path of an output file]. Rename the current `filenet.podf` file in the `\fnsw_loc` directory to a different name. Copy the specified output file over the `filenet.podf` file in the `\fnsw_loc` directory.

Important: Data limits and sizes, including password lengths, have increased in FileNet Image Services version 4.2. Except for the case where files must be restored to a format before FileNet Image Services version 4.2, do not update the Programmable Security Objects (PSO) and RDB password data until after fn_setup_rdb -u has been run. This ensures the safe upgrade of the existing data.

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This product incorporates technology covered by one or more of the following patents: U.S. Patent Numbers: 6,094,505; 5,768,416; 5,625,465; 5,369,508; 5,258,855.

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