

IBM FileNet Image Services
Version 4.2

Release Notes



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Note

Before using this information and the product it supports, read the information in "Notices" on page 29.

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.

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Revision log

Date	Revision
07/23/14	Adds or updates information about known issues and limitations <ul style="list-style-type: none"> • Updates information on 'Running Image Services in a high availability cluster environment' • Solaris 11 Kernel tuning parameters • IPV6 best practices information • Databases requiring enhanced document security note
05/10/14	Adds 'Verifying the MKF dataset and block sizes before performing upgrade'
02/28/13	Adds 'Running Image Services in an HA cluster environment'
08/09/11	Added information about known issues and limitations that migrated to 4.2 from previous releases. <ul style="list-style-type: none"> • Installation > Identify media • Databases > DB2 > Default code pages • Configuration > Connect failure and retry behavior for courier • Configuration > 1912 adapter and high availability (HA) • Configuration > eProcess • Configuration > Find open document • Configuration > loscan -fn display • Operating systems > AIX > FNPoll • Operating systems > AIX > 6.1 installation > /usr/lib/libMrm.a file • Operating systems > AIX > 6.1 installation > Oracle 10g patch • Operating systems > Solaris > Ultra320 dual ports • Operating systems > Windows > Newly connected optical drives on Windows 2003 • Operating systems > Windows > Ultra320 SCSI cards on Windows 2008 • Operating systems > UNIX > Retention dates • Operations > Excessive disk swapping • Operations > System administrator tools • Storage > COLD • Storage > Optical libraries • Storage > MSAR • Storage > 200FX jukebox
05/13/11	Initial release of the Image Services 4.2 release notes document.

Introduction

This release notes document provides information about IBM® FileNet® Image Services 4.2 and has the following major topics:

- **What's new** – Describes the new features in this release of Image Services.
- **Known issues** – Describes the known issues that are associated with this release of Image Services.
- Image Services Toolkit
 - What's new
 - Known limitations
- Image Services Remote Admin Console
 - What's new
 - Known limitations

Accessing IBM FileNet documentation

To access IBM FileNet documentation:

1. Go to the Product Documentation for FileNet P8 Platform support page:
<https://www.ibm.com/support/docview.wss?rs=3247&uid=swg27010422>
2. Select a PDF or a Doc Link, whichever is appropriate.

Contacting customer support

To contact IBM FileNet customer support:

3. Go to the FileNet Product Family support page:
<http://www-947.ibm.com/support/entry/portal/support?brandind=Information%20Management>
4. Select the product of interest.

Feedback

Your feedback helps us to provide quality information. Send your comments about this publication or any other IBM FileNet documentation 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).

What's new in Image Services 4.2

This section describes the new features in IBM FileNet Image Services 4.2.

Installation and upgrade procedures

Separate installation and upgrade documents are available for each supported operating system.

The installation and upgrade program uses the InstallAnywhere wizard, instead of the InstallShield wizard as was used in previous releases.

WPAR support on AIX 6.1 servers

FileNet Image Services is compatible with Workload Partitioning (WPAR) on AIX 6.1 servers. However, WPAR does not support the use of raw partitions. A fresh installation of Image Services in a WPAR environment must use file systems for the Image Services MKF databases. For more information, see the following section on MKF file systems.

MKF file systems

IBM FileNet Image Services now supports either file systems or raw partitions for its multi-keyed file (MKF) databases on UNIX servers. File systems are the default for fresh installations.

Existing FileNet Image Services users can choose to continue using raw partitions as before, or migrate to file systems. After the current UNIX-based Image Services server has been upgraded to Image Services version 4.2, you can optionally convert the MKF databases from raw partitions to file systems.

FileNet Image Services continues to support raw partitions for the MKF databases, if you do not choose to migrate. FileNet Image Services has always used regular files for MKF databases on Windows servers.

Advantages of file systems

File systems provide advantages over raw partitions.

- File systems do not require vendor-provided software, such as Veritas, to configure and manage the physical and logical volumes.
- File system maintenance requires less overhead than for raw partitions. Limitations

All MKF databases must be either raw partitions or file systems. You cannot use both raw partitions and file systems. After the MKF databases have been migrated to file systems, they cannot be reset to raw partitions. This limitation applies to all servers within the same Image Services domain.

For more information about this migration, see the *IBM FileNet Image Services MKF Database Migration from Raw Partitions to File Systems on UNIX Servers* document.

Integral SDS - Consistent delete

The Integral Single Document Storage (SDS) Consistent delete feature is responsible for managing the criteria that the deletion mechanism uses to determine if an SDS document can be deleted. Integral SDS document deletion operates consistently whether from the deldocs tool or from IDM Desktop.

Activate Content Delete on the SDS unit in order for documents that are candidates for deletion to be deleted from the SDS device. Integral SDS - Consistent Delete is controlled by the following trigger file:

```
/fnsw/local/trigger/consistent_delete_mask
```


The following table lists the parameters that you can use in the `consistent_delete_mask` trigger file.

Trigger file parameters	Description
check_docs	Checks the MKF docs table to determine if the retention parameter settings indicate if a document can be deleted. Event-based retention (EBR) and virtual EBR documents cannot be deleted. If the <code>consistent_delete_mask</code> trigger file does not exist, the deletion mechanism uses the <code>check_docs</code> logic by default.
check_doctaba	Checks the documents index database (doctaba) settings. A document will not be deleted if <code>f_deletedate</code> or <code>f_archivedate</code> is set to future dates. EBR and virtual EBR documents (which probably do not have <code>f_deletedate</code> dates) are not deleted from the MKF docs table, from doctaba, nor from the SDS device.
check_obj	Checks the object on the SDS device to determine if can be deleted. EBR and Virtual EBR documents cannot be deleted using this setting.
off	Turns off the Integral Single Document Storage (SDS) Consistent Delete feature. Operates as Image Services previously operated: <ul style="list-style-type: none"> • IDMDT IDMDT deletes documents regardless of retention settings. Deldocs enforces retention settings of SDS documents. <ul style="list-style-type: none"> ○ The <code>deldocs "-i"</code> flag overrides the retention settings that <code>deldocs</code> normally enforces.

When the trigger file uses more than one of the parameters, the affected document must meet the deletion criteria for each of the parameters before the document can be deleted. The settings should be entered in the trigger file on separate lines.

A newly created document that does not have any retention settings cannot be deleted for at least a day regardless of trigger file settings.

The presence of the trigger file and its contents are written to the view log when Image Services starts. An error is posted in the view log if a document cannot be consistently deleted.

For more information, see the *IBM FileNet Image Services Integral Single Document Storage and Retrieval Guidelines*.

MSAR - synchronous read to cache

The Magnetic Storage and Retrieval (MSAR) Synchronous Read into Cache feature improves MSAR read performance by reading content from MSAR surface files directly, without swapping the surface files in a virtual drive. When an MSAR document is retrieved, the requested pages that are not in cache are read directly from MSAR into cache synchronously. If the MSAR surface is not mounted, Image Services attempts to read the document from the MSAR surface file based on the `lib_surfaces` table location.

ISDS retrieval has priority over this feature so that high priority reads still go to SDS. Because they do not have entries in the MKF docs table, NLS documents do not have priority. Because they have no priority, NLS document will always retrieve synchronously from MSAR.

The Magnetic Storage and Retrieval (MSAR) Synchronous Read into Cache feature is controlled by the following trigger file:

`/fnsw/local/trigger/MSAR_sync_threshold`

- If the trigger file does not exist, the Magnetic Storage and Retrieval (MSAR) Synchronous Read into Cache feature is not enabled.
- The trigger files contains a document size threshold number (in bytes) to specify the document size threshold. The word "MAX" can be used in the trigger to specify the maximum value of 4 GB.
 - If the trigger file exists but does not specify a document size threshold value, the document size threshold is set to the document buffer pool size.

Documents that are smaller than the threshold size setting are read synchronously. Documents that are larger than the threshold size setting are read after the MSAR surface is loaded into a virtual drive.

For more information, see the *IBM FileNet Image Services MSAR Procedures and Guidelines*.

US Federal Information Processing Standard 140-2

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. FileNet Image Services supports FIPS for those customers who are required to use it by government agencies. FIPS is optional for others.

Tivoli GSKit 8

Important FileNet Image Services supports FIPS on AIX, Solaris, and Window servers. FileNet Image Services does not support FIPS on HP-UX because Tivoli GSKit 8 does not support PA-RISC nor 32-bit applications on IA64.

The Tivoli GSKit libraries are installed automatically when you install the FileNet Image Services or FileNet Image Services Toolkit software.

For more information, see the *IBM FileNet Image Services System Administrator's Handbook*.

Long password support

Password length has been expanded from an 8 character maximum to a 63 character maximum.

Common logging - Improved error messages

Many Image Services error messages have been improved and clarified to conform to IBM External Diagnostic requirements.

To review the updated error messages, see the *IBM FileNet Image Services System Messages Handbook*.

Known issues and limitations

This section describes:

- Image Services limitations resulting from independent software vendor issues
- Image Services limitations resulting from other supported IBM of FileNet application issues
- Image Services-specific known issues

The main sections are:

- [Installation and upgrades](#)
- [Databases](#)
- [Operating systems](#)
- [Operations](#)
- [Storage](#)

Installation and upgrades

The following topics are about Image Services installation and upgrades.

InstallAnywhere wizard

The Print to file option in the Software License Agreement panel does not create a file.

Upgrades

The following topics are about Image Services upgrades.

Verifying the MKF dataset and block sizes before performing an upgrade

1. From the fn_edit -> Datasets tab, determine the dataset file sizes (in MB).
2. Verify that the sizes from step #1 match the actual file sizes of the datasets in /fnsw/dev/1.
3. From fn_edit -> MKF Databases tab, determine the MKF block size (this value is usually 8K).
4. Verify the blocks values in /fnsw/local/sd/1/*.ddl files against the calculated values that are derived from the dataset file sizes (in KB), divided by the block size (in KB).

If inconsistencies are found, correct the problem before you upgrade.

Databases requiring Enhanced Document Security

If the relational database management system used with your Image Services system is not US7ASCII, you should implement Enhanced Document Security at installation time or before migrating to a non-US7ASCII character set.

Refer to the Implementing Enhanced Document Security manual for details.
<ftp://public.dhe.ibm.com/software/data/cm/filenet/docs/isdoc/412x/DocSec.pdf>

Identify media

The format of the checkpoint.osa file was changed as of Image Services 4.1 so that MSAR surface entries can be added to the file. The change caused all of the entries in the file to become longer.

When the software is restarted after it has been upgraded from either Image Services 4.1 or an earlier release, the Identify Media procedure is performed on each storage library that is configured on the server. This must be done so that the file can be rebuilt in the new format.

The Identify Media procedure adds additional time to the upgrade process. The time needed to complete this process depends on the number of storage libraries configured on the server and the number of slots in each library.

Perm_db block size

The perm_db block size must have a minimum setting of 8 KB when upgrading to Image Services 4.2 from Image Services 4.0.50, 4.1.1 or 4.1.2.

Configuration

The following topics are about Image Services configuration.

Running Image Services in a high availability cluster environment

If the Image Services server is running in a high availability cluster environment verify that a `virtual_server_name.txt` file exists on the server.

1. Start the Image Services System Configuration Editor by running the `fn_edit` command.
2. On the Network tab, verify that the cluster name is configured in the Network Name field. Leave the Network Address field blank.
3. Verify or create the `virtual_server_name.txt` file.
UNIX: `/fnsw/local/sd/virtual_server_name.txt`
Windows: `<drive> fnsw_loc\sd\virtual_server_name.txt`
4. Edit the `virtual_server_name.txt` file and verify or enter the cluster name.
5. Use the command: `fn_build -a` to rebuild the system configuration files.
6. Use `fn_setup` to set the file ownerships and permissions.
7. Use the following commands to validate the network configuration:
 - a. To verify the network address of the external or virtual cluster: `nslookup HA_cluster_name`
 - b. To verify the IPv4 and IPv6 NCH network addresses for local or remote Image Services servers: `/fnsw/bin/HAnetcheck`
For more information, see the technote titled '[Tools for troubleshooting Image Services and ISTK network](#) configuration' on the IBM support site.
8. Run `/fnsw/bin/nch_check` to verify that the Network Clearinghouse (NCH) on the Root server that is associated with the storage library server and application server is running, use the `nch_check` tool. The `nch_check` tool is intended to be used on a non-Root (storage library server and application server) in a multi-server Image Services domain.

See the *FileNet Image Services System Tools Reference Manual* for IPv4 and IPv6 syntax and examples. To download a PDF copy of this manual, see [Accessing IBM FileNet Image Services documentation](#).

1912 adapter and high availability (HA)

The 1912 adapter does not directly support High Availability (HA) configuration because auto-termination cannot be disabled on the adapters. Support of LVD/SE devices in HA systems can be done via converter boxes where the termination on the HA SCSI bus is disabled in the converter box.

Important: HA configurations using the 1912 device can be configured because the converter boxes act as an isolator and can have the terminators in the converter boxes disabled. LVD optical devices can be configured by using an SE to LVD converter box and disabling the terminators in the converter boxes on the LVD SCSI bus.

Connect failure and retry behavior for courier

An optional configuration file "`cor_backoff_config`" has been implemented to allow an administrator to modify the connect failure/retry behavior for courier for both Image Services and WAL.

What is the current default courier behavior?

Courier performs an open connect request to talk to clients over a network. It will retry a connection on a failure using a binary exponential backoff algorithm. On Image Services releases 3.6.10/SP3, 3.6.30/SP1 and 4.0.x the courier connect default retry values were changed to the following:

On Image Services servers (combined, OSAR, BES, etc.):

The maximum wait on any single retry is the `max_single_sleep` value (½ second is the default). The wait time can be less than ½ second, which means there can be many more retries than 1 every ½ second. The maximum wait for the sum of all retries is the `max_total_sleep` value (5 seconds is the default). After a total of 5 seconds of wait time, it will close a socket and the `OCOR_Open` function returns with an error <15,16,17> and logs it to the `elog`.

On WAL stations (IDM Desktop, ISTK applications, HP11, etc.):

The retry logic behaves the same way as on IS servers, except that the default values for both `max_single_sleep` and `max_total_sleep` are zero. So, upon the first unsuccessful connect, a close is performed on the socket and the `OCOR_Open` function returns with an error <15,16,17> and logs it to the `elog`.

When should I use the “`cor_backoff_config`” file?

Use the “`cor_backoff_config`” file when:

- If the site has a slow network
- If the courier default values are not long enough for your network (½ second retry and 5 seconds of retries for IS and 0 seconds of retries for WAL)
- If the TCP/IP parameters are correct according to the IS Installation documents in the TCP/IP parameter section and they are encountering <15,16,17> errors in the `elog`

Here is an example from a Windows server:

```
2006/03/10 03:53:34.288 15,16,17 <fn.service> PRI_check
(3960.4368.45 0xf78.1110) ...COR_Open: connect to 10.50.105.15 [32769] failed with
WSAGetLastError 10060
```

How do I implement the “cor_backoff_config” file?

The optional configuration file “cor_backoff_config” is manually created by the administrator for all Image Services and WAL servers. This configuration file permits the administrator to modify the default courier connect failure/retry behavior. If the file does exist, then its values override the default courier behavior.

The following is a sample of the contents of a “cor_backoff_config” file with the current default courier failure/retry values for Image Services. This sample can be used for both WAL and Image Services servers. However, for Image Services you would use values greater than those shown in the sample. The values used in the “cor_backoff_config” file are in milliseconds and the file strings (e.g., “max_single_sleep”) are case sensitive. The file should be created with Read/Execute permissions.

If the “cor_backoff_config” file has been accessed an informational message will be logged to the elog. For example:

```
2006/03/10 09:38:45.492 155,19,255 <fn.service> PRI_check  
(3736.3744.71 0xe98.ea0) ... [INFO]cor_backoff_config: debug: FALSE,  
max_single_sleep: 500ms, max_total_sleep: 5000ms
```

cor_backoff_config file contents:

```
debug 0 # if set to 1 output fn_log_msg() for each retry attempt  
max_single_sleep 500 # 500 ms means no more than ½ second in a single retry  
max_total_sleep 5000 # 5000 ms means no more than 5 seconds for all retries  
FN_COR_NO_CONNECT_ERROR 0 # when set to 1, courier errors will not be logged
```

NOTE In the debug line above, if debug is set to 1, the fn_log_msg function writes to different locations based on IS versus ISTK and operating system:

- UNIX Image Services: /fnsw/local/logs/ims_logs
- UNIX Image Services Toolkit: /fnsw/client/logs/client_logs
- Windows Image Services: \fnsw_loc\logs\ims_logs

cor_backoff_config file location:

On IS servers (combined, OSAR, BES, etc.):

```
/fnsw/local/sd/cor_backoff_config # Unix  
<drive:>\fnsw_loc\sd\cor_backoff_config.txt # Windows
```

On WAL stations (IDM Desktop, ISTK applications, HP11, etc.):

```
/fnsw/client/cor_backoff_config # Unix  
<drive:>\fnsw\client\cor_backoff_config.txt # Windows
```

eProcess

eProcess 5.1 and 5.2 support only one VWService and one VWServer in an Image Services system.

Although the Image Services System Configure Editor (fn_edit) includes procedures for adding, modifying, and deleting multiple VWServices and VWServers, a single VWService with a single VWServer is the only configuration supported by eProcess 5.1 and 5.2.

Find open documents

FileNet Image Services can run out of shared memory segments (Xapex > Background Job Control > New > Find Open Documents) when you have an extremely large number (millions) of documents. You might see a message similar to this:

```
202,0,2 opendocs getarea:  
No memory available for process. nbytes = 44000048 errno = 12
```

Workaround

To resolve this issue, modify the /etc/security/limits file to increase the per process memory size to 512 MB.

Use your preferred text editor to change the following values in the limits file for the IS user, such as fnsw:

```
fnsw:  
data = 1048576  
rss = 1048576
```

(These values are expressed in 512-byte blocks.)

1. Log out and log back in as the Image Services software user for the new values to take effect.
2. Stop the Image Services software.

```
initfnsw stop
```

3. Kill the TM_daemon:

```
killfnsw -Ady
```

4. Restart the Image Services software.
5. Rerun Find Open Documents from Background Job Control.

ioscan -fn display

(*HP Integrity only*) Users must modify the entry depending on the type of library attached to the LVD/SE adapter. The values put in the fifth column depend on what is displayed in ioscan -fn.

If an SE library and an SE ODU are attached to a A5150A card, ioscan -fn shows:

```
ext_bus      5 0/4/0/0 c720 CLAIMED INTERFACE SCSI C896 Ultra2 Wide Single-Ended  
target 7 0/4/0/0.2 tgt CLAIMED DEVICE  
disk 5 0/4/0/0.2.0 sdisk CLAIMED DEVICE HP C1113J /dev/dsk/c5t2d0 /dev/rdisk/c5t2d0
```

The entry for an A-class server in FNPoll.servers would look like this for the configuration of the SE library to work:

```
# A-Series  
SE1 A sctl ctl C896  This line was modified.  
SE2 A unknown unknown none  
DIFF1 A sctl ctl Ultra  
DIFF2 A sctl ctl C875
```


If an LVD library and a Plasmon G104 are attached to a A6829A card, ioscan -fn shows:

```

ext_bus      8          0/6/2/1  c8xx    CLAIMED INTERFACE SCSI C1010 Ultra160 Wide LVD
target      11          0/6/2/1.0  tgt     CLAIMED DEVICE
disk 10      0/6/2/1.0.0    sdisk   CLAIMED DEVICE SONY SMO-F561
            /dev/dsk/c8t0d0 /dev/rdisk/c8t0d0
target      12          0/6/2/1.1  tgt     CLAIMED DEVICE
disk 8       0/6/2/1.1.0    sdisk   CLAIMED DEVICE SONY SMO-F561
            /dev/dsk/c8t1d0 /dev/rdisk/c8t1d0
target      13          0/6/2/1.2  tgt     CLAIMED DEVICE
disk 9       0/6/2/1.2.0    sdisk   CLAIMED DEVICE SONY SMO-F561
            /dev/dsk/c8t2d0 /dev/rdisk/c8t2d0
target      14          0/6/2/1.3  tgt     CLAIMED DEVICE
disk 11      0/6/2/1.3.0    sdisk   CLAIMED DEVICE SONY SMO-F561
            /dev/dsk/c8t3d0 /dev/rdisk/c8t3d0
target      15          0/6/2/1.6  tgt     CLAIMED DEVICE
unknown -1  0/6/2/1.6.0    UNCLAIMED UNKNOWN IDE MULTI

```

The entry for an A-class server in FNPoll.servers would look like this for the configuration of the SE library to work:

```

# A-Series
SE1 A sctl ctl C1010  This line was modified.
SE2 A unknown unknown none
DIFF1 A sctl ctl Ultra

```

Databases

The following topics are about Image Services databases and other issues that are database-specific.

DB2

The following topics are about the Image Services DB2 database and other issues that are DB2-specific.

Installation of version 9.5

Default code pages

(DB2 only) If you install DB2 9.5 with the default code page set to Unicode, you might encounter the following DB2 errors when executing a ddexim import job:

```

2008/11/21 13:51:38.417 121,9,302 <fnsw> ddexim -sd -i
/fnsw/local/tmp/disk_info/sun225d2r_ART_ADD_ON.db.exp (2583.1.115 0xa17.1) ... [SERIOUS]

Error in GDBD_exec: SQLExecute, STMT 65538 (&000a3220) (./src/GDBD.c, VERSION 4.1.1.0,
@3393) .

SQLSTATE = 22001, NativeError = -302,

ErrorMsg = '[IBM][CLI Driver][DB2/SUN64] SQL0302N The value of a host variable in the
EXECUTE or OPEN statement is too large for its corresponding use. SQLSTATE=22001

```

The error translates to:

```

sun225d2r(fnsw)/fnsw/local/tmp/disk_info> db2 ? SQL000302

SQL0302N The value of a host variable in the EXECUTE or OPEN statement is too large for its
corresponding use.

```

Cause

The value of an input host variable was found to be too large for its use in the SELECT, VALUES, or prepared statement. One of the following occurred:

- The corresponding host variable or parameter marker used in the SQL statement is defined as string, but the input host variable contains a string that is too long.
- The corresponding host variable or parameter marker used in the SQL statement is defined as numeric, but the input host variable contains a numeric value that is out of range.
- The terminating NUL character is missing from the C language NUL-terminated character string host variable.
- Federated system users: in a pass-through session, a data source-specific restriction might have been violated.

This error occurs as a result of specifying either an incorrect host variable or an incorrect SQLLEN value in an SQLDA on an EXECUTE or OPEN statement.

The statement cannot be processed.

Workaround

Ensure that the input host variable value is the correct type and length. If the input host variables supply values to parameter markers, match values with the implied data type and length of the parameter marker.

Federated system users: for a pass-through session, determine what data source is causing the error (see the Troubleshooting Guide for procedures to follow to identify the failing data source). Examine the SQL dialect for that data source to determine which specific restriction has been violated, and adjust the failing statement as needed.

```
sqlcode: -302
sqlstate: 22001, 22003
```

Networking

The following topics are about Image Services networking.

IPv6 best practices

- You must configure the network infrastructure (DNS, routers, and so on) to support IPv6 before you enable IPv6 on the Image Services system.
- All Image Services servers and clients must support IPv6 before you enable IPv6 on the Image Services servers.
- Upgrade the servers to Image Services version 4.1.2 or later before upgrading the Image Services clients.
- Update the DNS with the IPv6 addresses rather than the host file. The Image Services software looks at DNS first, the host file second, and the network clearinghouse third.
- Create the touch ipv4 file while deploying IPv6.

The ipv4 trigger file causes the Image Services software to use IPv4 protocol on all outgoing RPCs. Continuing to use IPv4 after IPv6 has been configured gives you the ability to upgrade from IPv4 to IPv6 in stages. After the network infrastructure and all Image Services servers and clients are configured for IPv6, you can remove the ipv4 trigger file.

Trigger files:

Image Services server: /fnsw/local/sd/ipv4

Image Services Toolkit client: /fnsw/client/config/ipv4

When you are ready to enable IPv6, see [technote 1331100](#), “IPv6 Configuration Procedures for Image Services.”

Operating systems

The following topics are about Image Services operating systems and other issues that are operating system-specific.

AIX

The following topics are about the Image Services AIX operating system and other issues that are AIX-specific.

Installation of version 6.1

Installation of the /usr/lib/libMrm.a file

(AIX only) AIX 6.1 installs the /usr/lib/libMrm.a file in a directory that is different from the one required by the Image Services 4.2. As a result, the Image Services 4.2 installation fails when running lic_admin.

Workaround

1. After you have installed AIX 6.1, but before you install Image Services 4.2, log in as a user with root privileges.
2. Download and install APAR: IZ13179 on AIX 6.1.
3. Enter: `ln -s /usr/lpp/x11/lib/R1/libMrm.a /usr/lib/libMrm.a`

Oracle 10gR2 6613550 patch

(AIX only) AIX 6.1 requires the Oracle 10gR2 6613550 patch to fix a problem with rootpre.sh.

1. Download patch number 6613550 from the Oracle support web site.
2. As a user with root privileges, run the script.
3. As Oracle user, launch the Oracle Universal Installer (runInstaller).

FNPoll

(AIX only) After a boot or a reboot on AIX, FNPoll continues to run for up to two minutes after the system is available for logon. If you attempt to start Image Services while FNPoll is running, errors will log and the optical libraries will be unusable. Errors logged might include:

```
2007/06/22 15:00:41.431 133,0,2 <fnsw> fn_trapd (397514) ... [SERIOUS]
ARM Can't open Storage Library a (device name='/fnsw/dev/1/osara'), err=ca64000a
2007/06/22 15:00:41.433 133,0,2 <fnsw> fn_trapd (397514) ... [WARNING]
Can't get gripper enabled/disabled status on OSAR 'a'
```

Workaround

On full-use systems, after a boot/reboot of an AIX system, run the following command to determine when FNPoll finishes running:

```
ps -ef | grep FNPoll
```

Once the FNPoll process is not listed in the process listing, you can start Image Services.

On systems that have Image Services autostart configured, add a “sleep” to the /etc/rc.inittfnsw file to allow enough delay for the devices to be created before Image Services startup begins. The entry in the /etc/rc.inittfnsw file would look like this:

```
# AIX specific processing
if test "$system_type" = "AIX" ; then
    sleep 120
fi
```

Place the “sleep” in the file before the Start Image Services section where “inittfnsw start” is called.

Solaris

The following topics are about the Solaris operating system and other issues that are Solaris-specific.

Sun PCI-X Ultra320 dual port for Solaris 10

(Solaris only) When using a Sun PCI-X Ultra 320 LVD/SE dual port (SG-XPCI2SCSI-LM320) SCSI card on Solaris 10, the FNSOD kernel driver fails with numerous optical drives. This is an issue with the Sun mpt driver which is the layer below FNSOD. (Trouble ticket case 65485545).

This is not a problem with any other SCSI adapters on Solaris 10. Other SCSI cards such as Sun X6541A, Sun X6758A, and Paralan P79320 Ultra 320 SCSI cards have the same functionality on Solaris 10 that they had on prior operating system versions.

Workarounds

- Use a different SCSI card.
- Each time Solaris 10 is rebooted with the reconfigure flag (boot -r), or the /reconfigure file exists on reboot, Solaris 10 will recreated all of the device links. This is typically only used when new hardware is added or changed. Solaris 10 has been shown to consistently create invalid device links on reconfigure reboot with attached HP optical libraries. These invalid device links are associated with device LUNs that do not exist.

The following sample is a list of the /dev directory for optical device fnsod which has an invalid device entry.

```
ls -al /dev/fnsod*

lrwxrwxrwx  1 root      sys          49 May 18 09:46 /dev/fnsod.8,11,3,0 ->
../devices/pci@8,600000/scsi@1,1/SOD@3,0:8,11,3,0

lrwxrwxrwx  1 root      sys          49 May 18 09:46 /dev/fnsod.8,11,4,0 ->
../devices/pci@8,600000/scsi@1,1/SOD@4,0:8,11,4,0

lrwxrwxrwx  1 root      root         49 May 22 11:28 /dev/fnsod.8,11,4,1 ->
../devices/pci@8,600000/scsi@1,1/SOD@4,1:8,11,4,1
```

In this sample case, the device fnsod.8,11,4,1 is an invalid device. You would know this by understanding what devices actually exist on a given system. You can find this information from the control panel on the optical library. In this sample case the device arm is device id 3 Lun 0, and the disk drive is id 4 Lun 0, and id 4 Lun 1 is not a valid device.

To resolve this problem, remove and recreate the device links by hand.

Login with a root user account and type the following commands:

```
# rem_drv fnsod
# rm /dev/fnsod*
# rm /dev/SOD*
# /fnsw/bin/fnsod.install
```

You should see the following output which shows only the correct devices were created.

```
Beginning fnsod.install script
No match
Driver (fnsod) not installed.
No match
-rw-r--r--  1 root      sys          2584 May 22 15:01 /kernel/drv/fnsod.conf
-rwxr-xr-x  1 root      sys          132727 May 22 15:01 /kernel/drv/sparcv9/fnsod
Driver (fnsod) installed. Devices:
/dev/fnsod.8,11,3,0 /dev/fnsod.8,11,4,0
```

The second problem has been seen on IS startup, after the invalid device links are fixed. The IS software will log when attempting to open the library, similar to the following:

```
202,100,17 <fnsw> dsched b
FCL: unexpected errno 3 performing open_device operation on file: /fnsw/dev/1/oddb1
```

Workaround

Create the /kernel/drv/mpt.conf file that specifically configures the Ultra320 driver to force a bus width of 8 bits. This will not be a problem because these optical libraries can only work in 8 bits and an attempt to negotiate 16 bits is causing the problems.

This is a sample mpt.conf file.

```
name="mpt" parent="/pci@8,600000"
unit-address="4"
target1-scsi-options=0x58
scsi-options=0x178 scsi-initiator-id=7;
```

You will have to change the parent="/pci@8,600000" to match your specific device. To find this device name, type the command:

```
ls -al /dev/SOD*
```

This is the output which matches the above mpt.conf file.

```
lrwxrwxrwx 1 root sys 45 May 22 15:02 /dev/SOD.0 ->
../devices/pci@8,600000/scsi@1,1/SOD@3,0:osar

lrwxrwxrwx 1 root sys 44 May 22 15:02 /dev/SOD.1 ->
../devices/pci@8,600000/scsi@1,1/SOD@4,0:odd
```

The mpt.conf file must also need to be owned by root. Use the following commands to change ownership of the mpt.conf file.

To find the unit-address use the number after the SOD@ which in this case is 4 for the drive. Multiple drives will require multiple entries.

```
chown root /kernel/drv/mpt.conf
chgrp root /kernel/drv/mpt.conf
```

The supported HA systems allow only one host to be active at a time, so the limitation of the interposer board would not cause problems in most cases. There are times when both hosts might be active however. One is when they are booted, although this can be avoided by waiting for one server to boot completely before starting the other one. If one of the servers fails however, when it is booted to bring it back on line, it will poll the devices on the SCSI bus and this could result in the command response being directed to the wrong host. If the customer always idled the SCSI bus by disabling the arm and all of the drives inside the library before booting the server, they could theoretically work around this. IBM does not recommend this workaround.

Workaround

Use target mode.

Solaris 11 - Kernel Tuning parameters

The FileNet Image Services 4.2.0 Installation and Configuration Procedures manual for the Solaris hardware platform does not mention that Solaris 11 is supported and does not provide the kernel settings for Solaris 11.

For Solaris 11 servers, use the same Solaris kernel limits that are documented for the Solaris 10 operating system in the FileNet Image Services 4.2.0 Installation and Configuration Procedures. For information, see the IBM Product documentation site:

<https://www-304.ibm.com/support/docview.wss?rs=86&uid=swg27010558>

UNIX

The following topics are about the Image Services UNIX operating system and other issues that are UNIX-specific.

Retention dates

(UNIX only) Due to a limitation in the UNIX time functions (known as the year 2038 problem or the UNIX millennium bug), you cannot set or extend retention dates in the MKF docs table past the year 2038 on documents that were archived by Image Services Integral SDS because retention values are stored as seconds in the MKF docs table and on the protected storage device (SDS).

Documents and SDS objects that are in the doctaba table and that have retention dates that are beyond the year 2038 will be protected by the retention date because retention dates are stored in the doctaba table as days and not as seconds.

Currently HCAP and SunSAR do not support retention dates beyond the year 2038 but Snaplock, Centera, and DR550 SDS devices support retention dates past 2038. IBM anticipates that all supported SDS devices will at some point prior to 2038, support retention dates beyond 2038.

Windows only

The following topics apply only to Windows operating systems.

COLD

(Windows only) COLD log file names are truncated when they are viewed using Xcold_log.

Localization

(Windows only) The following issues occur when a Windows server is configured to use either a Japanese or Korean character set.

Installation

Typically, users can choose their own root path for the Image Services software installation. The final installation paths are:

- `user_defined_root_path\fnsw` for the FNSW directory
- `user_defined_root_path\fnsw_loc` for the FNSW_LOC directory

However, if the Windows server uses a Japanese or Korean character set and the user-defined root path contains Japanese or Korean characters, then the Image Services installation program “Hardware Checks” panel does not display the FNSW and FNSW_LOC paths correctly.

This is only a display issue; the installation works correctly.

Hotkey display

Incorrect hotkeys display in the Security Administration panel when:

- Adding a user
- Adding a group
- Deleting a database logon
- Deleting a user

Incorrect hotkey underline position displays in the:

- Build Menu dialog box
- Define User Indexes dialog box

Task Manager (when restoring a service)

Newly connected optical drives on Windows 2003

(Windows 2003 only) Newly connected optical drives on Windows 2003 servers create error when accessed.

On servers running Windows 2003, the operating system mistakenly creates lettered drives for newly connected optical drives. If you access the optical drive for which a lettered drive exists, errors are written to the elog but operations appear to run successfully. Rebooting the server will remove the lettered drive and end the errors.

Adaptec Ultra320 SCSI cards for Windows 2008

(Windows 2008 only) Windows 2008 users with Adaptec Ultra320 SCSI cards (29320ALP-R, 29320LPE, 39320A-R, and IBM 39R8743) should not use the Windows-supplied drivers (adpu320.sys) with these cards.

The version numbers of these cards are either v.3.0.0 or v.7.2.0. IS created lettered drive and creates SCSI optical device errors when using the Windows-supplied drivers. Download the latest non-RAID driver from the Adaptec website.

The version of the latest non-RAID driver should be at least v7.00.00.08.

Fresh installation on a Windows 2008 cluster

(Windows 2008 only) By default, Windows 2008 Microsoft Cluster software names a cluster shared drive with the cluster resource name that begins with "Cluster Disk." This naming convention causes the Image Services 4.2 installation program to not recognize the shared disk.

To avoid this situation, see the [Fresh Installation on a Windows 2008 Cluster](#) technote.

Operations

The following topics are about Image Services operations.

Excessive disk swapping

Background jobs can cause excessive disk swapping.

Background jobs such as Import, Find Open Docs and Doc Copy, and Integral SDS tasks can cause excessive disk swapping, even though `fn_edit` parameters are set to minimize disk swaps. This is because background jobs circumvent `fn_edit` parameters.

System administrator tools

System administrator tools might require locks when updating system and Image Services resources. If more than one occurrence of the same tool runs concurrently, the other occurrences wait for the first one to release its lock. If you abort or kill a waiting or hung process, the tool could exit holding a resource lock and hang other processes waiting for the resource the tool was holding. These hangs can be prevented by running only one occurrence of any system administrator tool and by never terminating a tool abnormally.

Workaround

IBM recommends running no more than one occurrence of any Image Services system administrator tool. In addition, never exit these tools using the "X" in the upper right had corner of the window, issuing a control-C, or using any other methods for killing the process. System administrator tools are accessed through Xapex (Application Executive menu) or through the command line (`SEC_tool`, etc).

Storage

The following topics are about Image Services storage devices.

COLD

Some changes were required to the character set translations provided by COLD during data import. Additionally, a procedural change was made to documents with the Euro character in them during COLD Preview. The solutions provided to these issues are not actual fixes, but considered legitimate workarounds.

Background

When importing data files into COLD, the data files are assumed to use the same character set format as the IS default character set. When this is not the case, a translation map is necessary so that the characters display correctly in the IS default character set. COLD provides a few translation maps to convert from other character set formats into the 8859-1 character set. The most common one translates from the EBCDIC character set into the 8859-1 character set.

Issue #1

The Euro character is not supported in the 8859-1 character set, which is the one normally used for Western European countries. Instead, it is supported in the 8859-15 character set. IS does not support the 8859-15 character set as a default character set on the system. However, the Windows 1252 code page is a superset of the 8859-1 character set and also includes the Euro character. Consequently, it has been decided to import COLD documents that include the Euro character into the 1252 character set instead of 8859-1. As a result, customers must use the new character set translation files provided to import documents that contain the Euro character. Two new character set translation tables are being provided: one that translates from 8859-15 to 1252 and one that translates from EBCDIC to 1252.

Issue #2

The Euro character cannot be displayed on UNIX based IS servers during COLD preview because the default character set used, 8859-1, does not include the Euro character. As a result, documents containing the Euro symbol can only be displayed during COLD preview on Windows-based IS servers. This can only be accomplished in conjunction with the resolution for issue #1, whereby COLD documents are being imported into the 1252 character set format.

Impact on the customer

The new translation maps are supported by COLD Preview, COLD Import, and the COLD daemon (cold_3770). Select one of the new translations maps from COLD Preview or Import in the 'Character Set Translation' part of the window in the user interface. For the COLD daemon, specify the '-t' option with the name of the character set translation file to use.

Workaround

The following files are provided to resolve the COLD related Euro character set issues.

8859-15_1252	8859-15 to 1252 translation map (binary)
8859-15_1252_src	8859-15 to 1252 translation map (ASCII)
eb_1252_src	EBCDIC to 1252 translation map (binary)
ebcdic_1252	EBCDIC to 1252 translation map (ASCII)

Note that only the binary versions of the files are used by COLD. The ASCII versions are made available for information only. They provide the specific mapping for each character in the character set and are used to generate the binary versions of the files.

Optical libraries

When you run the `fn_edit` procedure to auto-configure a new optical library, the library number assignments for existing libraries might be changed.

If this happens, then problems will occur for libraries that were configured as a “preferred library” for a document family.

This can happen if a new library is attached to a server where any previously configured opticals are scanned in a different order than when they were initially configured. For example, if you already have library A and B, scanned in that order, and you attach library C such that the libraries are scanned in the order of C, A, B, you will run into this problem. Also, if you manually configured libraries previously, you might have assigned library numbers differently than what would have been assigned when they are auto-configured. Problems can occur when preferred libraries are defined for families, because they might no longer be assigned to the correct physical library.

Maintain an old copy of the `as_conf.s` file as a reference. After the auto-configuration, check whether the library numbers of previously existing libraries have changed. If so, edit the file so that it reflects the old numbers. If a new library is assigned to one of the previously used numbers it must be given a new number so that the old numbers are used by the previously existing libraries.

MSAR

The following topics are about Image Services MSAR storage devices.

Erase a “do not use” MSAR surface

If you erase an unlabelled surface that is marked “Do Not Use”, it won’t erase until the next recycle of the IS software. (A recycle removes a “Do Not Use” flag and retries the erase). At that point, the erase does a sequential database search for documents residing on that surface. This is extremely slow for large databases and can take an extended period of time.

Erase an “out-of-sync” MSAR surface

If you attempt to erase an MSAR surface with no active documents on it and the “Do Not Use” flag is set, the erase will terminate and the disk will be ejected.

If you want to erase an out-of-sync MSAR surface, you must recycle the IS software before starting the erase job. The recycle removes the “out-of-sync” flag for a retry.

MSAR families with multiple concurrent write surfaces

A system that has multiple concurrent write surfaces typically writes to only one surface at a time. It uses the other concurrent write surfaces for overflow purposes if a bottleneck occurs when processing write requests for the initial surface.

Additional software tuning might be required to best use the system resources and to eliminate bottlenecks.

200FX jukebox

The following topics are about Image Services 200FX jukebox storage devices.

Configuration

Product ID C1170A is not in the OSAR contents table for 200FX jukebox. As a result, fn_edit auto-configure of HP200FX will not complete successfully. Therefore, you must manually configure the jukebox.

The jukebox, according to the HP website, should be returning a SCSI ID of C1170F (indicating 4X optical drives) instead of C1170A (indicating 2X optical drives). The 200FX is not a common jukebox. It was never sold by HP but is created with a field upgrade of a 2X jukebox model.

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