SPOOLMAIL

Enhancement Summary V2R4M0
Program Number 2A55SM1

Installation Instructions

Restoring the new release

Read the Enhancement Summary to determine if any changes affect your installation.

Follow these instructions to install SpoolMail V2R4M0 on your System i5:

Note: If you have downloaded this software from the web, instructions specific to installing from the download can be found in the file "readme.htm" which is included in the download.

1. Sign on to the system as the security officer (QSECOFR).

2. Verify that your machine is at i5/OS V5R4M0 or later by running:

   DSPDTAARA DTAARA(QGPL/QSS1MRI)

   Note: If you are running a version of i5/OS earlier than V5R4M0 you can not install SpoolMail V2R4M0 on your machine. You must install an earlier version of SpoolMail or upgrade the operating system.

3. Verify that user domain objects are allowed in the libraries SPOOLMAIL and QSRV, by running:

   WRKSYSVAL SYSVAL(QALWUSRDMN)

   Take option 5 to display the value. If the value is not *ALL, use option 2 to add libraries SPOOLMAIL and QSRV to the list of libraries where user domain objects are allowed.

4. Insure that i5/OS will be able to verify the signatures that we apply to our product's objects by installing our Signing Certificate and Root CA Certificate using Digital Certificate Manager. Alternately, insure that signature verification will not prevent the restore operation by running:

   WRKSYSVAL SYSVAL(QVFYOBJRST)

   Take option 5 to display the value. If the value is 3 or higher, use option 2 to temporarily change the value to 1.

5. Mount the distribution media in the appropriate device.

6. Submit the Restore Licensed Program (RSTLICPGM) command to batch:

   RSTLICPGM LICPGM(2A55SM1) DEV(device-name) LNG(2924)

   Note: "device-name" is the device the media was mounted on and is usually OPT01.
   Note: During the restore operation the system operator message queue may receive inquiry message CPA3DE4 "Directory not registered. (C G)". Unless you are using a directory naming convention similar to ours (that is the directory specified in the CPA3DE4's second level text is unrelated to our software), You can safely respond with a "G" to reestablish the relationship between the directory and the product. Typically the message will occur three times.

7. Enter your permanent authorization code by following the instructions on your Authorization letter.

8. Determine which PTFs were included on the media by entering the following command:

    DSPPTF LICPGM(2A55SM1)

9. Visit www.gumbo.com to determine if newer PTFs are available.

Enhancements For SpoolMail V2R4M0

What's In This Section

> This section provides information on SpoolMail enhancements for the current release, notes any customer code implications, and describes where to find more information when applicable.

Digitally Signed PDF Capability Added

> PDF files produced by SpoolMail can be, optionally, digitally signed. The signature included in the PDF document allows the identity of the author to be validated and provides additional assurance that the PDF document has not been tampered with after it was signed.

> You create digitally signed PDF documents by specifying an Application ID when the document is created. There are two ways to accomplish this: at the command level and at the system (or LPAR) level. The command level overrules the system level. For command level, specify an Application ID directly on the command's new PDF document signing key (PDFSGNKEY) parameter. For the system level, specify an Application ID on the CHGSM1DFT command's new PDF document signing key (PDFSGNKEY) parameter.

> The shipped default values for the PDF document signing key (PDFSGNKEY) parameters are *DEFAULT and *NONE respectively.

> Application ID refers to the name you have given to a digital certificate when placing it in the *OBJECTSIGNING Certificate Store using i5/OS's Digital Certificate Manager (DCM). DCM is option 34 of i5/OS. You can determine if DCM has been installed by running the Display Software Resources (DSPSFWRSC) command.

> For complete information on setting up DCM, creating and storing certificates and adding Application IDs, goto the iSeries Information Center (http://www.iseries.ibm.com/infocenter).

S/MIME Signed Message Capability Added

> Email produced by SpoolMail can be, optionally, digitally signed using S/MIME Signed Message format. S/MIME (Secure / Multipurpose Internet Mail Extensions) is a standard for public key encryption and signing of email encapsulated in MIME. A signed message is an ordinary message with a digital signature added by the sender. The signature has two purposes: it identifies the sender, and it verifies that the content of the message has not been altered since the message was sent.

> You create digitally signed email by specifying an Application ID when the email is created. There are two ways to accomplish this: at the command level and at the system (or LPAR) level. The command level overrules the system level. For command level, specify an Application ID directly on the send command's new Signing key (SGNKEY) parameter. For the system level, specify an Application ID on the CHGSM1DFT command's new Signing key (SGNKEY) parameter.

> The shipped default values for the Signing key (SGNKEY) parameters are *DEFAULT and *NONE respectively.

> Application ID refers to the name you have given to a digital certificate when placing it in the *OBJECTSIGNING Certificate Store using i5/OS's Digital Certificate Manager (DCM). DCM

is option 34 of i5/OS. You can determine if DCM has been installed by running the Display Software Resources (DSPSFWRSC) command.

For complete information on setting up DCM, creating and storing certificates and adding Application IDs, goto the iSeries Information Center (http://www.iseries.ibm.com/infocenter).

*USRDTAUP Special Value Added

A new special value, *USRDTAUP has been added to the To (recipient) (TOSMTPNAME) parameter. When specified, the value of the spooled file's "User Data" (USRDTA) attribute is treated as a user name and the email address stored in the directory entry associated with the user name is used as the recipient.

Some applications place the name of the requesting user in the spooled file's user data and this special value can be used to link it to the user's email address.

CC(), BCC() And REPLYTO() Enhanced

Special values previously only available on the To (recipient) (TOSMTPNAME) parameter are now available on the Cc (carbon copy) (CC), Bcc (blind carbon copy) (BCC), and Reply to (REPLYTO) parameters. The additions are: *MAILTAG, *PAGDTA, *SPLFOWN, *SPLFCRT, *USRDFNDTA, *USRDFNTXT, and *USRDTAUP.

SNDSPLMAIL's FILE() Parameter Enhanced

A new special value, *LASTCRT, has been added to the Send Spool Mail (SNDSPLMAIL) command's Spooled file name (FILE) parameter. When FILE(*LASTCRT) is specified, the last spooled file created by the current job or thread is identified using the QSPRILSP api and processed. When *LASTCRT is specified, the JOB() and SPLNBR() parameters are ignored.

*LASTCRT is useful when the command is run from within a job that changes user profile during processing and creates spooled files that end up in QPRTJOB.

CHGSM1DFT Prompting Correction

An error in the CHGSM1DFT prompt override program was scrubbing the *FGID special value from the PDFFNTIMB() parameter.

Authorization Component Corrections And Updates

o Check SpoolMail Authorization (CHKSM1AUT) command added wasn't working correctly for non-tiered products.

Encryption Component Corrections And Updates

o ArcFour encryption functions accessible from the product interface were removed and replaced with calls to i5/OS supplied apis. This reduces the product's Export Control Classification Number (ECCN) to EAR99-NLR i.e. innocuous and exportable anywhere.

o Functions implementing the SHA-1 message digest algorithm have been added.

Font Processor Corrections And Updates

Added exports for accessing and processing TrueType fonts made available by the DDS FONTNAME() keyword.

o Added font table to locate fonts referenced through DDS's FONTNAME() keyword to base definition table.

o Corrected CPGID (codepage global identifier) returned for several well know codepages (T1DxBASE) in base definition table resulting in improved "tounicode" maps generated by pdf conversions that use the codepages and embed the fonts.

o Increase Type1 font parser memory allocation to avoid out of memory error for some large font character sets.

o Updated font base data table with additional cpgid - codepage information including recent Polish additions.

o Faulty logic allowed code pages in the process of being parsed to be used as complete during highload stress test. Incomplete codepages used as complete gave erroneous results.

o Previously, when processing a spooled file's attributes for font specifications, the file's Character identifier (CHRID) setting was ignored and values were derived from the default ccsid in all cases. CHRID is now processed correctly.

FreeType Component Corrections And Updates

o Initial build. Portions of FreeType.org's FreeType library have compiled into a service program to parse font files and retrieve information from them.

Integrated File System Component Corrections And Updates

o oflag process was expanded in IfsOpen() to provide more fine grain control required by some digital signing methods.

PDF Generator Corrections And Updates

o Enable embedding of TrueType fonts and processing of the unicode data that results when the DDS FONTNAME() keyword is specified without a named code page.

o Type1 font parsing errors weren't being caught and handled, resulting in "pointer not set" error when embedding font.

o Internal functions to digitally sign generated PDF documents added PDF generator.

o PDF0039 "Unknown image data element size." erroneously generated when processing 4 bit CMYK images with "PDF image process blending" (PDFIMGPBL) parameter set to

*NOPREBLEND4.

o Corrected bolding of adjacent data when processing SCS spooled files.

o Malformed (truncated in middle of page) AFPDS spooled file caused malformed PDF document when compression used. No error message was issued. Diagnostic message now issued and valid PDF generated.

o PDF417 is a 2-dimensional barcode used in a variety of applications, including transport, identification cards, and inventory management. Support for PDF417 has been added to the Portable Document Format Transforms.

o Tolerate and correct mangled G4 MMR image created by ImagePlus.

o Adobe's Acrobat 8.0 spotted a missing parameter in the color profile included with PDF/A documents. The parameter is now included.

o Adobe's Acrobat 8.0 Preflight PDF/A validator does not tolerate a space character at the end of the file header. It has been removed.

o Imbedded Type 1 font programs were incorrectly declared as Compact Font Format (CFF). Now they are correctly declared as Adobe Type 1 Font Format.

o PDF insertion of single space character for SCS Horizontal Tab mishandled, resulting in it being ignored.

o PDF location of SCS Underscore mishandled when certain *FGID font imbedding is performed.

Print Data Stream Processor Corrections And Updates

o Data Stream Seek function returned erroneous results (or a tight infinite loop) under some conditions. These most often occurred during Report Manager filtering i.e negative distance trans buffer move in buffered data stream.

Conversion Processor Corrections And Updates

o Error processing *TIFF page range corrected.

SCS Processor Corrections And Updates

o Corrected initial position calculated during set horizontal margin (SHM) SCS control code processing.

Send Mail Component Corrections And Updates

o Specifying a variable containing the special value '*N' on the INCOBJ() parameter to signify "no value" does not work correctly.

Space Management Component Corrections And Updates

- o Added locking protocol to insure that pointer retrieved during space creation points at newly created space.

- o Space locking now uses job default wait time.

Spool Component Corrections And Updates

- o Previously the CRTSPLSAVF command could fail if the printer file, which is included in the saved material, contained functionality that would not save to earlier releases. I.e. a new barcode format. Now when this case arises the printer file is omitted and the save completed.

OpenSsl Component Corrections And Updates

- o Initial build. Portions of OpenSsl.org's OpenSsl library have compiled into a service program to generate asn.1 encoded Pkcs7 signatures rendered base 64.