

SPOOL-A-MATIC

Version 1 Release 5 Modification 0
Enhancement Summary
Program Number 2A55-SAM

Fourth Edition (March 2002)

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Installation Instructions

Restoring the new release

Read the Enhancement Summary to determine if any changes affect your installation. To install Ver 1 Rel 5 Mod 0, sign on as the security officer.

1. Verify that your machine is at OS/400 V4R4M0 or later by running:

```
DSPDTAARA DTAARA(QGPL/QSS1MRI)
```

2. Mount the distribution media in the appropriate device.
3. Submit the Restore Licensed Program (RSTLICPGM) command to batch:

```
RSTLICPGM LICPGM(2A55SAM) DEV(device-name)
```

4. Enter your permanent authorization code.

Enhancements for Spool-A-Matic Version 1 Release 5 Modification 0

What's In This Section

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

Gumbo Logical Printer Driver Added

A new command, Create Device Gumbo Printer (CRTDEVGLP) provides a new range of possibilities for using Spool-a-Matic.

The Create Device Gumbo Printer (CRTDEVGLP) command creates a device description for a Gumbo logical printer. A Gumbo logical printer is a printer device that performs spooled file processing instead of printing on paper.

As with other printer devices, you use OS/400's writer commands (WRKWTR, STRPRTWTR, ENDWTR, HLDWTR, etc.) and OS/400's configuration commands (WRKCFGSTS, VFYCFG, etc.) to control a Gumbo logical printer's operation.

When you create a Gumbo logical printer using the Create Device Gumbo Printer (CRTDEVGLP) command, a source file with the same name is create in library QUSRSYS. The source file contains a member with the same name as the printer and in the source member is a single Control Language (CL) command. As a Gumbo logical printer processes, it runs this command once for each spooled file in the output queue.

Gumbo Logical Printers can be shared on the network like any other OS/400 printer. Your users can add it as a network printer to their PC and "print" to it from any PC application. If for example, you set up the logical printer to generate PDF then your users can generate PDF directly from any of their desktop applications without the need to purchase and install Adobe's PDF writer on each PC. This can be a huge savings. Let us know what other applications you find for Gumbo Logical printers.

Added Barcode Support To PDF

The PDF transforms now support the conversion of barcodes found in the spooled file.

Exception Handling, File Clean Up

More robust exception handling was added to prevent program failure. When an exception or other failure does occur, the generated (damaged) file is closed and deleted.

811 And 814 Renamed to LETTER and LEGAL

Several transform names included "811" to denote 8 1/2" x 11" paper and "814" to denote 8 1/2" x 14" paper. These have been replaced by "LETTER" and "LEGAL" respectively. For example the transform *PDF811 is now known as *PDFLETTER. For compatibility reasons, the old versions are still recognized and honored as before.

Additional PDF Paper Sizes Added

Several transforms for new PDF paper sizes were added. These are:

- *PDFSTATEMENT for 5.5" x 8.5" paper size
- *PDFEXECUTIVE for 7.25" x 10.5" paper size
- *PDFLEDGER for 11" x 17" paper size
- *PDFA5 for A5 paper size
- *PDFA3 for A3 paper size
- *PDFB5 for B5 paper size
- *PDFB4 for B4 paper size

PDF Document Title Parameter Added

A PDF document title (PDFDOCTTL) parameter was added to the Spool Convert (SPLCONVERT) command. The parameter specifies the title of the generated Portable Document Format (PDF) PC file. CHAR(256).

Note: The title is also used when generating HTML.

The possible values are:

- *NONE - No title is placed in the generated PC file.
- *ACGCDE - The spooled file's accounting code is used as the title.
- *PRTTXT - The spooled file's print text is used as the title.
- *USRDTA - The spooled file's user data is used as the title.
- *USRDFNDA - The spooled file's user defined data is used as the title.
- title - Specify the title of the PDF file.

PDF Document Subject Parameter Added

A PDF document subject (PDFDOCSBJ) parameter was added to the Spool Convert (SPLCONVERT) command. The parameter specifies the subject of the generated Portable Document Format (PDF) PC file. CHAR(256). The possible values are:

- *DEFAULT - A default subject is placed in the generated PC file.
- *ACGCDE - The spooled file's accounting code is used as the subject.
- *PRTTXT - The spooled file's print text is used as the subject.
- *USRDTA - The spooled file's user data is used as the subject.
- *USRDFNDA - The spooled file's user defined data is used as the subject.
- subject - Specify the subject of the PDF file.

PDF 128 Bit Encryption Added To PDFDOCSEC

The PDF document security (PDFDOCSEC) parameter has been enhanced to support 128 bit encryption and new permissions added by version 1.4 of the PDF specification. The parameter specifies how (PDF) files are secured. See the command help text for details.

Owner Parameter Added

An Owner (OWNER) parameter was added to the Spool Convert (SPLCONVERT) command. The parameter specifies the user profile that is the owner of the newly created object. The possible values are:

***CURUSRPRF**

The object is owned by the current effective user of the current job or thread.

***SPLFOWN**

Ownership of the object is transferred to the owner of the spooled file. If the current effective user does not have *ADD data authority to the spooled file owner's profile, ownership of the object is determined in the same manner as *CURUSRPRF.

user-profile-name

Specify the user profile that is the owner of the newly created object. If the current effective user does not have *ADD data authority to the user profile, or if the profile does not exist, ownership of the object is determined in the same manner as *CURUSRPRF.

PDF Font Imbedding Parameter Added

A PDF font imbedding (PDFFNTIMB) parameter was added to the Spool Convert (SPLCONVERT) command. The parameter specifies, by font type, which font definitions are included in the generated PDF file. Imbedding fonts improves the fidelity of the PDF at the expense of file size. The possible values are:

***DEFAULT**

The default setting is used. See the CHGSAMDFT command.

***NONE**

No font definitions are included in the file. All fonts are mapped to Acrobat built-ins.

***TYPE1**

Outline font resources are imbedded in the file.

***TYPE3**

Raster font resources are sub-setted and imbedded in the file.

***TYPES13**

Both raster and outline font resources are imbedded in the file.

TOOBJ() Backslash Resolution Corrected

When creating the file specified in the TOOBJ() parameter, backslash (\) characters are normalized to the IFS's forward slash (/). This processing did not account for differences in code pages and previously did not work correctly for all source CCSIDs (ex. 273).

Target CCSID Changes

The Target CCSID parameter now defaults to *WINANSI (which is 1252) instead of 819. This provides more convenient usage for many locations, in particular those that use the Euro.

New special values were added: *WINANSI=1252, *UNICODE=13488, and *GBK=1388 (Simplified Chinese).

Option 60 Removed From Menu

Option 60 which was ECS modem based PTF retrieval has been removed from the menu. The underlying RTVGSIPTF command remains in the product. At a future release, the command will also be removed. PTFs are available for download at www.gumbo.com. You should change your procedures to use this source.

Option 65 Removed From Menu

Option 65 which displayed the machines serial number and processor group has been removed from the menu and the underlying DSPMCHDTA command deleted from the product. A similar function is provided by OS/400's WRKLICINF command. You should change your procedures to use this command.

New TOOBJ() Special Value Added

Several new special values have been added to the TOOBJ() parameter. These special value causes data from spooled file's attributes to be substituted into the path.

- *JOBNBR - Job number
- *SPLNBR - Spooled file number
- *SPLCCYY - Create century indicator and year (2002 = '102')
- *SPLCYY - Create 2 digit year (2002 = '02')
- *SPLCMM - Create 2 digit month
- *SPLCDD - Create 2 digit day

Additional Corrections and Fixes

A wide range of additional corrections and fixes were made to Spool-a-Matic These include:

Note: Thanks to all who reported problems or assisted in their resolution.

- o TXT Generator
 - Inline AFPDS resources were not bypassed and incorrectly ended up on the first page, mangling it.
 - Pages with data on line 1 only are mishandles and data from the next page was added in.
 - Invalid DBCS data was generating MCH3601 pointer not set. Invalid data is now trimmed.
- o PDF Generator
 - Unicode support added.
 - Encoding now generated for built-in fonts when target doesn't use PDF's WinAnsiEncoding.
 - Encoding for imbedded type 1 fonts improved for non Latin 1 CCSIDs.
 - MCH0601 and/or PDF0063 generated when processing some MMR images.
 - Correct rotation and alignment processing for non-HPT printers.
 - MCH0601 static storage error generated when processing some MMR images.
 - Text underscore positioning was improved.
 - Spooled file native page size was miscalculated for some.
 - Added processing for Chinese/Japanese/Korean DBCS conversion to PDF. You must have font imbedding turned off (the default) and you must have a country specific version of Acrobat Reader or have an Asian font pack installed in order to correctly view the generated file. The font packs can be downloaded free at:
<http://www.adobe.com/products/acrobat/acrrasianfontpack.html>.
 - Correct DBCS Simplified Chinese table entries.
 - *OVL secret forms type processed correctly for non-OfficeVision spooled files.
 - '\ character is not portable for some source CCSIDs resulting in broken PDF files. The problem was corrected.
 - Was incorrectly processing some (obscure) images.
 - Was incorrectly rotating some overlays when rotation parameter should have been ignored.
 - Enhanced orientation and position logic to more accurately emulate printer hardware behavior.
 - *IPDS spooled files with PAGRTT(*DEV) not rotated correctly.
 - Improved PDF graphics scaling giving more accurate results.
 - Adobe Acrobat Reader 5.0 fails with "Invalid Type 3 Font" when opening file with embedded type 3 fonts.
 - Invalid PDF was generated if Barcode HRI was the only text in the spooled file. The Text proc set and font were omitted.

- In rare instances, a buffer overflow resulted in an invalid page array yielding invisible pages.
 - Enabled CMYK color image processing.
 - Removed font /Name keyword. The keyword can confuse Acrobat 5.0. But since it is required by Acrobat 1.0, generated PDF can only be viewed by Acrobat 2.0 or later viewers.
 - Enabled IBM MMR compression for CMYK color images.
 - Invalid DBCS data is now trimmed to correct length.
 - Invalid DBCS SO/SI usage is now tolerated.
 - Page overlays are now loaded first. Previously they were loaded into the page last. For color overlays, this caused the printing to be obscured.
 - Corrected line spacing for non OS/400 AFPDS.
 - Enabled JPEG full color image processing.
 - Formerly, PDF created from an SCS spooled file with an overlay could get an incorrect font size when *COR was processed.
 - Celled raster IM images inside page segments were mishandled, garbling the image.
 - Improved font sizing for *COR/198/15 CPI spooled files.
 - Fixed problem with graphics text having incorrect line width when other lines exist on the page.
 - Enabled Bi-level color image processing.
- o Print Data Stream Processor
 - Enabled DBCS overprinting over blanks.
- o Font Resource Processor
 - Added DBCS font definitions to tables.
 - Added processing for DBCS fonts specified on spooled files.
 - Width value from the font descriptor triplet was not being properly used while scaling font widths.
 - CPI(18) gives wrong font global identifier resulting in wrong size (small) text.
 - Wrong Type 3 font was used in some cases, making results less than desirable.
 - Added code to use implicit DBCS fonts when IGCCDEFNT(*SYSVAL) and the system value is *NONE. The implicit font is selected based on source CCSID:
 - 930 = QFNT61/X0G32B Japanese
 - 933 = QFNT62/X0M32K Korean
 - 935 = QFNT64/X0ABCD Simplified Chinese
 - 937 = QFNT63/X0M32T Traditional Chinese
 - 939 = QFNT61/X0G32B Japanese
 - 5026 = QFNT61/X0G32B Japanese
 - 5035 = QFNT61/X0G32B Japanese
- o Intelligent Printer Data Stream Processor
 - Spooled file native page size was miscalculated for some.
 - Added support for unresolved orientation value of 'FF'x.
- o Mixed Object Content Architecture Processor
 - Mainframe generated AFPDS includes trimmed structured fields which caused MCH0601 when processed.
 - Enabled JPEG full color processing.
 - Tolerate malformed Begin Overlay and End Overlay structured fields.
- o Spool-a-Matic
 - IFS O_TEXTDATA flag not set on open giving undesirable results when TOOBJ() targets QSYS.LIB.
 - SPLCONVERT command's JOB() parameter behavior was restored. Previous releases did not require that the user and job number elements of the job parameter be specified. This was an error which was corrected. However the correction broke customer code and was removed. You should however specify all 3 elements of SPLCONVERT's JOB() parameter.
 - An authorization code for a particular serial number and processor group now works for with any smaller processor group as well.

- Increase the valid range of the SPLCONVERT command's SPLNBR() parameter to the new V5R1M0 limit of 999,999.
 - Reference Printer Device position calculations were enhanced to more accurately reflect the behavior of the hardware.
 - Updated CHGSAMDFT REFPRTDEV() parameter and help to reflect new special values and enhanced explanation.
 - Added Reference Printer Device support for color overlays.
 - Added JPEG full color processing service program.
 - Gumbo Logical Printers now change their run priority to 50 since the work is batch like and priority 15 is inappropriate.
- o SNA Character String Processor
 - Better font width calculation improves text positioning for some spooled files.
 - Spooled file native page size was miscalculated for some.
 - Added processing for DBCS SO/SI control sequences.
 - Certain malformed OfficeVision spooled files were generating an MCH3203 recursion error.
 - Added processing for DBCS SO/SI control sequences.
 - Added code to tolerate invalid DBCS data and to provide implicit SO/SI shift in when needed.
 - PrtPos control sequence no longer generates an implicit Shift In.
 - o Image Object Content Architecture Processor
 - Color image processing functions were added.
 - IDS structured field was not being initialized at the beginning of an image leading to erroneous error messages.
 - o Print Text Object Content Architecture Processor
 - Default values were not translated to the current unit base when used. This caused odd text positioning in some circumstances.
 - Default values translated incorrectly to the current unit base when used. This caused odd text positioning in some circumstances.
 - DOC1 generates print text descriptors with units per unit base values outside the valid range. These values are now tolerated.
 - DOC1 generates print text descriptors with extent values outside the valid range. These values are now tolerated.
 - Added support for unresolved orientation value of 'FF'x.
 - o Miscellaneous Functions
 - The program called by the RTVGSIPTF command was corrected.
 - Added *MENU processing to product Field Fix Manager.