Report Manager

Enhancement Summary
Licensed Program 2A55RM1 V2R7M0

Spooled File Distribution

Edition

Twentieth Edition (March 2020)

This edition applies to the licensed program Report Manager (Program 2A55RM1), Version 2 Release 7 Modification 0.

This summary is available through option 1 of the RPTADM menu, in PDF format in directory /Gumbo/Proddata/2A55RM1/doc on your system, and on the web at www.gumbo.com

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Cover image: "Saguaros, Saguaro National Monument" Arizona 1941, Ansel Adams

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Installation Instructions

Follow these instructions to install Report Manager V2R7M0 on IBM i using physical media or a virtual image:

Prepare

If you are upgrading a previous release (if Report Manager is currently installed), perform these steps before installing the software:

1. Read the Enhancement Summary to determine if any changes affect your installation.
2. Insure that the product is not in use, as the installation process must clear the product's library. This will fail if objects such as menus are in use. If the installation fails, the previous release will be restored.

Install

Note: If you are installing from a save file downloaded as an executable zip (.exe), use the save file specific "readme.htm" instructions included in the download.

1. Sign on to the system as the security officer (QSECOFR).
2. Verify that your machine is at IBM i V7R3M0 or later by running:

   ```
   WRKLICINF
   ```

   Note: If you are running a version of IBM i earlier than V7R3M0 you cannot install Report Manager V2R7M0 on your machine. You must install an earlier version of Report Manager or upgrade the operating system.

3. Verify that user domain objects are allowed in the libraries RPTMGR 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 RPTMGR and QSRV to the list of libraries where user domain objects are allowed.

   Note: QSRV is required to correctly process PTFs when they are loaded and applied.

4. Insure that IBM i 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 physical media or virtual image on the appropriate device.
6. Submit the Restore Licensed Program (RSTLICPGM) command to batch:

   ```
   RSTLICPGM  LICPGM(2A55RM1) DEV(device-name) LNG(2924)
   ```

Note: Where "device-name" is the device where the media or image was mounted 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 or four times.

Finish

When the RSTLICPGM command completes, library RPTMGR and directory '/Gumbo/ProdData/2A55RM1' contain the new software. To complete the installation:

1. If you have an Authorization or Instructions letter with your permanent authorization code, enter the code now.

   Note: Report Manager automatically grants 30 days usage for new installs or 90 days usage for release upgrades.

2. Retrieve the current cumulative Report Manager PTF package by running the following command:

   ```
   RPTMGR/RTVGSIPTF
   ```

   Note: *GUMBO* recommends downloading the current cumulative PTF package after installing the software.

3. Visit our PTF page at www.gumbo.com and check the **Additional IBM i PTF Information** section for IBM PTFs you may need to install.
4. You can access the Report Manager menu by running the following command:

   ```
   GO  MENU(RPTMGR/RPTADM)
   ```

Enhancements For Report Manager V2R7M0

What's In This Section

This section provides information on Report Manager enhancements for release V2R7M0, notes any customer code implications by marking them with a **COMPATIBILITY WARNING**, and describes where to find more information when applicable.

Retrieve Gumbo PTF (RTVGSIPTF) Command Updated

Previously, the Retrieve Gumbo PTF (RTVGSIPTF) command downloaded PTFs using the FTP protocol. Now RTVGSIPTF uses HTTP. Additionally, RTVGSIPTF can access the PTF server through a proxy server, if required by your network, using the new PROXY() parameter.

We anticipate that some installations' networks will have problems accessing the PTF server over HTTP. On a temporary basis, RTVGSIPTF has introduced a PROTOCOL() parameter that allows you to switch back to the old FTP behavior while correcting problems with HTTP service. This parameter will ultimately be removed along with support for FTP as a transport mechanism.

COMPATIBILITY WARNING

HTTP is now the default protocol for PTF retrieval. If your network restricts HTTP access or if a proxy is required for HTTP access the RTVGSIPTF command will fail. If a proxy is required you must fill in the PROXY() parameter. Otherwise you will have to specify PROTOCOL(*FTP) while you resolve problems with HTTP access on your network.

Call Date Format Corrected

Improperly formatted date causes call to Spool-a-Matic's SPLCONVERT command and SpoolMail's SNDSPLMAIL command to fail.

AFP Processor Changes

- EXTAFPRSC miscalculated buffering leading to duplicate data in extracted resource.
- EXTAFPRSC was being fooled by a name containing all blanks resulting in IFS1001 3014. Now a blank name isn't used as the resource's name.

Encryption Changes

- Replaced RSA MD5 implementation with IBM's built-in API, removing RSA copyright statements and acknowledgements. The product's Export Control Classification Number (ECCN) remains EAR99-NLR i.e. innocuous and exportable anywhere.

Font Processor Changes

- Corrected calculation of horizontal scaling for TrueType fonts which are not uniformly scaled (i.e. DDS *POINTSIZE height value not equal to width value). Previously the difference was ignored and processed as uniformly scaled.
- Extraneous and misleading diagnostic messages FNT0008, FNT0009, FNT0010, and FNT0017 no longer issued. They are only of interest to *SCS spooled files but were issued for all.

- New export to return TrueType/OpenType font name.
- We were issuing diagnostic messages for each page when a spooled file specified a non-standard coded font and the coded font could not be found on the system. Messages are now only issued once per spooled file.
- X0ABCD no longer used as a default DBCS font.
- Now substitute Courier FGID of correct size for Symbol FGIDs: 8 > 11, 30 > 11, 80 > 75, 225 > 223.
- Avoid *FGID alternative character set substitution from system table.
- When *FGIDs were imbedded and when font internal height and external height disagreed, font height was correct on the first page only. The problem is corrected.
- Type 1 font resolution now strips marker fields from the font program resulting in a pure pfb. This resolves a complaint from more recent PDF/A validators such as veraPDF,
- There is a naming discrepancy between IBM and Adobe regarding the mu/micro glyph. This caused the character to non-display in some circumstances. We have standardized on Adobe's view and the discrepancy is resolved.
- Incorrect character positioning could occur when imbedding *AUTO was used along with text relative positioning *EXACT or *EXACTMOD.
- Removed definition for font X0ABCD from internal font tables. This was an old work around that is no longer needed and gives incorrect results in some instances.
- This version of the font component ended, prematurely, reliance on source CCSID for font processing. Now source CCSID is again used as a last resort when font processing can't find any other means of determining CCSID. This primarily affects DBCS spooled files.
- Font processing is enhanced to parse and use information contained in font resources on the system and only referencing internal tables if the resource can't be found or if the resource doesn't contain the needed information.
- An internal change was made to avoid font resolution until the time information is needed, if ever.
- New export to allow retrieval of a font's Baseline Offset Default value.
- Update Baseline Offset Default retrieval to use FND Nominal Height if it is larger than Baseline Extent Max.
- Length and positioning were miscalculated for DBCS characters when processed in the presence of font resources. The old, correct, behavior has been restored.
- When determining a CCSID for a font based on GCSGID/CPGID fails, an attempt is made to identify a CCSID based on CPGID alone. This restores the previous behavior.
- Unicode map generation during code page *FNTRSC resolution now suppressed when processing a single byte code page that represents an individual plane of a DBCS cpgid. This removes extraneous conversion failure messages.
- When font resources are substituted for FGID fonts, the resource's notion of size now overrules the GRID specification. This restores the old, correct, behavior.
- When OCRB was specified by FGID(3), an OCRA code page was selected incorrectly. Now OCRB CPGID 2086 is substituted for the CPGID 340 generated into the data stream and the error is avoided.

FreeType Changes

- Update FreeType 2 code base from version 2.3.5 to version 2.6.2.

Integrated File System Changes

- New function to open (create) a file based on CCSID instead of CPGID added. This facilitates control over the created file's CCSID attribute.
- Glob (wildcard) processing was being too picky, only finding stream files in pure directories. Processing now correctly handles all Integrated File System objects including documents and folders.
- Potential memory leak under error conditions removed from glob processing.

Message Environment Changes

- New export allows on the fly tuning of an existing message environment's diagnostic message delivery.

Program Distribution Changes

- Added updated signature verification certificates to product.
- Added field fix manager processing to delete resolved font resource users spaces, if requested by a PTF, in order to force regeneration.

PTOCA Processor Changes

- Added processing and macros to track and return start and end positions for overstrike and underscore.

SCS Processor Changes

- Invalid channel number in SCS control VCS (vertical channel select) was treated as a fatal error. Now the control is ignored and processing continues.

Spool Indexing Changes

- Two separate and independent indexing bugs masked each other's existence, but combined could lead random memory overwriting, and in the case of report writers, lead to eventual job failure. The problem only occurred with *ALL line or *ALL position filtering, and long running report writers.

Send Mail Changes

- Uninitialized variable caused missing attachment when *PAGDTA spooled file splitting was used. The error is corrected.
- RFC-2231 implemented allowing non-ascii characters to appear in MIME field parameter values.
- RFC-2387 implemented. The Include object (INCOBJ) parameter has been enhanced to include a Content-ID element. With the addition "multipart/related" groups can be generated.

- Objects (OBJ) parameter processing is enhanced to process wildcards. The object path name can be either a simple name or a name that is qualified with the name of the directory in which the object is located. A pattern can be specified in the last part of the path name. An asterisk (*) matches any number of characters and a question mark (?) matches a single character. If the path name is qualified or contains a pattern, it must be enclosed in apostrophes.

Space Management Changes

- Free function avoids call to OS when no memory to free.

Spool File Changes

- Added system name and create date/time to delete function.

Spool Management Changes

- CRTSPLSAVF command now saves QCHRIDCTL system value.
- The Merge Spooled File (MRGSPLF) command's Merge input list (MRGFILE) parameter has been modified. Element 5 'Page range to print:' has been given a single value of *ALL which is the default. This avoids a command prompter problem that resulted in an incorrect command string that could not be reprompted.