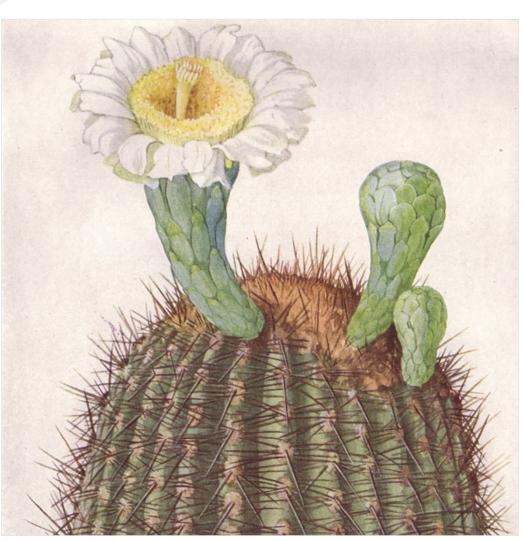# Report Manager

Enhancement Summary
Licensed Program 2A55RM1 V2R5M0

Spooled File Distribution

Edition

Eighteenth Edition (July 2013)

This edition applies to the licensed program Report Manager (Program 2A55RM1), Version 2 Release 5 Modification 0.

This summary is available as option 1 from the RPTADM menu, in PDF format in directory /Gumbo/Proddata/2A55RM1/doc on your system, and on the web.

© Copyright Gumbo Software, Inc. 1992, 2013. All Rights Reserved.

Cover image: Saguaro Illustration National Geographic Magazine, XXXI (June 1917) Page 513.

Contents

Installation Instructions

Follow these instructions to install Report Manager V2R5M0 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 a self extracting 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 V7R1M0 or later by running:

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

   Note: If you are running a version of IBM i earlier than V7R1M0 you cannot install Report Manager V2R5M0 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 letter with your permanent authorization code, enter it 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 V2R5M0

What's In This Section

This section provides information on Report Manager enhancements for release V2R5M0, notes any customer code implications by marking them with a **COMPATIBILITY WARNING**, and describes where to find more information when applicable.

Old Report Conversion Failed

Report Manager report's internal layout has changed three times over the years. When an old report is opened for the first time by new release, its internal format is updated. At V6R1M0 the conversion process failed on some systems for reason unknown and undocumented, but related to pointers to system pointers. The conversion process's handling of pointers has been simplified and the problem avoided. Symptoms of the problem included converted reports with no subscriptions and converted reports unrecognized as reports.

Filter Print False Error

Printing report filters produced an extraneous CPF6A92 "List RMTMPFTRP not active." error message. The filters were printed correctly. The message is now avoided.

Better Conversion CCSID Calculation

Subscriptions that specify transforms other than *TXT make calls to our SpoolMail and/or Spool-a-Matic products. When making the call, the spooled file's source ccsid is now determined based on its attributes and in the case of DBCS and *PDFxxx transforms, the target ccsid is adjusted to provide appropriate conversion.

Subscription Number Expanded

Previously, subscription numbers were limited to 1-255. The limited has been raise to 1-512.

Retrieve Gumbo PTF (RTVGSIPTF) Command Added

Previously, loading and applying PTFs for Report Manager required a visit to www.gumbo.com, downloading a file and many manual steps. We've added a command to automate the process.

The Retrieve Gumbo PTF (RTVGSIPTF) command checks a remote system for new product PTFs, and, if available, downloads and installs them.

The command assumes that IBM i has connectivity to the PTF server. Unless you are running your own internal server hosting our PTFs, this means that IBM i has access to the internet and that FTP is not blocked by a firewall.

The command first checks the availability of new PTFs by retrieving a product and release specific file (Ex. q2r50LastPtf.txt) from the remote system and comparing its contents to the last PTF applied locally. If newer PTFs are available, a product and release specific PTF save file (Ex. q2r50all.svf) is downloaded, and the PTFs it contains are loaded and applied.

Note: *GUMBO* only delivers immediate PTFs. Immediate PTFs do not require an IPL and an IPL is never performed by the command.

The previous method of supplying PTFs will be supported until all supported product releases contain RTVGSIPTF and until the vast majority of customers are using RTVGSIPTF. At a minimum this will be several years.

Font Processor Changes

- New internal version of font processor released. The release reorganizes internal structure to provide on demand or as needed processing of font resources. As a result, some errors such as "font not found" occur later than in earlier releases.
- GCSGID superset - subset data updated for Japanese character sets.
- DBCS fonts identified by FGIDs 53248, 53249 (Japanese), 54563, 54568 (Traditional Chinese), 54565, 54566, 54567, 54568 (Simplified Chinese), and 54560, 53816 (Korean) were incorrectly treated as not scalable, resulting in improper font sizing.
- For fonts identified by an FGID which has an implied height, height overrides were ignored. Overrides are now applied.
- Enhanced processing for api QGSLRSC. Previously, processing was ended if the api issued any error. Now the spooled file resource list is inspected for useable data after an error is returned.
- Corrected message handling when api QGSLRSC returns an error. Previously the error returned by api QGSLRSC was either replaced by another or dropped.
- An erroneous entry in an internal font table resulted in incorrect FGID substitution for user defined FGIDs in the range 65280 to 65379.
- Previously, font parsing could produce errors or failed processing. The problem situation arose when identically named, but different, font resources were simultaneously parsed and the timing of the processing was unlucky. Luck is no longer required to get correct results.

FreeType Changes

- Added functions to process type1 fonts.

Integrated File System Changes

- Integrated file system service program recast with storage model *INHERIT to increase product construction flexibility.
- Added dash ("-") as a recognized separator character which distinguishes the end of a special value for substitution. For example '*SPLCYY-*SPLCMM-*SPLCDD' is recognized and a date is formed.
- Added missing message id IFS1014 and IFS1016.
- Corrected usage of message id IFS1014 and IFS1016.
- Functions were added for creating and removing hard links for stream files.

Mail Set Up Changes

- DSPMAILLOG was sending a "no data available" message regardless of the reason for failure of the DSPJRN command. Command now sends an "error encountered" message for DSPJRN failures unless the failure is CPF7062 "No entries converted ...".

National Language Support Changes

- Previously an unknown keyboard type code was treated as an error. Now the job default ccsid is used.
- Several QKBDTYPE values don't have an implied ccsid, for example CAB and JEB. Now when resolving these, the job default ccsid is used instead of returning an error.
- Special value *JOBDFT incorrectly resolved to job ccsid, not job default ccsid.
- Added new function to resolve ccsid of a spooled file from its attributes.

Print Data Stream Changes

- Changed default stream manager to use internal job and spooled file IDs to open spooled file. This allows correct processing in the presence of spooled files with duplicate file/job/user/jobnbr/splnbr combinations.

Program Distribution Changes

- Previously, a missing product directory didn't cause SAVLICPGM or CHKPRDOPT to fail. Now, diagnostic message CPD3D70 is issued for each missing directory and the operation fails.
- /lib has been added to the product's directory structure to facilitate future enhancements.
- Added QSYSLIBL check to trouble shooting instructions.
- RTVGSIPTF fails if no PTFs currently installed.
- The product's prompt message file is now part of the shipped deliverables as a prelude to internationalization.
- Command compilation change to allow *IMOD in all commands that allow *IPGM and to allow *BMOD in all commands that allow *BPGM.
- Incorrectly declared variable prevented RTVGSIPTF command from loading and applying PTFs.
- A new object signing certificate, to replace the previously used and expiring one, was placed into service on our development systems. If you are using CHKOBJITG to verify the integrity of objects in our software, load the new certificate into the *SIGNATUREVERIFICATION certificate store.

PTOCA Processor Changes

- Added processing for new control sequence x6A Unicode Complex Text (UCT). Previously message ID PTX0005 was issued.

Sfntly Changes

- Initial build. Google's Sfntly library has been compiled into a program to subset font files.

Spool Indexing Changes

- Missing page map reset resulted in erroneous page selection when multiple compound filters were applied to a spooled file. The second application resulted in pages from the first being included.
- The range of the length element of the Page data (PAGDTA) parameter has been increased to 255 from 64.

Send Mail Changes

- Mailer now issues an information message with file size on acceptance by QtmmSendmail() API. Use RCVMSG to retrieve file size which is first 8 bytes of message data as a binary variable:

```
           ...
DCL        VAR(&MSGID) TYPE(*CHAR) LEN(7)
DCL        VAR(&FILESIZE) TYPE(*INT) LEN(8)
           ...
SND...   (send command)
RCVMSG     MSGTYPE(*LAST) MSGDTA(&FILESIZE) MSGID(&MSGID)
IF         COND(&MSGID *EQ SND1067) THEN(DO)
           /* additional code to act on file size */
           ...
ENDDO
           ...
```

- Added functions and exports in support of priority specification.
- Removed obsolete MIME warning for non-MIME readers. Email no longer includes:

```
> THIS IS A MESSAGE IN 'MIME' FORMAT.  Your mail reader does not
support MIME.
> You may not be able to read some parts of this message.
```

- New special value for email address parameters, ***USRPRF**, has been added. ***USRPRF** is used to specify a user profile name that supplies an email address. The correct form is: ***USRPRF:NAME** where **NAME** is a user profile. The directory entry associated with the user profile is identified and the email address it contains is used.
- Added functions to process message body with specified content type.
- Improperly initialized variable resulted in garbage in message data for message id SND1009 and SND1030.
- Objects in unlinkable file systems now handled properly.
- New export to allow client to select synchronous vs. asynchronous processing and thus avoid a temporary directory used for asynchronous.
- Previously, included files sent as "text/html" used 8bit encoding (basically a straight copy). For signed email, this resulted in invalid signatures at the mail client. Additionally, the message arrived "quoted-printable"; presumably rewritten by IBM i. Encoding of "text/html" has been changed to "quoted-printable", avoiding the problem.
- Previously when adding files as attachments, calling functions had to insure that each file was available until the email was finalized and sent. Internal processing was changed to establish hard links to the files, allowing the calling function to delete them immediately.

- Previously, MIME parts were added to an email under construction without regard to order. I.e. parts were added as they were processed. While this behavior is compliant with the relevant MIME specifications, it befuddles some of the most popular email clients. Outlook treats text MIME parts preceded by an attachment as an attachment, giving it a name and failing to display it. In the same scenario, Thunderbird displays the text part as intended but also assigns a name and shows it in the list of attachments muddying the overall appearance of the message.

  Now, generation of MIME parts is postponed until the full content of the email is known. Once known, the text MIME parts are processed first, placing them at the top of the email in the order received, followed by any and all attachments, again in the order received. In the case of alternative groups, if the first alternative is a text MIME part, all alternatives are moved as a group to the top of the email.

Spool Management Changes

- Enhanced processing for api QGSLRSC. Previously, processing was ended if the api issued any error. Now the spooled file resource list is inspected for useable data after an error is returned.
- Corrected message handling when api QGSLRSC returns an error. Previously the error returned by api QGSLRSC was either replaced by another or dropped.
- The Merge Spooled File (MRGSPLF) command's Merge input list (MRGFILE) parameter has been extended with two additional elements, Job system name and Spooled file created. These mirror earlier additions by IBM for spooled file identification.
- The number of spooled files that can be specified on the Merge Spooled File (MRGSPLF) command has been increased from 256 to 300.
- The number of spooled files that can be specified on the Merge Spooled File (MRGSPLF) command has been increased from 128 to 256.
- The Archive Spooled File (ARCSPLF) command has been extended with two additional parameters, Job system name (JOBSYSNAME) and Spooled file created (CRTDATE). These mirror earlier additions by IBM for spooled file identification.
- The Retrieve Spooled File (RTVSPLF) command has been extended with two additional parameters, Job system name (JOBSYSNAME) and Spooled file created (CRTDATE). These mirror earlier additions by IBM for spooled file identification.
- The Duplicate Spooled File (DUPSPLF) command has been extended with two additional parameters, Job system name (JOBSYSNAME) and Spooled file created (CRTDATE). These mirror earlier additions by IBM for spooled file identification.

Text Generation Changes

- Added processing to optionally blank pad each line to the width of the spooled file. Previously only blank trimmed processing was supported.