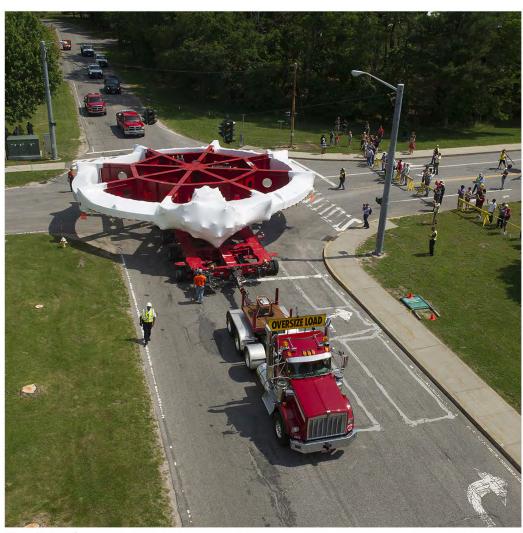# Excel-erator

Enhancement Summary
Licensed Program 2A55XL1 V2R3M0

Data Base Conversion

Edition

Twelfth Edition (February 2020)

This edition applies to the licensed program Excel-erator (Program 2A55XL1), Version 2 Release 3 Modification 0.

This summary is available through option 1 of the XLERATOR menu, in PDF format in directory /Gumbo/Proddata/2A55XL1/doc on your system, and on the web at www.gumbo.com

Cover image: Muon g-2 600 ton magnet heading to Fermilab accelerator complex. (Wikimedia Commons)

Contents

Installation Instructions

Follow these instructions to install Excel-erator V2R3M0 on IBM i using physical media or a virtual image:

Prepare

If you are upgrading a previous release (if Excel-erator 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 Excel-erator V2R3M0 on your machine. You must install an earlier version of Excel-erator or upgrade the operating system.

3. Verify that user domain objects are allowed in the libraries XLERATOR 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 XLERATOR 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(2A55XL1) 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 XLERATOR and directory '/Gumbo/ProdData/2A55XL1' 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: Excel-erator automatically grants 30 days usage for new installs or 90 days usage for release upgrades.

2. Retrieve the current cumulative Excel-erator PTF package by running the following command:

   ```
   XLERATOR/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 Excel-erator menu by running the following command:

   ```
   GO  MENU(XLERATOR/XLERATOR)
   ```

Enhancements For Excel-erator V2R3M0

What's In This Section

This section provides information on Excel-erator enhancements for release V2R3M0, notes any customer code implications by marking them with a **COMPATIBILITY WARNING**, and describes where to find more information when applicable.

Message Parameter Enhanced

Send File Excel (SNDFEXCEL) command's Message (MSG) parameter has been enlarged from 2048 to 5000 bytes in length. Additionally, a send as element was added which allows specification of *TEXTPLAIN or *TEXTHTML content type. No program changes are required.

Subject Parameter Enhanced

Send File Excel (SNDFEXCEL) command's Subject (SUBJECT) parameter's maximum length is increased to 128.

New Menu Option

Option 67. Work with Source Code for Tools and Examples added to Excel-erator's main menu XLERATOR/XLERATOR. The option accesses source code found in file XLSOURCE which provides useful functions and demonstrates coding techniques used with Excel-erator.

Excel 2010 Warning Avoided

Out of order record generation caused Excel 2010 to treat *BIFF8 spreadsheets as suspicious when PAGESETUP() was specified.

Corrected Page Setup Scale *AUTO

Page scaling *AUTO is now explicitly written to the generated spreadsheet. Some viewers default to '1' in the absence of a declaration.

Better File CCSID Control

Previously, generated files were opened (created) based on CPGID. Under some circumstances, most notably CSV UTF8 variants, the resulting file had an inappropriate CCSID attribute. Now file open is based directly on CCSID and the problem avoided.

Radix Character Source Corrected

CSV conversions were using the decimal format specified in the job's locale, if present, instead of the decimal format specified for the job. If your processing relies on this behavior, CHGUSRPRF SETJOBATR(*DECFMT) for the affected users.

COMPATIBILITY WARNING

Format Text Transforms Added

Three new transforms have been added: *BIFF8T, *XMLSST, and *OOXMLT. Each is identical to: *BIFF8, XMLSS, and *OOXML, respectively, with one exception. Text cells are given text format instead of general format. This can be useful when handling character fields which contain numeric data.

Retrieve Gumbo PTF (RTVGSIPTF) Command Updated

COMPATIBILITY WARNING

Previously, the Retrieve Gumbo PTF (RTVGSIPTF) command supported downloading PTFs using the FTP protocol. With this release FTP support is removed.

HTTP is now the only 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.

The protocol PROTOCOL() parameter remains to provide backward compatibility with existing customer programs. If PROTOCOL(*FTP) is specified, a message is issued, and HTTP is used to communicate with the PTF server.

Include object (INCOBJ) Enhanced

Excel-erator's Include object (INCOBJ) parameter has been enhanced to include a Content-ID element. With the addition "multipart/related" groups can be generated.

Objects can be designated as part of a group of alternatives and/or can be assigned a Content-ID to designate it as a member of a group of related objects which allows reference between objects. There is interplay between alternative group and related group. The following rules are applied:

- The MSG() parameter, if specified, has implied Content-ID of *NONE and an implied alternate group of *NONE.
- Objects in each alternate group number are considered in turn with alternate group *NONE treated as group 0.
- If a group contains more than one object and at least one object has a Content-ID specified, a related group is formed.
- The first object within the alternate group that does not have a Content-ID specified is considered the root of and included in the related group. All other objects without a Content-ID are not included in the related group.
- If all objects in an alternate group have a Content-ID then the first object is considered the root of the related group.

Binary Interface File Format Changes

- New export to add SHEETPR (x'0081') record.

Comma-Separated Value Changes

- A limit of 256 fields was erroneously enforced on CSV files. The limit has been removed.

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.

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.
- New internal version V1R5M0 of service program created to position for future enhancements.
- New functions to perform glob (wildcard) processing added.

Message Environment Changes

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

OfficeOpen XML Spreadsheet Changes

- When generating fit to page element, now add Tags fitwidth/fitheight if either is non-zero. Entering value 0 is different than nothing. The viewers default nothing to 1, while the value '0' gives the *AUTO effect intended.

Program Distribution Changes

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

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.
- Now uses IfsOpenCcsid().
- 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.

Microsoft Spreadsheet XML Changes

- When generating fit to page element, now add Tags fitwidth/fitheight if either is non-zero. Entering value 0 is different than nothing. The viewers default nothing to 1, while the value '0' gives the *AUTO effect intended.