# Dumpster

Enhancement Summary
Licensed Program 2A55DMP V2R1M0



Spooled File Internals

## Edition

**Tenth Edition (August 2017)**

This edition applies to the licensed program Dumpster (Program 2A55DMP), Version 2 Release 1 Modification 0.

This summary is available through option 1 of the DUMPSTER menu, in PDF format in directory /Gumbo/Proddata/2A55DMP/doc on your system, and on the web at www.gumbo.com

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Cover image: Coal tipple at Gaston mine, Fairmont, West Virginia. October 1908.

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## Installation Instructions

Follow these instructions to install Dumpster V2R1M0 on IBM i using physical media or a virtual image:

### Prepare

If you are upgrading a previous release (if Dumpster 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 V7R2M0 or later by running:

   ```
   WRKLICINF
   ```

   **Note:** If you are running a version of IBM i earlier than V7R2M0 you cannot install Dumpster V2R1M0 on your machine. You must install an earlier version of Dumpster or upgrade the operating system.

3. Verify that user domain objects are allowed in the libraries DUMPSTER 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 DUMPSTER 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(2A55DMP) 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 DUMPSTER and directory '/Gumbo/ProdData/2A55DMP' 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:** Dumpster automatically grants 30 days usage for new installs or 90 days usage for release upgrades.

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

    ```
    DUMPSTER/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 Dumpster menu by running the following command:

    ```
    GO   MENU(DUMPSTER/DUMPSTER)
    ```

## Enhancements For Dumpster V2R1M0

### What's In This Section

This section provides information on Dumpster enhancements for release V2R1M0, notes any customer code implications by marking them with a **COMPATIBILITY WARNING**, and describes where to find more information when applicable.

### New DMPSPLF Special Value Added

The Dump Spooled File (DMPSPLF) command's Spooled file (FILE) parameter now supports specifying spooled file name *LASTCRT. *LASTCRT selects the last spooled file created by the current job or thread, using the QSPRILSP API, for processing. This is useful for jobs that create spooled files under other user profiles, which consequently end up in the user's QPRTJOB. When ***LASTCRT** is specified, the job name/user/number spooled file number, job system name, creation date and creation time are ignored.

### Source Access Option Added To Menu

Dumpster menu option 67 was added to provide access to examples and source code included in the product.

### 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

- 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.
- Previously when producing unicode mappings when code page *FNTRSCs were missing from the system, CPGID=37 was used as a default. Now the implied CPGID is used and accuracy increased for non CPGID=37 code pages.
- Test for equal character sets enhanced to look at the underlying *FNTRSC and not the references, decreasing the number of false negatives.
- Processing enhanced to produce a unicode character map even in the absence of a code page *FNTRSC object.
- New export allows retrieval of a font stack entry's opinion on the current effective ccsid.

### Integrated File System Changes

- New internal version V1R5M0 of service program created to position for future enhancements.

## Print Data Stream Changes

- New export added to improve space/memory management between service program and clients.
- Page buffering enhanced to handle DBCS data with encoding schemes other than x1301.
- Uninitialized variable causes *TXTxxx conversion failure when splitting the spooled file with PAGDTA() parameter.
- Internal modifications to increase modularity.
- Page buffer concept and supporting functions added. Page buffers allow out of sequence print data to be processed correctly by sequence oriented transforms such as txt, html, etc.

## Program Distribution Changes

- RTVGSIPTF anonymous logon updated to include @gumbo.com.
- 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.

## Space Management Changes

- New String Space functions SpcSspGetNextVs2() and SpcSspLoadCurrentVs2() added.