

# Dicer

Enhancement Summary V1R6M0  
Product Number 2A55DCR

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## Edition

Sixth Edition (August 2009)

***GUMBO***

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## Installation Instructions

Read the Enhancement Summary to determine if any changes affect your installation.

Follow these instructions to install Dicer V1R6M0 on your System i:

**Note:** If you have downloaded this software from the web, instructions specific to installing from the download can be found in the file "readme.htm" which is included in the download.

1. Sign on to the system as the security officer (QSECOFR).
2. Verify that your machine is at i5/OS V5R4M0 or later by running:

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

**Note:** If you are running a version of i5/OS earlier than V5R4M0 you can not install Dicer V1R6M0 on your machine. You must install an earlier version of Dicer or upgrade the operating system.

3. Verify that user domain objects are allowed in the libraries DICER 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 DICER 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 i5/OS 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 distribution media in the appropriate device.
6. Submit the Restore Licensed Program (RSTLICPGM) command to batch:

```
RSTLICPGM LICPGM(2A55DCR) DEV(device-name) LNG(2924)
```

**Note:** "device-name" is the device the media was mounted on 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 times.

7. Enter your permanent authorization code by following the instructions on your Authorization letter.
8. Determine which PTFs were included on the media by entering the following command:

```
DSPPTF LICPGM(2A55DCR)
```

9. Visit [www.gumbo.com](http://www.gumbo.com) to determine if newer PTFs are available. If so, download and install them. The bottom of our PTF web page also includes a listing of any IBM PTFs that affect the product.

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

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## Enhancements For Dicer V1R6M0

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### What's In This Section

This section provides information on Dicer enhancements for release V1R6M0, notes any customer code implications, and describes where to find more information when applicable.

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### Product Build Enhancements

The manner in which programs and service programs in our products are compiled and bound has undergone a significant change in order to incorporate and take advantage the \*TERASPACE storage model and \*LLP64 data model added to i5/OS.

You will probably not notice a difference, but you may face an exposure that is worth considering. Several of our products can call programs that you provide to perform processing. SpoolMail "Address mapping programs" and Report Manager "User process programs" are examples of this. If you do not use a "we call you" feature, you are not exposed. When source is compiled and a program bound, it specifies the storage model it uses, the activation group it attaches to and whether or not it is tera space enabled. If you take the default values for these and you are coding in languages other than C and C++ (RPG and CL for example), you are not exposed.

If on the other hand your programs are not tera space enabled (the default for C and C++) and/or you are attaching to our product's activation group either by specifying ACTGRP(\*CALLER) or by specifying our named activation group, your program may fail when we call it. You can avoid this by changing your program to TERASPACE(\*YES) for the first, and compiling with ACTGRP(\*NEW) for the second.

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### Product Manual "Enhancements"

In a sad passing, the printed manual's command diagrams have been retired. They have been replaced by the output of IBM's Generate Command Documentation (GENCMDDOC) command, the new "normal". While we view them as inferior, they obviate the grueling job of hand maintaining the diagrams. We won't miss the work.

With the change, the printed and green screen version of the manual have been converged. Both are now generated from the green screen UIM help source. In most instances this means that the figures in the printed manual have been degraded to the level available using UIM. Their level was never high to begin with.

The convergence will make it easier to better document the product as it only needs be done once. And being machine generated, the documentation is much easier to manipulate. If you have suggestions for format improvement, we'd like to hear them.

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### Spool User Interface Corrections And Updates

- WRKGSISPLF and WRKGSIOUTQ panels have been enhanced to more closely simulate their i5/OS analogs when prompting option 2, Change Spooled File Attributes. The output queue parameter is now accessible without pressing F10.

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### Authorization Component Corrections And Updates

- Check Dicer Authorization (CHKDCRAUT) command wasn't working correctly for non-tiered products.

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## Encryption Component Corrections And Updates

- ArcFour encryption functions accessible from the product interface were removed and replaced with calls to i5/OS supplied apis. This reduces the product's Export Control Classification Number (ECCN) to EAR99-NLR i.e. innocuous and exportable anywhere.
- Functions implementing the SHA-1 message digest algorithm have been added.

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## Font Processor Corrections And Updates

- F:OCA data stream processor now processes HSF (Horizontal Scale Factor) triplet for MCF (Map Coded Font 2) SFI. These can be found in overlays created using InfoPrint Designer. Function added to retrieve scale.
- Corrected sizing of the bolded counterpart of a font selected by the SCS command SFG which is imbedded (\*FGID).
- Added exports for accessing and processing TrueType fonts made available by the DDS FONTNAME() keyword.
- Added font table to locate fonts referenced through DDS's FONTNAME() keyword to base definition table.
- Corrected CPGID (codepage global identifier) returned for several well know codepages (T1DxBASE) in base definition table resulting in improved "tounicode" maps generated by pdf conversions that use the codepages and embed the fonts.
- Increase Type1 font parser memory allocation to avoid out of memory error for some large font character sets.

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## Graphic Object Processing Corrections And Updates

- Chained command sequences that contain an interior begin segment command resulted in extraneous lines. Interior begin segment commands are now treated as NOOPs.

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## MODCA Processor Corrections And Updates

- MO:DCA data stream processor now processes HSF (Horizontal Scale Factor) triplet for MCF (Map Coded Font 2) SFI. These can be found in overlays created using InfoPrint Designer.

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## National Language Support Component Corrections And Updates

- Added new simple string conversion function export.

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## Print Data Stream Processor Corrections And Updates

- Data Stream Seek function returned erroneous results (or a tight infinite loop) under some conditions. These most often occurred during Report Manager filtering i.e negative distance trans buffer move in buffered data stream.

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## Program Distribution Corrections And Updates

- Menu option to 'Verify the product is installed correctly' now specifies CHKSIG(\*NONE). Since we digitally sign our objects but most customers do not install our digital certificates, the option gave unnecessarily alarming results. If you have installed our digital certificates, you can run a complete check using:

```
CHKPRDOPT PRDID(2A55DCR) RLS(V1R6M0) CHKSIG(*ALL)
```

- Added function to retrieve a product's installed home directory coded in the requesting job's default ccsid.
- Added function to produce a system wide unique temporary file name. The file is in the product installed home directory's /tmp folder unless /tmp contains variant EBCDIC, as is the case for Japanese ccsid 5026 jobs. In this case the file is placed in the system /tmp directory using a /TMP name.

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## Spool Indexing Corrections And Updates

- Commands DMPPIP, DSPPAGDTA, and RTVPAGDTA now support 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() and SPLNBR() parameters are ignored.
- The concept of filter sets, sets of page filters joined by \*AND/\*OR conjunctions, has been introduced to indexing. Functions and types to manipulate these have been added. \*AND/\*OR conjunction processing is modeled on QUERY, whereby \*ORs separate groups of \*ANDs.

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## Space Management Component Corrections And Updates

- QUSCRTUS() api parameter 11's default behavior changed at i5/OS V6R1M0 rendering some uses of large user spaces an error. Call to api changed to specify original behavior.

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## Spool Component Corrections And Updates

- Previously the CRTSPLSAVF command could fail with CPF21A0 "AUDIT required to create or change libraries" as the CRTLIB command used by CRTSPLSAVF specified CRTOBJAUD(\*NONE). The CRTLIB command now takes the default CRTOBJAUD(\*SYSVAL) and the error is avoided.