CoolSpools

MEMO TO USERS

2020

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1. Introduction

This document lists changes that technical personnel, support staff and programmers need to be aware of before migrating to CoolSpools Version 7 from any earlier version of the products listed below:

Previous product	Previous Library
CoolSpools V6	COOLSPV6R1
CoolSpools PLUS	COOLSPV5R1
CoolSpools V5	CVTSPLV5R1
CoolSpools V4	CVTSPLV4R1
CoolSpools V3	CVTSPLV3R1
CoolSpools V2	CVTSPLV2R1
Communiqué V1	CMNQUEV1R1
Communiqué V2	CMNQUEV2R1
Slipstream V4	STMEXPV4R1
Slipstream V3	STMEXPV3R1
Slipstream V2	STMEXPV2R1
CoolTools V2	SPLTLSV2R1
CoolTools V1	SPLTLSV1R1

2. General Considerations

Operating System

The minimum level of IBM i (OS/400) on which CoolSpools Version 7 will run in V5R3M0. You cannot install CoolSpools V7 if you are still on OS/400 V5R2M0 or earlier.

CoolSpools Version 7 can run on any version of OS/400 or IBM i from V5R3M0 upwards. There is no special version of IBM i 6.1 or IBM i 7.1 (OS/400 V6R1M0 or V7R1M0).

When migrating to IBM i 6.1 or IBM i 7.1 1 (OS/400 V6R1M0 or V7R1M0) OS/400 V5R4M0 or earlier, you need to ensure that CoolSpools objects are subject to object conversion along with all other program objects. Use STROBJCVN to do this.

License keys

You will need a license key for each product option you want to use.

The software will run for 30 days without a license key when first installed, but you can email support@ariadnesoftware.co.uk at any time and ask for temporary license keys, or, if you meet the upgrade requirements shown above, you can just ask for your permanent license keys.

When requesting a license keys, please quote:

- your system serial number(s)
- your partition (LPAR) number(s), if the system has multiple partitions
- the product options you want keys for

Once you have installed V7, there is a command **DSPPRDINF** (Display Product Information) which shows the serial number and LPAR number we need.

Support keys

Starting with CoolSpools V6, you'll also need a **support key** if you want to install fix packs (PTFs). The support key validates your support and maintenance contract with ariadne and your eligibility to install fixes. If you have a current support and maintenance contract with ariadne, you will be sent a support key along with your license keys for V7 and a new support key will be emailed to you every time you renew your support and maintenance contract. You should use the **SAVSUPKEY** (Save Support Key) command to save the support key on the system so you don't have to remember it and key it in when you come to install fixes.

Refer to the Maintenance Guide for further details.

User copies of ariadne commands

If you have taken copies of any commands or other objects from the product library of any of the products listed in the Introduction, these will be made obsolete when CoolSpools V7

is installed and may cause problems. Delete and, if necessary, recreate those objects when you are ready to go live with CoolSpools V7.

System library list

If you have modified your system library list to include the product library of any of the products listed in the Introduction, you will need to modify system value QSYSLIBL to include the new product library COOLSPV7R1 instead at the point of going live.

In the run up to going live, if you wish to be able to parallel run the two versions and test CoolSpools V7 before going live with it (as we strongly recommend), you will need to use the CHGSYSLIBL command to modify the system portion of the library list of test jobs running CoolSpools V7 so they can use the correct product library without affecting live jobs.

Library lists

Where the old product library name is referenced, this will need to be replaced by the new library name at the point of going live. Consider:

- hard-coded library references in source code
- job descriptions
- scheduler setup (IBM job scheduler, ROBOT etc.)
- system values QSYSLIBL and QUSRLIBL

3. <u>Migrating from CoolSpools/CoolSpools PLUS to CoolSpools Spool Converter</u>

Before migrating applications to CoolSpools V7 Spool Converter (the replacement for CoolSpools and the CoolSpools functionality within CoolSpools PLUS), consider the following changes carefully and make any modifications to your applications these necessitate.

Product Library

The new CoolSpools V7 product library is COOLSPV7R1.

Where the old product library name is referenced, this will need to be replaced by the new library name at the point of going live. Consider:

- hard-coded library references in source code
- job descriptions
- scheduler setup (IBM job scheduler, ROBOT etc.)
- system values QSYSLIBL and QUSRLIBL

See the table below for details of the old product library names.

Previous product	Previous Library
CoolSpools V6	COOLSPV6R1
CoolSpools PLUS	COOLSPV5R1
CoolSpools V5	CVTSPLV5R1
CoolSpools V4	CVTSPLV4R1
CoolSpools V3	CVTSPLV3R1
CoolSpools V2	CVTSPLV2R1

Change of copybook name

Copybook CS_OPTFNCP is now called AR_OPTFNCP.

There is now also an additional copybook called AR_OPTFNCX which must be included in the same way as AR_OPTNFCP. If this source member is not in your copy of CS_SRCFILE, install the latest fix pack or contact us and we will send it to you.

CoolSpools Exit programs must be recreated

All exit programs and other user-written programs that bind to service program CS_SRVPGM must be recreated in order to work with the new release.

Previously, when creating exit programs to work with CoolSpools, it was necessary to bind in just service program CS_SRVPGM when creating your program with CRTPGM. Now, you should bind in both CS_SRVPGM and the new service program CP_SRVPGM).

Remember to specify **ACTGRP(*CALLER)** so exit programs run in the same activation group as CoolSpools.

The command you will need to recreate your exit programs is therefore now something like:

CRTPGM
    PGM(your_lib/your_pgm)
    MODULE(your_lib/your_module)
    BNDSRVPGM(COOLSPV7R1/CP_SRVPGM COOLSPV7R1/CS_SRVPGM)
    ACTGRP(*CALLER)

If you are using the dynamic binding versions of the CoolSpools option list APIs (i.e. calls to programs, such as **AR_ADDITMR**, rather than to the equivalent procedures in a service program, such as **OptAddItem)**, the exit programs do not need to be recreated.

Changes to password parameters

In previous releases, where a command parameter represented a password, that parameter was defined with either DSPINPUT(*NO) or DSPINPUT(*PROMPT) specified, so that the password was hidden in the joblog.

However, in order to support the use of the new feature known as **parameter sets**, limitations imposed by the IBM command exit programs have necessitated that these parameters be changed to DSPINPUT(*YES). Users should be aware that this means that from this release onwards, passwords supplied on the commands will be visible on the command line and in job logs.

However, also with this release, we have introduced support for **encrypted passwords** which allows you to supply passwords in encrypted form. Users are encouraged to use this facility to counteract any loss of security caused by the need to change these parameters to DSPINPUT(*YES).

Withdrawal of support for BIFF5 Excel files

The CVTSPLXLS command no longer supports the EXCEL(*BIFF5...) option.

Previously, two versions of Excel files were supported: BIFF5 (compatible with Excel 95) and BIFF8 (compatible with Excel 97 and later). BIFF5 files can now no longer be created.

However, Excel Open Office XML files (.xlsx), compatible with Excel 2007 can now be created using CVTSPLXLS and the new CVTSPLXL command, allowing a much larger number of rows per worksheet than previously.

Withdrawal of support for images in PDF referenced externally

The CVTSPLPDF and CVTSPLSTMF commands no longer have the option to reference images external to a PDF file by means of the INCLFILE(... *EXTERNAL...) option.

This is because Adobe has withdrawn this feature from PDF as a potential security exposure.

Calculation of line numbers in spooled files that use overlays

Version 5 PTF 5CV0028 implemented a change in the calculation of line numbers in spooled files. While this change had the major advantage that it brought the line numbers calculated by CoolSpools into line with those calculated by DSPSPLF, it also meant that applications that relied on the old method to do things like extract exit program parameters and generate bookmarks could suddenly stop working after application of the PDF.

In order to avoid this, the following technique was employed:

- the method used was controlled by an option on the TEXT parameter of CVTSPLPDF etc.

- this had options *NEW (new method) and *OLD (old method) but defaulted to *ENVVAR

- The special value *ENVVAR indicated that the method used was controlled by environment variable CS_TXT_ LINE_METHOD

- if this existed and had the value *NEW, the new method was used

- if this did not exist, or had some other value, the old method was used

- after the fix was released, an exit program ran when CoolSpools was installed that created CS_TXT_PCL_LINE_METHOD set to *NEW

- the overall effect of this was that new users adopted the new method but users who installed prior to 5CV0028 continued to use the old method unless they took a conscious step to implement it.

In Version 6, the default value of CS_TXT_PCL_LINE_METHOD is *NEW. This means that:

- if environment variable CS_TXT_PCL_LINE_METHOD does not exist (check using the WRKENVVAR command); and

- you use any of the following features:

  - positional exit program parameters (EXITPGMPOS parameter)

  - positional bookmarks (BMARKPOS parameter)

  - positional splitting (SPLITPOS parameter)

you will need to either:

- Modify any code or command calls to take account of the possible change of line numbers and re-test before going live; or

- Set CS_TXT_PCL_LINE_METHOD to *OLD to continue to use the old method

Version 5 PTF 5CV0240 implemented a similar change in relation to *USERASCII (PCL) spooled files and used environment variable CS_TXT_PCL_LINE_METHOD in a similar way. The default for CS_TXT_PCL_LINE_METHOD in V6 is *NEW. If you need V6 to continue to calculate line numbers in PCL as V5 did prior to 5CV0240, set CS_TXT_PCL_LINE_METHOD to *OLD.

New elements added to the middle of the FTP parameter

In order to add support for secure FTP (i.e. FTP over SSL/TLS), some new elements have been added to the FTP parameter of the various CVTSPLxxxx commands.

Because the parameter already included a list element at the end, it was necessary to add these new elements to the middle of the parameter.

This means that source code that uses the FTP parameter will need to be modified to take account of these extra parameters, even if you do not intend to use the secure FTP option.

Withdrawal of support for coordinates specified other than by *ROWCOL

It is no longer possible to specify coordinates in terms of inches, centimeters or millimeters. The only option for specifying coordinates is now *ROWCOL (row and column).

This change has been made because the *INCH/*CM/*MM option was little used, impossible to implement precisely and unambiguously, and therefore confusing to users.

In the case of the SPLITPOS and SPLITKEY parameters, where "Method of measurement" was not the last element of the parameter, the element has been retained for the sake of backwards compatibility, but now accepts only the value *ROWCOL. In all other cases, the element has been deleted.

This change affects the following command parameters:

Parameter keyword	Commands affected
SPLITPOS **element retained but only *ROWCOL now permitted**	CVTSPLCSV CVTSPLHTML CVTSPLPDF CVTSPLRTF CVTSPLSPLF CVTSPLSTMF CVTSPLTXT CVTSPLXLS
SPLITKEY **element retained but only *ROWCOL now permitted**	CVTSPLCSV CVTSPLHTML CVTSPLPDF CVTSPLRTF CVTSPLSPLF CVTSPLSTMF CVTSPLTXT CVTSPLXLS
EXITPGMPOS **element deleted**	CVTSPLCSV CVTSPLHTML CVTSPLPDF CVTSPLRTF CVTSPLSPLF CVTSPLSTMF CVTSPLTIFF CVTSPLTXT CVTSPLXLS

| EXITPGMKEY

element deleted | CVTSPLCSV
CVTSPLHTML
CVTSPLPDF
CVTSPLRTF
CVTSPLSPLF
CVTSPLSTMF
CVTSPLTIFF
CVTSPLTXT
CVTSPLXLS |
|---|---|
| BMARKPOS

element deleted on CVTSPLPDF, retained on CVTSPLSTMF | CVTSPLPDF,
CVTSPLSTMF |
| BMARKKEY

element deleted, retained on CVTSPLSTMF | CVTSPLPDF,
CVTSPLSTMF |

Withdrawal of support for PRTPDF command

The PRTPDF command, which attempted to print PDFs from the system i by communicating with a PC using RUNRMTCMD, has been withdrawn from this version as it proved too unreliable and was not in keeping with CoolSpools' ethic of being a standalone system i system.

We recommend the use of the PRTSTMF command instead. PRTSTMF was introduced by PTF to Version 5 of CoolSpools and can be used to create *USERASCII spooled files containing a PDF data stream from PDF stream files. These spooled files can be printed on printers configured for Postscript 3.

Stream file authorities

When creating a stream file, previous versions of CoolSpools set the owner's data authority on the new file to *RWX and set public authority to whatever value was specified on the AUT parameter, but did not set any authority for the owner's group. Group authority is now set to *RWX too.

RSCDIR parameter removed

In order to simplify command prompting, the little used RSCDIR parameter has been deleted.

RSCDIR identified the IFS directory in which CoolSpools should look for PCL macros and fonts saved by the RTVPCLRSC (Retrieve PCL Resources) command.

This information can now be supplied to CoolSpools in one of two ways:

- by creating an environment variable called CS_RSC_DIR containing the path to use
- by using the OPTIONS((*RSCDIR '/path')) command parameter

STMFCODPAG deleted from CVTSPLPDF and CVTSPLXLS commands

In order to simplify command prompting, the little used and unnecessary STMFCODPAG parameter has been deleted from the CVTSPLPDF and CVTSPLXLS commands.

The encoding of data in PDF and Excel files is dictated by the requirements of those formats and is not user definable. This parameter only ever dictated the CCSID attribute that was assigned to stream files created by these commands which is of little relevance since the data they contain is binary.

EMAILCFM and EMAILRPY parameters deleted from commands

In order to reduce parameter clutter, the little used EMAILCFM and EMAILRPY parameters have been deleted from all CVTSPL... commands.

The function of the EMAILCFM and EMAILRPY parameters has been combined with that of the EMAILTO parameter, which now supports new "email type" values of *CFM (confirmation-to email address) and *RPY (reply-to email address).

Commands now deprecated or withdrawn

Use of CVTSPLSTMF is now deprecated and ariadne reserves the right to withdraw support for it in a future release. You are encouraged to switch over to running the format-specific commands (e.g. CVTSPLPDF) that were introduced with Version 5 of CoolSpools instead of CVTSPLSTMF at the first opportunity. CVTSPLSTMF will not be further enhanced in future releases and any new features will be available only via the format-specific commands.

As part of the process of moving from CVTSPLSTMF to the format-specific commands, in addition to changing the command name and removing the obsolete TOFMT parameter, you are highly likely to have to make other changes as there have been numerous small changes to parameter values and defaults. Refer to the documentation of the command parameters below for details.

The CVTSPLSAV command has been superseded by SAVSPLF and is now deprecated.

The CVTSTMSPLF command has been superseded by RSTSPLF and has been withdrawn.

Menus

The CoolSpools Spool Converter menu is now called SPOOLCONV.

Marker for CoolSpools function names

Previously, the default function marker identifying the start of a CoolSpools function name was x'5B5B', irrespective of the CCSID of the job. This meant that on a US system (CCSID = 37), the marker was $$ but on a UK system (CCSID = 285) the marker was ££.

Thus, $$SUBST or $$XLATE on a US system became ££SUBST or ££XLATE on a UK system.

Now, the default function marker is $$ irrespective of the CCSID. CoolSpools will take account of the job CCSID to check for the characters $$ in all cases.

If your code assumes a different marker, you must either modify your code to use $$, or change the default marker for your system by setting environment variable

CS_FCN_MARKER for CoolSpools Spool Converter or SL_FCN_MARKER for CoolSpools Database to the characters you wish to use as the function marker.

4. <u>Migrating from Slipstream/CoolSpools PLUS to CoolSpools Database</u>

Before migrating applications to CoolSpools V6 Database (the replacement for Slipstream and the Slipstream functionality within CoolSpools PLUS), consider the following changes carefully and make any modifications to your applications these necessitate.

Product Library

The new CoolSpools V6 product library is COOLSPV6R1.

Where the old product library name is referenced, this will need to be replaced by the new library name at the point of going live. Consider:

- hard-coded library references in source code
- job descriptions
- scheduler setup (IBM job scheduler, ROBOT etc.)
- system values QSYSLIBL and QUSRLIBL

See the table below for details of the old product library names.

Previous product	Previous Library
CoolSpools PLUS	COOLSPV5R1
Slipstream V4	STMEXPV4R1
Slipstream V3	STMEXPV3R1
Slipstream V2	STMEXPV2R1

Withdrawal of support for BIFF5 Excel files

The CVTDBFSTMF command no longer supports the EXCEL(*BIFF5...) option.

Previously, two versions of Excel files were supported: BIFF5 (compatible with Excel 95) and BIFF8 (compatible with Excel 97 and later). BIFF5 files can now no longer be created. However, Excel Open Office XML files (.xlsx), compatible with Excel 2007 can now be created with the new CVTDBFXL command.

CVTDBFSTMF command now deprecated

The CVTDBFSTMF command is little changed in this release and it is not anticipated that any code that references CVTDBFSTMF will need to be change to run with CoolSpools V6.

However, use of CVTDBFSTMF is now deprecated. You are encouraged to switch over to running the new format-specific commands (e.g. CVTDBFXL, CVTDBFXML) instead of CVTDBFSTMF at the first opportunity. CVTDBFSTMF will not be further enhanced in future releases and any new features will be available only via the format-specific commands. As part of the process of moving from CVTDBFSTMF to the new format-specific command, in addition to changing the command name and removing the obsolete TOFMT parameter, you are highly likely to have to make other changes as there have been numerous small

changes to parameter values and defaults. Refer to the documentation of the command parameters below for details.

Menus

The CoolSpools Database menu is now called DATABASE.

5. Migrating from Communiqué/CoolSpools PLUS to CoolSpools Email

Before migrating applications to CoolSpools V7 Email (the replacement for Communiqué and the Communiqué functionality within CoolSpools PLUS), consider the following changes carefully and make any modifications to your applications these necessitate.

Product Library

The new CoolSpools V7 product library is COOLSPV7R1.

Where the old product library name is referenced, this will need to be replaced by the new library name at the point of going live. Consider:

- hard-coded library references in source code
- job descriptions
- scheduler setup (IBM job scheduler, ROBOT etc.)
- system values QSYSLIBL and QUSRLIBL

See the table below for details of the old product library names.

Previous product	Previous Library
CoolSpools V6	COOLSPV6R1
CoolSpools PLUS	COOLSPV5R1
Communiqué V1	CMNQUEV1R1

Preserving User Setup Data

You can use the **IMPEMLDTA** (Import Email Data) command supplied with CoolSpools Email to migrate data from an earlier version (Communiqué V1R1M0 or CoolSpools PLUS V5R1M0).

This provides any means of preserving data that you have set up such as email address lists and email address directories, as well as historical information such as message logs.

New EMAILID parameter on SNDCMNMSG command

The first parameter of the SNDCMNMSG command is now EMAILID, which defaults to *NEW.

This new parameter makes it possible to retrieve a previously sent email to form the basis of a new email by specifying the identifier of the email to be copied on the EMAILID parameter.

The first parameter was previously TO. If you have source code which defines parameters on a positional basis (rather than by keyword) and which assumes that the first parameter is TO, you will need to modify that code.

In other words:

> *SNDCMNMSG ((somebody@somewhere.com)) MSG('Example')*

would need to be rewritten as:

> *SNDCMNMSG *NONE ((somebody@somewhere.com)) MSG('Example')*

If, however, as is normally the case, parameters are specified by keyword. for example:

> *SNDCMNMSG TO((somebody@somewhere.com)) MSG('Example')*

no change is required.

If you think this functionality provided by the new EMAILID parameter is unlikely to be needed by your users, and you want to avoid their seeing the new parameter, you can modify your code to hide it by specifying selective prompt characters. For example, if you have a CL program that prompts for the SNDCMNMSG command by prefixing it with a question mark:

> ? SNDCMNMSG

(the programmatic equivalent of pressing F4 at the command line), you can hide the parameter completely and force the default value *NEW by prefixing the parameter keyword with ?- like this:

> ? SNDCMNMSG ?-EMAILID(*NEW)

Alternatively you can show the parameter but make it non-input-capable like this:

> ? SNDCMNMSG ?*EMAILID(*NEW)

Menus

The CoolSpools Email menu is now called EMAIL.

6. Migrating from CoolTools/CoolSpools PLUS to CoolSpools Spool Admin

Before migrating applications to CoolSpools V7 Database (the replacement for CoolTools and the CoolTools functionality within CoolSpools PLUS), consider the following changes carefully and make any modifications to your applications these necessitate.

Product Library

The new CoolSpools V7 product library is COOLSPV7R1.

Where the old product library name is referenced, this will need to be replaced by the new library name at the point of going live. Consider:

- hard-coded library references in source code
- job descriptions
- scheduler setup (IBM job scheduler, ROBOT etc.)
- system values QSYSLIBL and QUSRLIBL

See the table below for details of the old product library names.

Previous product	Previous Library
CoolSpools V6	COOLSPV6R1
CoolSpools PLUS	COOLSPV5R1
CoolTools V2	SPLTLSV2R1
CoolTools V1	SPLTLSV1R1

Preserving User Setup Data

You can use the **IMPADMDTA** (Import Spool Admin Data) command supplied with CoolSpools Spool Admin to migrate data from an earlier version (CoolTools V1R1M0 or V2R1M0 or CoolSpools PLUS V5R1M0 or CoolSpools V6).

This provides a means of preserving data that you have set up such as spooled file monitors, spooled file rules, spooled file scripts etc.

Rule and script names can now be up to 20 characters in length

Previously, spooled file rule names and spooled file script names could only be a maximum of 10 characters in length. The maximum length is now 20 characters to allow the use of more meaningful names.

Registered function names

User authorities to items such as:

- standard options
- user-defined options

- capabilities such as the use of the command line in WRKSPLFPDM

- the ability to operate as a system administrator

- etc.

are governed by the use of **registered functions** as before, but the registered function names have changed.

Previously the registered function name started with a prefix that was either AR_ST_ or AR_CS_

The corresponding new name replaces this prefix with ARIADNE_.

Registered function authority settings are automatically converted from the old functions to the new ones when you install CoolSpools Spool Admin and when you run **IMPADMDTA** to import exist data.

Subsystem name

CoolSpools Spool Admin jobs now run in a subsystem called COOLSPOOLS.

Previously the name was COOLTOOLS.

You may need to modify your system startup routine to start the new subsystem instead of the old when you go live with CoolSpools Spool Admin.

Job description name

CoolSpools Spool Admin jobs now use a job description called COOLSPOOLS.

Previously the name was COOLTOOLS.

You may need to modify the new COOLSPOOLS job description to set the job attributes as you need them in your environment. For example, you should set the initial library list to include any libraries needed by user-written exit programs that are called from these jobs as well as resource libraries containing fonts, overlays and page segments that might be referenced by spooled files that are converted.

File ST_TRNRUL

For administrative reasons, file ST_TRNRUL has been replaced by a similar file with the name ST_TRNSTP. You may need to modify your H.A./replication system to take account of this.

Testing CoolSpools Spool Admin while running CoolTools live

You can install CoolSpools Spool Admin alongside CoolTools or CoolSpools PLUS and we encourage you to test the new system before going live with it.

As described above, you can migrate your setup data into the new version using IMPADMDTA.

However, bear in mind that once you have done that, starting the COOLSPOOLS subsystem or running the Version 6 STRMONSPLF command will cause it to start processing your existing live spooled files as well as or instead of your live COOLTOOLS jobs.

In order to test CoolSpools Spool Admin while continuing to run CoolTools or CoolSpools PLUS live, you may need to:

- run IMPADMDTA to import the live setup from CoolTools/CoolSpools PLUS into CoolSpools V6 Spool Admin

- temporarily modify the CoolSpools V6 Spool Admin copies of your spooled file monitors, spooled file rules and spooled file scripts so that they will work against output queues containing test data rather than your live output queues.

- use those temporary versions to prove the new Version 6 setup is working properly

- run IMPADMDTA to re-import the live setup from CoolTools/CoolSpools PLUS at the point of going live, overwriting the test setup data

Menus

The CoolSpools Spool Admin menu is now called SPOOLADMIN.

Security

Authority/security related functions are now part of CoolSpools Base as they are shared by all parts of CoolSpools. See the CoolSpools Base menu BASEMENU for options that were previously part of the CoolSpools Security menu.

7. **New commands**

There are two new commands with version 7.

- IMPXLDBF - Import Excel Spreadsheet to Database File.

  This command allows excel spreadsheets to be imported onto the system i / iseries / AS400.

  Functionality includes using reference files and the ability to import individual worksheets into individual members.

- CVTDBFXLSX - Convert Database file to Excel 2007-2013 format.

  This command uses Open Office XML to give extra functionality, including the use of report breaks,report summaries and the inclusion of image files.