

# BASE OPTION USER GUIDE

V7R1 - 2020

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# **Introduction**

The CoolSpools Base Option must be installed before any of the other CoolSpools product options and includes the core code shared by all of those options. It also includes a number of shared functions and utilities, which are documented here. Refer to the user guide for the relevant product option for information about those options.

# **System Requirements**

- A system i or running IBM i (OS/400) V5R3M0 or above.
- 20 Mb of system i disk space.
- No PC is required.

# Minimum OS/400 Release Level

The minimum OS/400 release level required to run V7R1M0 of CoolSpools base option is OS/400 **V5R3M0**.

If you are running V5R2M0 or an earlier version of OS400, you will not be able to install V7R1M0 of CoolSpools base option.

# **Product Library**

All product options of CoolSpools V7R1M0 install into the single product library COOLSPV7R1.

# **Installation**

Refer to the <u>Installation Guide</u> for instructions.						

# **Maintenance**

Refer to the <u>Maintenance Guide</u> for instructions.

# **Getting Started**

The easiest place to start is the CoolSpools Menu. This gives access to the wide range of functions available within CoolSpools.

Enter the following command at a system i (iSeries, AS/400) command line to display the CoolSpools Menu:

#### GO COOLSPV7R1/COOLMENU

	Work with Style Definitions		ARIADNE2					
Position to .								
Type options	, press Ente	er.						
2=Change	3=Сору	4=Delete	5=Display	7=Rename				
Opt Style nan	ne							
*DATA								
*HEADER								
*NORMAL								
*SUBTOTA	L							
*TOTAL								
AMBER_TR	AFFIC_LIGH	HT						
GREEN_TR	AFFIC_LIGH	НT						
RED_TRAF	FIC_LIGHT							
	Bottom							
F3=Exit F5=	=Refresh F	F6=Add F1	2=Cancel	F23=More options				

# **WRKSTLDFN** (Work with Style Definitions)

The **WRKSTLDFN** (Work with Style Definitions) command manages style definitions. Style definitions can be used to control the appearance of data in Excel, XML and HTML files created by CoolSpools.

WRKSTLDFN displays a list of style definitions that have been created and allows new styles to be created and existing styles to be changed, copied, deleted or renamed.

	Work with Style Definitions			ARIADNE2		
Position to .						
Type options	, press Ente	er.				
2=Change	3=Сору	4=Delete	5=Display	7=Rename		
Opt Style nam *DATA *HEADER *NORMAL *SUBTOTA *TOTAL AMBER_TR GREEN_TR RED_TRAFF	L AFFIC_LIGI AFFIC_LIGH					
			Rottom			

# **Options**

Options that can be input against entries in the list are:

F3=Exit F5=Refresh F6=Add F12=Cancel F23=More options

**2=Change** Change the style. Runs the CHGSTLDFN command.

**3=Copy** Copy the style. Runs the CPYSTLDFN command.

**4=Delete** Delete the style. Runs the DLTSTLDFN command.

**5=Display** Display the style. Runs the DSPSTLDFN command.

**7=Rename** Rename the style. Runs the RNMSTLDFN

command.

17=Retrieve Source Retrieve Style Definition. Runs the RTVSTLDFN

command.

# Function keys

Available function keys are:

**F3=Exit** Exit the application.

**F5=Refresh** Refresh the list.

**F6=Create** Create a new style. Runs the CRTSTLDFN

command.

F11=Show Full Name /

**Show Test** Toggle between showing full name and text.

**F12=Cancel** Return to the previous screen.

# **CRTSTLDFN (Create Style Definition) Command**

The CRTSTLDFN command creates a style definition for use with CoolSpools Spool Converter and CoolSpools Database.

Style definitions can be used to determine the appearance of cells in Excel spreadsheets and data in XML and HTML documents. When outputting to Excel format, they can also be used with conditional formatting to control the appearance of cells based on rules you define.

Command parameters are as follows:

### STYLENAME - Style name

Each style is identified by means of a style name, which must be a valid OS/400 name up to 50 characters in length.

**Please note that style names are CASE-SENSITIVE.** This is necessary in order to allow them to be matched against XML element names, which are case-sensitive.

The exception to this rule is any predefined style name (one starting with an asterisk in the list below). These are always case-insensitive and shifted to upper case.

You can define your own Style definitions by choosing a name that is helpful to you, but there are also several pre-defined style names which have special meanings:

*NORMAL	The default style name for cells output by CoolSpools Spool Converter.
	If you specify *DATA for the name of the style, the attributes you specify will become the default attributes for data rows.
*DATA	The default style name for data rows output by CoolSpools Database.
	If you specify *DATA for the name of the style, the attributes you specify will become the default attributes for data rows in files generated by CoolSpools Database
*HEADER	The default style name for header rows output by CoolSpools Database.
	If you specify *HEADER for the name of the style, the attributes you specify will become the default attributes for header rows (rows generated as a result of the HEADER parameter settings).

#### \*TITLE

The default style name for title rows output by CoolSpools Database. .

If you specify \*TITLE for the name of the style, the attributes you specify will become the default attributes for title rows. Title rows are those generated from the additional heading lines elements of the CoolSpools Database CVTDBFxxx command HEADER parameter and the caption text of the HTML parameter.

#### \*SUBTOTAL

The default style name for subtotal rows output by CoolSpools Database. .

If you specify \*SUBTOTAL for the name of the style, the attributes you specify will become the default attributes for subtotal rows. Subtotal rows are those that result from subtotals and group-by fields in Query/400 queries when the \*COMBINED output form is selected.

#### \*HYPERLINK

The default style name for hyperlink output by CoolSpools Database.

If you specify \*HYPERLINK for the name of the style, the attributes you specify will become the default attributes for hyperlink output in files generated by CoolSpools Database.

#### \*FLWDLINK

The default style name for followed hyperlink output by CoolSpools Database.

If you specify \*FLWDLINK for the name of the style, the attributes you specify will become the default attributes for followed hyperlink output in files generated by CoolSpools Database.

#### \*TOTAL

The default style name for total rows output by CoolSpools Database.

If you specify \*TOTAL for the name of the style, the attributes you specify will become the default attributes for total rows. Total rows are those that result from subtotals and group-by fields in Query/400 queries when the \*COMBINED output form is selected.

#### \*COLHDG

The default style name for column heading rows output by CoolSpools Database.

If you specify \*COLHDG for the name of the style, the attributes you specify will become the default attributes for Column Headings output in files generated by CoolSpools Database.

#### \*PAGHDG

The default style name for page heading rows output by CoolSpools Database.

If you specify \*PAGHDG for the name of the style, the attributes you specify will become the default attributes for Column Headings output in files generated by CoolSpools Database.

\*ROOT

**XML Only.** The default style for the root element.

\*ROW

**XML Only.** The default style for the row element, i.e. the element corresponding to a record in the input file.

If these styles are not defined, the default attributes assigned are as shown in the table below:

Attribute	*DATA	*HEADER	*TITLE	*SUB TOTAL	*HYPER LINK	*FLWD	*TOTAL	*COLHDG	*PAGHDG	*ROOT	*ROW
Locked (Excel only)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A
Hidden (Excel only)	No	No	No	No	No	No	No	No	No	N/A	N/A
Horizontal alignment	General	General	General	General	General	General	General	General	General	General	General
Indent	0	0	0	0	0	0	0	0	0	N/A	N/A
Vertical alignment	Тор	Bottom	Тор	Тор	Тор	Тор	Тор	Тор	Тор	Тор	Тор
Wrap text	No	Yes	No	No	No	No	No	No	No	No	No
Shrink to fit (Excel only)	No	Yes	No	No	No	No	No	No	No	N/A	N/A
Vertical alignment	Тор	Тор	Тор	Тор	Тор	Тор	Тор	Тор	Тор	Тор	Тор
Row height	*AUTOFI T	*AUTOFIT	*AUTO FIT	*AUTOFIT	*AUTOFIT	*AUTO FIT	*AUTOFIT	*AUTOFIT	*AUTOFIT	*AUTO FIT	*AUTOFI T
Font name (Excel)	Arial	Arial	Arial	Arial	Arial	Arial	Arial	Arial	Arial	N/A	N/A

	sans-
	serif
N/A	N/A
12	12
Yes	Yes
No	No
No	No
Black	Black
White	White
*AUTO	*AUTO
*NONE	*NONE
N/A	N/A
N/A	N/A
1	1
*AUTO	*AUTO
N/A	N/A
	N/A
N/A	
	1
	res lo lo lo lack White AUTO NONE I/A I/A I/A I/A

declaration (HTML only)											
Display option (XML only)	*BLOCK	*BLOCK	*BLOC K	*BLOCK	*BLOCK	*BLOC K	*BLOCK	*BLOCK	*BLOCK	*BLOC K	*BLOCK

# **DFTUSEAUT - Default use authority**

Whether, by default, users other than the creator of this style can use it.

Options are:

\*ALLOWED (Default). By default, users other than the creator of this

style can use it.

**\*DENIED** By default, users other than the creator of this style

cannot use it.

You can control whether a particular use has rights to use this style by means of the WRKREGFNC command. The registered function to manage is

ARIADNE\_STL\_DFN\_nnnnnnnnn\_USE where nnnnnnnnn is the internal style identifier for this style.

### **DFTCHGAUT** - Default change authority

Whether, by default, users other than the creator of this style can change it.

Options are:

\*DENIED (Default). By default, users other than the creator of this

style cannot change it.

\*ALLOWED By default, users other than the creator of this style can

change it.

You can control whether a particular use has rights to change this style by means of the WRKREGFNC command. The registered function to manage is

ARIADNE\_STL\_DFN\_nnnnnnnnnCHG where nnnnnnnnn is the internal style identifier for this style.

# **TEXT - Text 'description'**

Descriptive text for the style.

#### **FONTNAME – Font name**

Specifies the name of the font to be used.

Note that CoolSpools cannot validate whether the font name you have specified is valid or whether it will be available when the file is opened. If the font name is typed incorrectly or if the font is not available when the file is opened, Excel or your browser will substitute a different font.

Note also that when the font you use in Excel is not one of the "well known" fonts (Arial, Courier New or Times New Roman), CoolSpools may not be able to calculate column widths correctly because it has no access to the font metrics on which those calculations depend.

**\*ARIAL** (Default). Arial **\*COURIER** Courier New

**\*TIMES** Times New Roman

**font\_name** Specify the name of the font to use

**path** You can also specify a path to a TrueType or OpenType

font file on this parameter element. The font file name

must have an extension of .ttf or .otf.

#### FONTSIZE - Font size

The point size of the font to use.

#### **BOLD - Bold**

Whether the font is bold or not. Note that setting this attribute will only result in a bold font if a suitable bold version of the font is available or if the normal font can be adapted.

Options are:

\*NO (Default). Normal font

**\*YES** Bold font.

#### **ITALIC** - Italic

Whether the font is italic or not. Note that setting this attribute will only result in an italic font if a suitable italic version of the font is available or if the normal font can be adapted.

Options are:

\*NO (Default). Normal font

**\*YES** Italic font.

#### **UNDERLINE - Underlined**

Whether the font is underlined or not and, if it is, the style of underlining.

Excel options are:

\*NO (Default). No underlining

**\*SINGLE** Single underlining

**\*DOUBLE** Double underlining (Excel only)

\*SGLACC Single accounting underlining (Excel only)
\*DBLACC Double accounting underlining (Excel only)

#### **TEXTCOLOR** - Text color

Determines the color applied to text.

Options are (with hexadecimal RGB equivalents):

*BLACK	*WHITE	*RED	*BRIGHTGREEN
#000000	#FFFFFF	#FF0000	#00FF00
*BLUE	*YELLOW	*PINK	*TURQUOISE
#0000FF	#FFFF00	#FF00FF	#00FFFF
*DARKRED	*GREEN	*DARKBLUE	*DARKYELLOW
#800000	#008000	#000080	#808000
*VIOLET	*TEAL	*GRAY25	*GRAY50
#800080	#800080	#800080	#800080
*MAUVE #9999FF	*PLUM #993366	*YELLOWWHITE #FFFFCC	*LIGHTTURQUOISE #CCFFFFF
*DARKPINK	*BLUSH	*MEDIUMBLUE	*PALEMAUVE
#660066	#FF8080	#0066CC	#CCCCFF
*SKYBLUE #00CCFF	*LIGHTGREEN #CCFFCC	*LIGHTYELLOW #FFFF99	*PALEBLUE #99CCFF
*ROSE	*LAVENDER	* <b>TAN</b>	*LIGHTBLUE
#FF99CC	#CC99FF	#FFCC99	#3366FF
*AQUA	*LIME	*GOLD	*LIGHTORANGE
#33cccc	#99CC00	#FFCC00	#FF9900
*ORANGE	*BLUEGRAY	*GRAY40	*DARKTEAL
#FF6600	#666699	#969696	#003366
*SEAGREEN	*DARKGREEN	*OLIVEGREEN	*BROWN
#339966	#003300	#333300	#993300
*INDIGO #333399	*GRAY80 #333333		

You can also optionally specify your own RGB color code in the form of six hexadecimal digits (similar to the codes shown in the table above), but please note that this option is not supported when converting to \*XLS BIFF8 format.

# **BACKCOLOR - Background color**

Determines the color of the background of a cell or text item.

The default is:

\*AUTO The Excel default background color (usually white) or white (HTML, XML)

Alternatively, you can use the same options as listed for text color above.

#### **LOCKED - Locked**

(Excel only)

Whether cells to which this style is applied are locked when worksheet protection is in effect.

Options are:

**\*YES** (Default). When the worksheet is protected, the cell will

be locked (protected).

**\*NO** When the worksheet is protected, the cell will remain

unlocked.

#### **HIDDEN - Hidden**

(Excel only)

Allows you to indicate that a column should be hidden. This might be useful if you do not wish the column to appear but want it to be available for calculations.

Options are:

**\*NO** (Default). The column is not hidden.

**\*YES** The columns will be hidden

## **HRZALIGN** - Horizontal alignment

Controls the horizontal alignment of data.

Options are:

\*GENERAL (Default). Character data is left-aligned. Numeric data and

dates are right-aligned. In relation to header text, the alignment is dictated by the nature of the data in the column, not the header text, i.e. headings for columns of character data will align to the left and headings for numeric columns and date columns will align to the right.

\*LEFT Left-aligned.

\*RIGHT Right-aligned.

\*CENTER Center-aligned

\*FILL (Excel only) Fill. Repeats the data in the cell across the

entire width of the column.

\*JUSTIFY Forces data to fill the entire width of the column,

wrapping text to additional lines, if necessary.

\*DISTRIBUTED (Excel only) Distributed. Available only in Excel 2002 and

above. It results in the cell contents being distributed across the width of the cell, to line up with both the left

and right side.

#### **INDENT - Indent**

Sets the text indent level. The effects of this are somewhat different between Excel and HTML/XML.

Options are:

**\*NONE** (Default). No indent is applied. **0-15** Sets the indentation level.

For Excel, each indentation level is equivalent to 3 spaces. All text affected is indented to the same extent, i.e. where text wraps to more than one line, it is all indented to the

same point.

For HTML/XML, this sets the text-indent property in ems (the width of an em is equivalent to the point size of the

font). The first line of the text only is indented.

### **VRTALIGN** - Vertical alignment

Controls the vertical alignment of data in a cell.

Options are:

\*BOTTOM (Default). Information is aligned at the bottom of the cell.

**\*TOP** Information is aligned at the top of the cell. **\*CENTER** information is aligned in the center of the cell.

\*JUSTIFY Text is spread evenly vertically across the height of the

cell.

\*DISTRIBUTED (Excel only) Text is spread evenly between the top of the

cell and the bottom. Effectively, blank space is placed between each line so that the complete cell is filled.

### **WRAP** - Wrap text

Controls whether text wraps in cells.

Options are:

**\*NO** (Default). Text does not wrap in the cell. If the text does

not fit in the column width, it is truncated.

**\*YES** Text wraps in the cell. If the text does not fit in the

column width, it will flow on to multiple lines.

#### **SHRINK - Shrink to fit**

(Excel only)

Determines whether the cell contents are shrunk to fit the available column width by reducing the font size.

Options are:

**\*NO** (Default). Text is not shrunk to fit.

**\*YES** 

Text is fitted to the available column width by reducing the font size, as required.

### **ROWHEIGHT - Row height**

Sets the height of rows.

Note that this attribute is only effective if set on one of the predefined styles:

- \*DATA (controlling the height of data rows)
- \*HEADER (controlling the height of the column headings row)
- \*TITLE (controlling the height of title rows)
- \*SUBTOTAL (controlling the height of subtotal rows)
- \*TOTAL (controlling the height of total rows)

Even if you associated every column with a style other than these, the row height set for that row will not be effective as the row height is always set from the appropriate predefined style from the list above.

Options are:

\*AUTOFIT (Default). The height of rows is automatically set by Excel

or your browser (HTML/XML) based on the font size.

**0-409** Specify the row height in points (72 points = 1 inch)

#### **PATTERN - Pattern**

Excel only.

Set pattern options.

#### Pattern color

(Excel only)

Determines the color of the any pattern applied to a cell.

The Excel default is:

\*AUTO The Excel default pattern color (usually black)

Alternatively, you can use the same Excel options as listed for text color above.

#### Pattern style

(Excel only)

Determines the style of the any pattern applied to a cell.

The default is:

\*NONE

No pattern

The available pattern options are the following names, which correspond to Excel's builtin patterns:

- \*SOLID
- \*GRAY75
- \*GRAY50
- \*GRAY25
- \*GRAY12.5
- \*GRAY6.25
- \*HRZSTRIPE
- \*VRTSTRIPE
- \*REVERSEDIAGSTRIPE
- \*DIAGSTRIPE
- \*DIAGCROSSHATCH
- \*THICKDIAGCROSSHATCH
- \*THINHRZSTRIPE
- \*THINVRTSTRIPE
- \*THINREVERSEDIAGSTRIPE
- \*THINDIAGSTRIPE
- \*THINHRZCROSSHATCH
- \*THINDIAGCROSSHATCH

### **TOPBDR** – Top border

Sets top border options.

#### **BOTTOMBDR** -Bottom border

Sets bottom border options.

#### **LEFTBDR** -Left border

Sets left border options.

# RIGHTBDR -Right border

Sets right border options.

Options for TOPBDR, BOTTOMBDR, LEFTBDR and RIGHTBDR are the same and are as follows.

#### **Border style**

Determines the style of the border.

The default is:

\*NONE

No border

Other Excel options are the following list of names corresponding to Excel's builtin border styles:

- \*THIN
- \*MEDIUM
- \*DASHED
- \*DOTTED
- \*THICK
- \*DOUBLE
- \*HAIR

The HTML/XML options correspond to the CSS border style options:

- \*THIN
- \*MEDIUM
- \*DASHED
- \*INSET
- \*DASHED
- \*DOTTED
- \*DOUBLE
- \*GROOVE
- \*HIDDEN
- \*OUTSET
- \*RIDGE
- \*SOLID

Note that if \*THIN, \*MEDIUM or \*THICK is specified for the border style, when converting to CSS/HTML, this equates to a solid border 1, 2 or 3 pixels wide respectively, and the border width element below is ignored.

#### **Border width**

(HTML only)

The width of the cell border in pixels.

Note that if \*THIN, \*MEDIUM or \*THICK is specified for the border style, when converting to CSS/HTML, this equates to a solid border 1, 2 or 3 pixels wide respectively, and this border width element is ignored.

#### **Border color**

The color of the border. Options are the same as for text color above.

#### **NBRFMT - Number format**

(Excel only)

#### **Number format type**

Sets the category of number formatting applied to numbers in cells to which this style relates. The following options allow you to modify or override aspects of the default formatting determined by your choice for this parameter element.

#### Options are:

*GENERAL	Ignore any	editina	associated	with th	ne field	and	format
	I GII OI C GII Y	Cultilla	associatea	** : : : : : : :	10 11010	ullu	IOIIII

numeric data with general numbers in them.

\*FIXED Ignore any editing associated with the field and format

numeric data with a fixed number of decimal places.

\*CURRENCY Ignore any editing associated with the field and format

numeric data as a currency amount.

\*ACCOUNTING Ignore any editing associated with the field and format

numeric data as an accounting value. The Accounting category is the same as the Currency category, except it

will align currency symbols and decimal points.

**\*DATE** Ignore any formatting associated with the field and

format it as a date. If the field does not contain a valid date, it will be formatted according to any editing

associated with the field.

**\*TIME** Ignore any formatting associated with the field and

format it as a time or date/time. If the field does not contain a valid time or timestamp, it will be formatted according to any editing associated with the field.

\*PERCENT Ignore any editing associated with the field, multiply the

value by 100 and format numeric data as a percentage.

Ignore any editing associated with the field, and format

numeric data in scientific notation.

\***TEXT** Ignore any editing associated with the field, and format

numeric data as text.

\*CUSTOM Apply a custom number format specified on the custom

number format element below.

#### **Decimal places**

(Excel only)

\*SCIENTIFIC

Where a numeric format that can include decimal places was specified on the number format type parameter, this parameter element determines the number of decimal places displayed.

#### Options are:

\*FIELD The number of decimal places defined for the field in its

DDS (CoolSpools Database) or the apparent number of

printed decimal places (CoolSpools Spool converter).

**dec\_places** Specify the number of decimal places

### **Thousands separator**

(Excel only)

Where a numeric format that can include thousands separators was specified on the number format type parameter, this parameter element determines whether thousands separators actually appear.

#### Options are:

*FMT Whether thousands separators appear depends on the
---

number format type selected. Accounting and currency formatting will include thousands separators but other

types will not.

**\*YES** Include thousands separators in the number format

irrespective of the fact that the number format type specified does not normally include them. For example you can format percentage values with thousands

separators using this option.

**\*NO** Do not include thousands separators in the number

format irrespective of the fact that the number format type specified does normally include them. For example,

you can format currency values without thousands

separators using this option.

#### **Currency symbol**

(Excel only)

Where a numeric format that can include a currency symbol was specified on the number format type parameter, this parameter element determines whether a currency symbol actually appears and what that symbol should be.

#### Options are:

\*FMT Whether a currency symbol appears depends on the

number format type selected. Accounting and currency formatting will include a currency symbol but other types will not. The currency symbol will be derived from the

system value QCURSYM.

**\*SYSVAL** Include a currency symbol in the number format

irrespective of the fact that the number format type specified does not normally include one. The currency symbol will be derived from the system value QCURSYM.

**\*NONE** Do not include a currency symbol in the number format

irrespective of the fact that the number format type specified does normally include one. You can use this option to display a currency value with no currency

symbol.

**currency\_symbol** Include a currency symbol in all numbers. The currency

symbol will be the one specified here.

#### **Negative numbers**

(Excel only)

Overrides the way in which negative numbers are displayed.

#### Options are:

\*FMT The format of negative numbers is determined by the

option specified for the number format type.

\*LEADING A leading minus sign is displayed.
\*TRAILING A trailing minus sign is displayed.

**\*PARENTHESES** Negative numbers appear in parentheses.

\***RED** Negative numbers appear in red.

\*REDL Negative numbers appear in red with a leading minus

sign.

\*REDT Negative numbers appear in red with a trailing minus

sian.

\***REDP** Negative numbers appear in red and in parentheses.

#### **CUSTOMFMT - Custom number format**

(Excel only)

Specify a custom number format. \*CUSTOM must be specified for the number format type element above.

Options are:

\*NONE No custom number format is defined.

**number\_format** Specify the custom Excel number format to use.

### CSS - CSS Styling

Specifies CSS-related styling options for use with HTML and XML.

**Display option (XML only)** 

Sets the CSS display style.

Options are:

\*BLOCK (Default). Takes up the full width available, with a new line

before and after.

\*INLINE Takes up only as much width as it needs, and does not

force new lines.

#### **Cell padding**

(HTML only)

The padding to apply to the cell, in pixels.

#### Additional style declaration

(HTML only)

A free-format, unvalidated string of text which will be appended to the style declaration generated by the previous elements. This option enables you to specify additional CSS formatting not available from this parameter. However, you must ensure that the text you enter is a valid portion of a CSS style declaration.

For example, specifying 'font-variant: small-caps' would cause the text to appear in small capitals.

# **OVRSTLDFN (Override with Style Definition) Command**

The Override Style Definition (OVRSTLDFN) command overrides a style definition for use with CoolSpools Spool Converter and CoolSpools Database.

Style definitions can be used to determine the appearance of cells in Excel spreadsheets and data in XML and HTML documents. When outputting to Excel format, they can also be used with conditional formatting to control the appearance of cells based on rules you define.

Overriding a style definition with OVRSTLDFN allows you to either make small temporary changes to an existing style definition or to define a new temporary style definition from scratch.

Style definition overrides established with OVRSTLDFN only affect processing in the job in which the OVRSTLDFN command is run.

Style definition overrides established with OVRSTLDFN persist only for the duration of the job or until deleted. They can be further modified by subsequent OVRSTLDFN commands in the same job.

Style definition overrides can be deleted by using the special

#### **OVRSTLDFN BASESTYLE(\*DLTOVR)**

option.

#### **Restrictions:**

- If the name of an existing style definition created with CRTSTLDFN is specified on the BASESTYLE parameter, you must have authority to use that style definition.
- The default authority to use a style definition can be modified by a user with \*ALLOBJ authority or who already has change authority to the style definition in question by running the CHGSTLDFN command.
- Individual user authorities to the style can be managed by means of the IBM CHGFCNUSG command or CoolSpools' WRKREGFNC. The function controlling authority to use a report definition is

ARIADNE\_STL\_DFN\_nnnnnnnnnn\_USE

where nnnnnnnn is the internal style definition ID, which is displayed by DSPSTLDFN.

Command parameters are the same as CRTSTLDFN and CHGSTLDFN, with the following exceptions:

# **BASESTYLE** (Based on style name)

Specifies the name of the existing style on which the style override will be based. Where \*SAME is specified for any parameter on this command, the attribute will be inherited from the style specified here.

#### Other options are:

\*DLTOVR This special value indicates that you are not defining a

style override but instead deleting an existing style override. The name of the style override to be deleted is

specified on the NEWSTYLE parameter.

\*NEW Indicates that you do not wish to base the style override

on any existing style but will instead create a new style

from scratch. Where \*SAME is specified for any

parameter value below, the value of the attribute will be defaulted. Defaults are as per the CRTSTLDFN command.

**character-value** Specify the style name on which the style override is

based.

### **NEWSTYLE** (New style name)

Specifies the name by which you will refer to the overridden style, or, if \*DLTOVR was specified for the BASESTYLE parameter, the name of the style override to be deleted.

\*SAME The style override will have the same name as the based-

on style specified on the BASESTYLE parameter.

**\*ALL** Permitted only if BASESTYLE(\*DLTOVR) was specified.

Indicates that you wish to delete all existing style

overrides.

character-value Specify the new name by which the override will be known,

or, if \*DLTOVR was specified on the BASESTYLE

parameter, the name of the style override to be deleted.

# Other commands used with Style Definitions

### **CHGSTLDFN (Change Style Definition) Command**

Modifies a style definition

# **CPYSTLDFN (Copy Style Definition) Command**

Copies a style definition to create a new style definition.

# **DLTSTLDFN (Delete Style Definition) Command**

Deletes a style definition

## **DSPSTLDFN (Display Style Definition) Command**

Display details of a style definition

### **RNMSTLDFN** (Rename Style Definition) Command

Renames a style definition

# **RTVSTLDFN (Retrieve Style Definition) Command**

Retrieves the command needed to create a style definition into a source file member.

# **WRKREGFNC (Work with Registered Functions)**

The **WRKREGFNC** (Work with Registered Functions) command lets you manage user authorities to various CoolSpools features, such as:

- Style definitions used by CoolSpools Spool Converter and CoolSpools Database
- Report definitions and report output maps created by CoolSpools Spool Converter
- CoolSpools Spool Admin standard options (e.g. 4=Delete) and user-defined options

A registered function is an OS/400 feature which allows user authorities to particular aspects of an application to be managed just as you can manage user authority to objects with GRTOBJAUT etc. and to stream files and directories with CHGAUT etc. You can use the OS/400 WRKFCNUSG, DSPFCNUSG and CHGFCNUSG commands to set user authorities to registered functions, but WRKREGFNC provides a more convenient interface in relation to ariadne's applications.

When run, WRKREGFNC displays a list of registered functions associated with the ariadne software you have installed, which are all part of the registered product called ARIADNE.

You can manage user authorities to registered functions already defined by ariadne when the product was installed, or created as part of your usage of the product (e.g. when defining a style), but you cannot create registered functions of your own.

CoolSpools V7R1 - Work with Registered Functions ARIADNE1

Position to function . . .

Base function for 7=Copy ..... \*NONE

Type options, press Enter.

2=Change 5=Display 7=Copy from base 8=Specials 9=Select as base

Opt Function

ARIADNE CoolSpools V7R1M0

ARIADNE\_SPECIAL\_FUNCTIONS CoolSpools options that can be restricte

ARIADNE\_DLT\_AFTER\_EMAIL\_YES Delete after sending?

ARIADNE\_ALW\_WRK\_OTH\_USR\_SPLF Allow working with other users' spooled

ARIADNE\_ALW\_LMTCPB\_CMD Allow LMTCPB users to run commands

ARIADNE\_ALW\_NON\_LMTCPB\_CMD Allow non-LMTCPB users to run commands

ARIADNE\_SYS\_ADMIN Allow user to act as system administrato

ARIADNE\_STYLE\_DEFINITIONS CoolSpools style definitions
ARIADNE\_STL\_DFN\_0000000002\_USE Normal style (use)
ARIADNE\_STL\_DFN\_0000000002\_CHG Normal style (change)

More...

F3=Exit F5=Refresh F12=Cancel

### **Options**

Options that can be input against entries in the list are:

**2=Change** Change user authorities to the function

**5=Display** Display user authorities to the function.

**7=Copy from base** Set the user authorities to the function by copying

the authorities associated with the "base" function. The base function must first be selected by using option 9=Select as base. This facility provides a quick and easy way of setting up authorities: just define them once for a single function, then duplicate those authorities where appropriate for

other similar functions.

**8=Specials** Display user authorities to the function, but only

those that differ from the default authority.

**9=Select as base** Select the function to be used as the "base

function" for option 7=Copy from base (see above).

### **Function keys**

Available function keys are:

**F3=Exit** Exit the application.

**F5=Refresh** Refresh the list.

**F12=Cancel** Return to the previous screen.

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When option 2=Change is selected against a registered function in the list, a screen similar to this one appears. It lists all user profiles defined on the system and shows those users' authorities to the selected function.

#### CoolSpools V7R1 - Work with Registered Functions ARIADNE1

Function . . . . : ARIADNE\_ALW\_LMTCPB\_CMD

Description . . . : Allow LMTCPB users to run commands

\*PUBLIC authority .: \*NO

Position to user . . .

Type options, press Enter.

1=Authorized 2=Not authorized 4=Remove user special authority

Opt User Type Auth Spec Source Description

ARIADNE \*GRP \*YES \*USRALLOBJ

FTPUSER \*USR \*NO \*PUBLIC

NONDELIVER \*USR \*NO \*PUBLIC

PETEWILES \*USR \*NO \*PUBLIC

PETOMANE \*USR \*NO \*PUBLIC

POSTMASTER \*USR \*NO \*PUBLIC

QAUTPROF \*USR \*NO \*PUBLIC

OBRMS \*USR \*NO \*PUBLIC

More...

F3=Exit F5=Refresh F11=Special auth F12=Cancel

#### Details shown are as follows:

**User** The user profile name.

**Type** \*USR=Simple user profile

\*GRP=Group profile

**Auth** \*YES=The user has authority to use the function.

\*NO=The user does not have authority to use the function.

The special authority defined for the user. Spec

> **\*YES**=The user has been explicitly granted authority to the function.

\*NO=The user has been explicitly denied authority to the function.

Blank=The user has no special authority to the function and the user's authority to the function will be determined by other factors (e.g. group profile authority, \*ALLOBJ special authority or the default authority)

How the user's authority to the function was Source

determined.

\*USRALLOBJ = The user has \*ALLOBJ special

authority through the user profile.

\*GRPALLOBJ = The user has \*ALLOBJ special

authority through the group profile.

\*USRSPCAUT= The user profile has been explicitly

granted or denied authority to the function.

\*GRPSPCAUT= The group profile has been explicitly granted or denied authority to the

function.

\*PUBLIC= Authority was derived from the default

(\*PUBLIC) authority setting.

**\*UNKNOWN**= The source could not be determined.

Description The user profile's text 'description'

# **Options**

Options that can be input against entries in the list are:

1=Authorized Explicitly grants the user profile

explicit authority to the function.

2=Not authorized Explicitly denies the user profile

explicit authority to the function.

4=Remove user special authority Where the user profile has previously

been explicitly granted or denied

authority to the function, this option removes that explicit authority. The user's authority to the function will be determined from other sources (group profile, \*ALLOBJ special authority, default \*PUBLIC authority).

## **Function keys**

Available function keys are:

**F3=Exit** Exit the application.

**F5=Refresh** Refresh the list.

**F11=Spec. auth** When the full list is displayed, this function key

switches to just displaying those user profiles with explicitly granted or denied special authority to the

function.

**F11=All users** When just users with special authority are

displayed, this function key switches to displaying

the full list of users.

**F12=Cancel** Return to the previous screen.

# **SAVREGFNC (Save Registered Functions)**

The **SAVREGFNC** (Save Registered Functions) command provides a means of saving registered functions that control user authorities to application features and options. It is our understanding that they are not saved by SAVSECDTA.

Registered functions settings saved with SAVREGFNC are saved into a stream file. The registered functions can be restored from the stream file subsequently using RSTREGFNC.

This can be useful for things like:

- duplicating registered functions to another system
- backing up registered functions before installing a new release or a PTF

Command parameters are as follows:

#### **TOSTMF** - Save in stream file

The full path of the stream file in which the registered function data will be saved.

### **REPLACE - Replace existing file**

Whether an existing file will be replaced.

Options are:

**\*NO** If the file specified on the TOSTMF parameter already

exists, an error will occur, it will not be replaced and no

changes will be made to it.

**\*YES** If the file specified on the TOSTMF parameter already

exists, it will be replaced.

# **AUT –Authority**

The public data authority level to assign to a new file.

Options are:

\*R (Default). Read only

\*W Write only

\*X Execute only

\*RW Read and write

\*RX Read and execute

\*WX Write and execute

\*RWX Read, write and execute (all)

\*NONE No authority

autl\_name Specify the name of an authorization list that will

control public authority to the file

# **RSTREGFNC (Restore Registered Functions)**

The **RSTREGFNC** (Restore Registered Functions) command provides a means of restoring registered functions that control user authorities to application features and options that were previously saved with SAVREGFNC.

This can be useful for things like:

- · duplicating registered functions to another system
- reinstating registered functions after installing a new release or a PTF

Command parameters are as follows:

#### FROMSTMF - Restore from stream file

The full path of the stream file in which the registered function data was saved.

## **FUNCTION** – Function(s) to restore

Which function(s) to restore.

Options are:

**Function\_name** The name of a registered function saved by the

SAVREGFNC command previously.

\*ARIADNE All ariadne registered functions saved by the SAVREGFNC

command previously.

# **DSPENCPWD Command**

The DSPENCPWD command displays a string of hexadecimal digits representing the encrypted form of a password that you enter.

You can use this encrypted form of the password on a number of parameters of the various CoolSpools commands. CoolSpools will decrypt the password before using it.

The primary purpose of this feature is to avoid the need to store passwords in source code in plain text form.

The following parameters support the use of encrypted passwords:

Command	Parameter	Element	Description
CVTDBFXL	FTP	Remote	Password for the FTP server
CVTDBFXLSX		password	
CVTDBFXML			
CVTDBFTXT			
CVTDBFHTML			
CVTDBFPDF			
CVTDBFCSV			
CVTSPLCSV			
CVTSPLDLM			
CVTSPLHTML			
CVTSPLPDF			
CVTSPLRTF			
CVTSPLSAV			
CVTSPLTIFF			
CVTSPLTXT			
CVTSPLXL			
CVTSPLXML			
MRGPDF			
SAVSPLF			
CVTDBFXL	EMAILOPT	Zip file	Optional password of the zip
CVTDBFXLSX		password	file in which email
CVTDBFXML			attachments may be sent
CVTDBFTXT			

CVTDBFHTML			
CVTDBFPDF			
CVTDBFCSV			
CVTSPLCSV			
CVTSPLDLM			
CVTSPLHTML			
CVTSPLPDF			
CVTSPLRTF			
CVTSPLSAV			
CVTSPLTIFF			
CVTSPLTXT			
CVTSPLXL			
CVTSPLXML			
MRGPDF			
SAVSPLF			
MRGPDF	FROMPDF	Password	Password needed to modify/read the from-PDF
CVTDBFXL	XLSPROTECT	Worksheet	Password needed to
CVTDBFXLSX		unprotect	unprotect a protected worksheet
CVTSPLXL		password	worksneet
CVTSPLPDF	PASSWORD	Applies to	Passwords needs to
MRGPDF		owner and	modify/open a protected PDF
ADDPDFSGN		user passwords	
CVTSPLPDF	SIGNATURE	Certificate	The password of the
ADDPDFSGN		password	certificate file being used to sign the PDF.
UNZIPDTA	PWD	Password	Password for zip file
ZIPDTA	PWD	Password	Password for zip file

In each case, the parameter element is followed by another element called **"Encrypted password supplied"**. If \*YES is specified for this element, CoolSpools will interpret the password supplied on the previous element as an encrypted password string and will automatically decrypt it using the internal key setting before using the password.

The password algorithm used is not symmetrical, i.e. simply supplying the encrypted form of the password to DSPENCPWD will not result in the original password being displayed.

The command parameters are as follows.

## **PWD- Password to encrypt**

Specify the password to be encrypted. CoolSpools will apply an encryption algorithm to the password string using an internal key setting and will display the password in its encrypted form as a string of hexadecimal digits. Make a note of this encrypted password string for use in your code or copy and paste it into your source member.

## **ZIPDTA Command**

The ZIPDTA command compresses one or more files (IFS stream files or database file members) using the industry-standard zlib compression library to create a zip file compatible with applications such as WinZip.

zlib was written by Jean-Loup Gailly (compression) and Mark Adler (decompression).

Command parameters are as follows:

### FROMFILE -Files to zip

Specify from one to 100 file path names in IFS naming format.

Path names can be generic, .e.g.

/home/myfiles/\*

or /home/myfiles/test\*
or /home/myfiles/\*.dat

or /home/myfiles/test\*.d\*

Physical file members are supported but must be specified in IFS naming format. For example, to zip all members in file MYFILE in library MYLIB, use:

### ZIPDTA FROMFILE('/qsys.lib/mylib.lib/myfile.file/\*')

Note that ZIPDTA simply compresses the data in a physical file member: it does not carry out any conversion or re-encoding. This means that if you zip a physical file member on the system i (most probably EBCDIC) and attempt to unzip on an ASCII system (e.g. PC or UNIX machine) the data will unzip but is unlikely to be easily readable.

## **TOZIP – Zip file name**

The name of the zip file which be created or replaced.

## STMFOPT - Stream file option

Whether an existing file will be replaced or the new zipped data added to an existing zip file.

Options are:

\*NONE If the file specified on the TOZIP parameter already

exists, it will not be replaced and no changes will be made

to it.

\*REPLACE If the file specified on the TOZIP parameter already

exists, it will be replaced.

**\*ADD** If the file specified on the TOZIP parameter already

exists, the newly compressed files will be added to it.

### **CPRLVL** – The data compression level

The level of data compression that is applied. The higher the compression level, the smaller the files that result (normally) but the longer the compression processing time.

Options are:

<u>\*DFT</u> The default compression level (6)

\*FASTEST The fastest compression method but giving the least

compressed results (1).

\*BEST The method giving the highest compression factor but

also taking the longest to process (9)

**\*NONE** No compression (0). Files are stored in the zip

uncompressed.

**compression** Specify the compression level (0-9)

#### PWD - Password

An optional password for the zip file. If a password is specified, the zipped file will be encrypted.

There is a single option:

\*NONE No password is required to unzip the file and the file is

not encrypted.

#### **Password**

The password needed to unzip the file.

#### **Encrypted password supplied**

Whether or not the password supplied on the previous element is supplied in the encrypted form returned by the CoolSpools base option's DSPENCPWD (Display Encrypted Password) command.

DSPENCPWD applies an encryption algorithm to a password and returns a scrambled version of that password to you. If you specify the scrambled password on the previous element, and specify \*YES here, the CoolSpools base option will unscramble the password for you before sending it to the FTP server. The main purpose of this facility is to avoid the need to hold passwords in plain text form in source code.

Options are:

**\*NO** The password supplied on the previous element is in

plain text format and not scrambled.

**\*YES** The password supplied on the previous is in the

scrambled form returned by DSPENCPWD. It will be automatically unscrambled before being sent to the FTP

server.

#### **Encryption method**

If the zip file is to be encrypted, and a password has been supplied on the first element, this element determines the encryption method.

**\*ENVVAR** The value of environment variable

CS\_DFT\_ZIP\_ENCRYPTION sets the encryption method.

If this environment variable exists, and is set to one of the other values permitted for this parameter (\*ZIP, \*AES128 or \*AES256), that value is used, otherwise \*ZIP is used.

This provides a convenient way of setting the default

value for this parameter element.

\*ZIP The original Zip encryption method. This method is now

considered weak and AES is recommended if strong encryption is required. However, this encryption method is likely to be more widely supported than AES, which is recognized by WinZip and most major zip utilities, but not

all zip software.

**\*AES128** 128-bit AES encryption.

**\*AES256** 256-bit AES encryption.

## **SUBTREE - Zip directory subtree**

Specify whether the directory is a sub-directory.

These are the options:

**\*NO** The directory is not a subtree.

**\*YES** The directory is a subtree.

## ZIPDIR - Directory path in zip file

#### **Root directory**

These are the options:

\*FROMFILE The directory path on the FROMFILE parameter is

duplicated inside the zip if ZIPDIR(\*FROMFILE).

So, if FROMFILE has a relative path such as

FROMFILE('mydir/\*'), the top-level folder inside the zip

will be 'mydir'.

\*ABS The directory path on the FROMFILE parameter is

duplicated inside the zip if ZIPDIR(\*ABS), but converted to

an absolute path.

So, if FROMFILE('mydir/\*') the top-level folder inside the zip will be the absolute path to 'mydir' e.g. 'home/mydir'.

\*NONE

No path is taken into account.

### **Include directory subtree**

Specify whether the subtrees are to be included in the root directory.

These are the options:

**\*NO** Sub Trees are not included.

**\*YES** Sub Trees are included.

## **UNZIPDTA Command**

The UNZIPDTA command decompresses one or more files zipped using the industrystandard zip format. It uses the ZLIB compression library written originally by Jean-Loup Gailly (compression) and Mark Adler (decompression).

Command parameters are as follows:

### FROMZIP -From zip file

Specify the name of the zip file containing the file(s) to unzip.

### FROMFILE -Files to unzip

Specify from one to 100 file path names in IFS naming format.

Path names can be generic, .e.g.

/home/myfiles/\*

or /home/myfiles/test\*

or /home/myfiles/\*.dat

or /home/myfiles/test\*.d\*

The path name specified must match the directory path inside the zip file.

## **TODIR - Unzip to directory**

The name of the directory into which the files are unzipped.

Options are:

\*FROMFILE The file will be restored to the same directory as that in

which it is stored inside the zip.

**dir\_name** Specify the directory into which the file will be unzipped.

Note that a physical file name can be specified here if the zipped file being restored is a physical file member.

## **TOFILE - Unzip to file**

The name of the file after it has been unzipped.

Options are:

**\*FROMFILE** The name of the file will be the same as in the zip.

**file\_name** Specify the new name of the file after unzipping.

## **REPLACE - Replace existing files**

Whether an existing file will be replaced or not.

Options are:

**\*NO** Existing files are not replaced and an error will occur if a

file of the same name already exists.

**\*YES** Any existing file of the same name will be replaced.

#### PWD - Password

The password required to unzip the file.

There is a single option:

\*NONE No password is required to unzip the file.

#### **Password**

The password needed to unzip the file.

### **Encrypted password supplied**

Whether or not the password supplied on the previous element is supplied in the encrypted form returned by the CoolSpools base option's DSPENCPWD (Display Encrypted Password) command.

DSPENCPWD applies an encryption algorithm to a password and returns a scrambled version of that password to you. If you specify the scrambled password on the previous element, and specify \*YES here, the CoolSpools base option will unscramble the password for you before sending it to the FTP server. The main purpose of this facility is to avoid the need to hold passwords in plain text form in source code.

Options are:

**\*NO** The password supplied on the previous element is in

plain text format and not scrambled.

**\*YES** The password supplied on the previous is in the

scrambled form returned by DSPENCPWD. It will be automatically unscrambled before being sent to the FTP

server.

## STMFCODPAG – Stream file code page

The code page that will be allocated to a new file that is unzipped.

Note that this attribute does not in any way cause conversion or re-encoding of the contents of the file. It simply determines the setting of the CCSID attribute of the new stream file. You should choose an appropriate setting that accurately reflects the encoding of the contents of the file.

If the file already exists, its CCSID attribute is unchanged and this parameter is ignored.

Options are:

\*PCASCII A Windows code page is derived from the job CCSID and

assigned to the file.

\*STDASCII A standard ASCII code page is derived from the job CCSID

and assigned to the file.

\*ISOASCII An ISO ASCII code page is derived from the job CCSID

and assigned to the file.

**ccsid** Specify the CCSID to assign to the file.

## **AUT - Public data authority**

The public data authority level to assign to a new file.

Options are:

\*R (Default). Read only

\*W Write only

\*X Execute only

\*RW Read and write

\*RX Read and execute

\*WX Write and execute

\*RWX Read, write and execute (all)

**\*NONE** No authority

autl\_name Specify the name of an authorization list that will

control public authority to the file

# **Acknowledgements**

- The data compression algorithm by CoolSpools is a system i implementation of the industry-standard zlib compression library, developed by Jean-Loup Gailly and Mark Adler, to whom our thanks are due <a href="http://www.zlib.net/">http://www.zlib.net/</a>
- JPEG processing in this software is based in part on the work of the Independent JPEG Group <a href="http://www.hal9k.com/cug/cug381.htm">http://www.hal9k.com/cug/cug381.htm</a>
- XML parsing uses code supplied by the Expat package Copyright (c) 1998, 1999, 2000 Thai Open Source Software Center Ltd <a href="http://expat.sourceforge.net/">http://expat.sourceforge.net/</a>
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- PDF signing is provided by the iText library <a href="http://www.lowagie.com/iText">http://www.lowagie.com/iText</a>
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