

**Looking Inside the Developer's Toolkit:
"Best Stuff" from the Advanced RDI Topics**



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About The Speaker

With an IT career spanning over 30 years, Charles Guarino has been a consultant for most of them. Since 1995 he has been founder and President of Central Park Data Systems, Inc., a New York area based IBM midrange consulting and corporate training company. In addition to being a professional speaker across the United States and Europe, he is a frequent contributor of technical and strategic articles and webcasts for the IT community. He is a member of COMMON's Speaker Excellence Hall of Fame and also Long Island Software and Technology Network's Twenty Top Techies. In 2015 Charles became the recipient of the Al Barsa Memorial Scholarship Award. Additionally, he serves as a member of COMMON's Strategic Education Team (SET) and is also a past president and monthly Q&A host of LISUG, a Long Island IBM i User's Group www.lisug.org.

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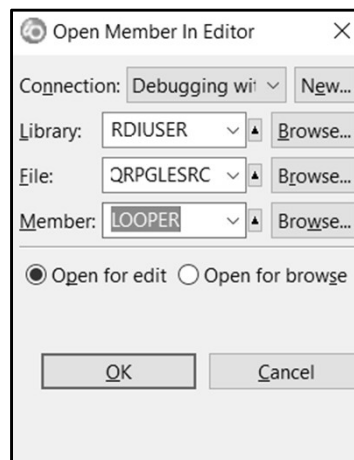
Twitter - @charlieguarino

What We'll Cover ...

- Hidden LPEX gems
- Climbing down the navigation tree
- Object tables
- The remote scratchpad
- Preferences
- Wrap Up

Quick New Member Open Shortcut!

- For those times when you want to edit or browse a source member but don't want to create or change a filter
- Press CTRL-ALT-Q



Tokenization !!!

```
ctl-opt bnddir('UTILITIES' : 'QC2LE') dftactgrp(*no) actgrp('QILE')
option(*srcstmt : *nodebugio) debug(*input);
*
dcl-f custmast disk(*ext) keyed usage(*update);

dcl-pr secretdata char(24);
      *n          char(24) value;
      *n          char(1)  value;
end-pr;

dcl-s cleardata   char(24);
dcl-s encrypteddata char(24);
dcl-s direction   char(1);

read custmast;
dow not %eof (custmast);

direction = 'E'; // Value of 'E' tells procedure to ENCRYPT
cleardata = cclrdata;
encrypteddata = secretdata(cleardata:direction);

// Update file CUSTMAST with encrypted data
cencdata = encrypteddata;
update custmstr;

read custmast;
enddo;

*inlr = *on;
return;
```

Parser Styles

Preferences

Parser Styles

Document parser
ILErpg

Styles

- Comment
- Directive Keyword
- Directive Statement
- Data
- Reserved
- Layout Space
- Free-Form Control-Flow Opcode
- Free-Form Built-in Function

Foreground [] Background []

Effects

- Underline
- Squiggle
- Strikeout
- Outline

Preview

```
/TITLE This is the title
/SPACE 5
H DFTACTGRP(*NO)
  CTL-OPT OPTION(*SRCSTMT);
FMYFILE IF E DISK BLOCK(*NO)
FQPRINT O F 132 PRINTER
* This is a comment
D ARRAY S 8 DIM(3)
D CTDATA PERRCD(1)
D VALUE S 5P 2 INZ(5)
DCL-F myfile DISK(*EXT) USAGE(*UPDATE)
      EXTDESC('MYLIB/MYFILE');
DCL-DS *n; // This is a comment
      message CHAR(100) INZ('hello');
      dateDue DATE(*ISO) INZ(D'2013-01-02');
```

Marking – A quick way to highlight a variable

The screenshot shows the LPEX IDE interface. At the top, a toolbar contains various icons, with a specific icon for marking highlighted by a red box. A tooltip below this icon reads: "Toggles marking occurrences of the given entity". Below the toolbar, a code editor window titled "ENCDECRYPT.RPGLE" is shown. The editor displays code with line numbers from 015400 to 017400. A red highlight is applied to the variable "direction" on line 016400. The status bar at the top of the editor indicates "Line 186 Column 110 Replace 1 change".

Hyperlinking – A quick way to change a variable definition

Hover over any variable and LPEX displays the attributes

```
// *****
//      begsr encryptroutine;
// *****
cleardata = *blanks;
cleardata:cleardata : Character (24)
encdata = *blanks;
datastringlen = %len(%trimr(cleardata));
```

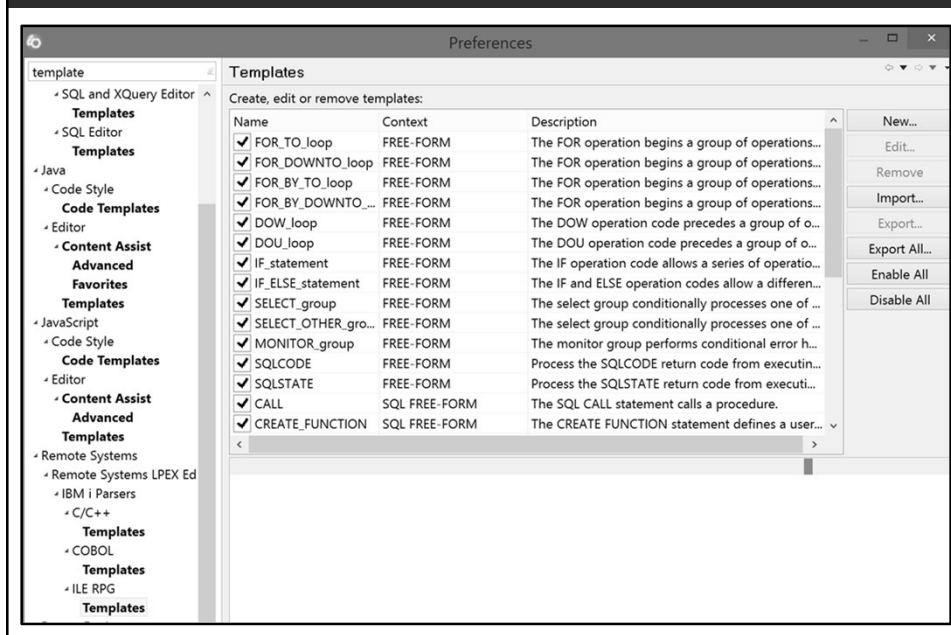
Press and hold CTRL and the field turns into a hyperlink

```
// *****
//      begsr encryptroutine;
// *****
cleardata = *blanks;
cleardata:cleardata : Character (24)
encdata = *blanks;
datastringlen = %len(%trimr(cleardata));
```

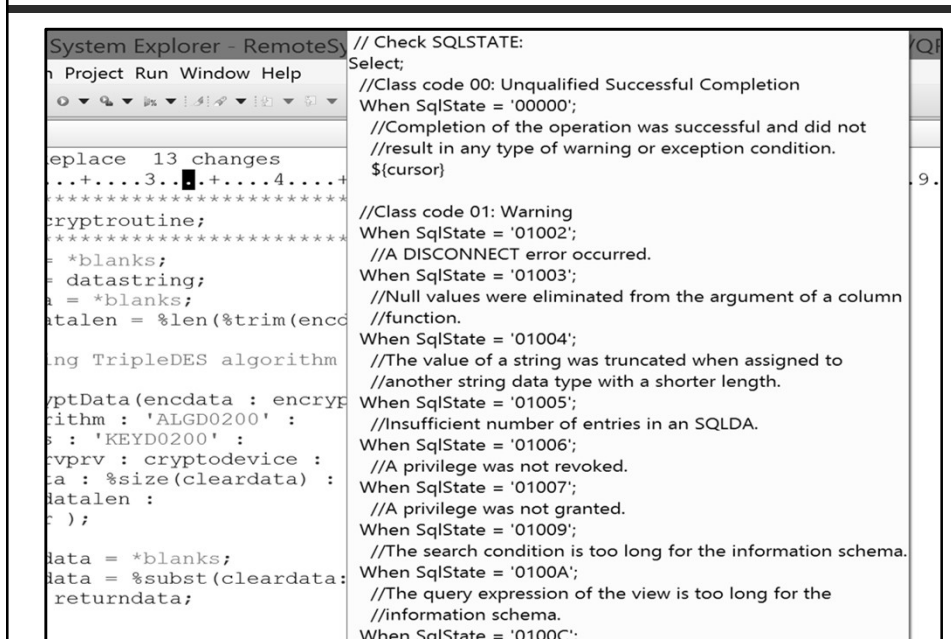
Click on the link and you are immediately brought to the definition

```
** The clear data variable
D cleardata      S          24
```

Templates – Short code to complex coding



Templates in action



Source formatting

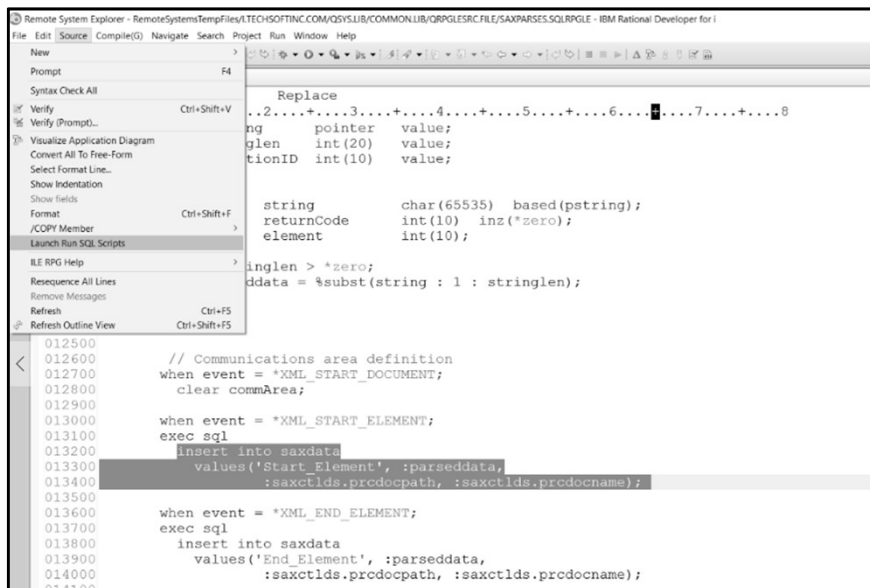
BEFORE

```
if hours > 40;
overtime = hours - 40;
overtimepay = overtime * overtimerate;
if hours > 50;
overtimepay = overtimepay + bonus;
endif;
gross = regularpay + overtimepay;
else;
grosspay = regularpay;
endif;
```

AFTER

```
if hours > 40;
  overtime = hours - 40;
  overtimepay = overtime * overtimerate;
if hours > 50;
  overtimepay = overtimepay + bonus;
endif;
gross = regularpay + overtimepay;
else;
  grosspay = regularpay;
endif;
```

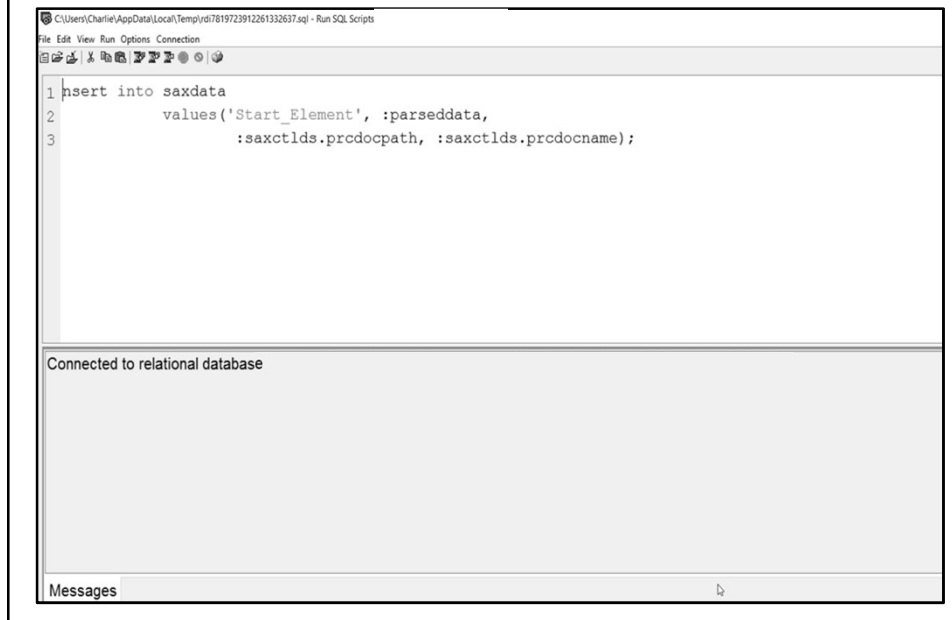
Built-in Run SQL Scripts



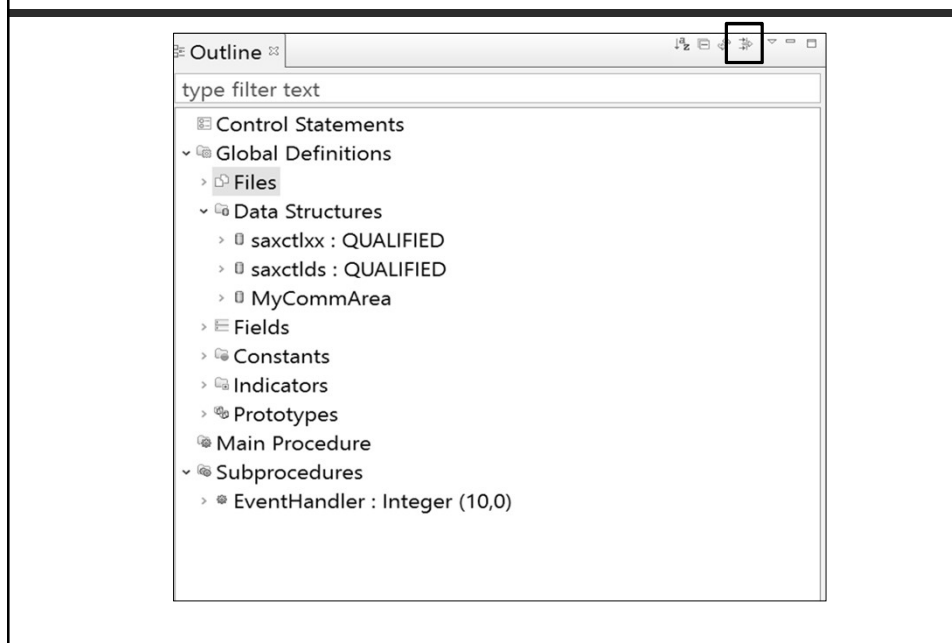
The screenshot shows the IBM Rational Developer for i interface. A menu is open with 'Launch Run SQL Scripts' selected. The code editor displays the following SQL script:

```
012500
012600 // Communications area definition
012700 when event = *XML_START_DOCUMENT;
012800 clear commArea;
012900
013000 when event = *XML_START_ELEMENT;
013100 exec sql
013200 insert into saxdata
013300 values('Start_Element', :parseddata,
013400 :saxctlds.prcdocpath, :saxctlds.prcdocname);
013500
013600 when event = *XML_END_ELEMENT;
013700 exec sql
013800 insert into saxdata
013900 values('End_Element', :parseddata,
014000 :saxctlds.prcdocpath, :saxctlds.prcdocname);
014100
```

Built-in Run SQL Scripts



Remove unreferenced objects from Outline view



Built in F1 support for embedded SQL

```
exec sql close C1;  
exec sql open C1;  
  
exec sql fetch C1 into :saxctlds;
```

The screenshot shows the IBM Rational Developer for i help interface. The search bar contains 'Go Scope: All topics'. The left pane shows a 'Contents' list with 'FETCH' selected. The main pane displays the following information:

IBM i 7.3 > Database > Reference > SQL reference > Statements

FETCH
The FETCH statement positions a cursor on a row of the result table. It can return zero, one, or multiple rows, and it assigns the values of the row returned to variables.

Invocation
This statement can only be embedded in an application program. It is an executable statement that cannot be dynamically prepared. Multiple row fetch is not allowed in a REXX procedure.

Authorization
See [DECLARE CURSOR](#) for an explanation of the authorization required to use a cursor.
If a global variable is specified in the INTO variable list, the privileges held by the authorization ID of the statement must include at least one of the following:

- The WRITE privilege on the global variable.
- Database administrator authority

Syntax

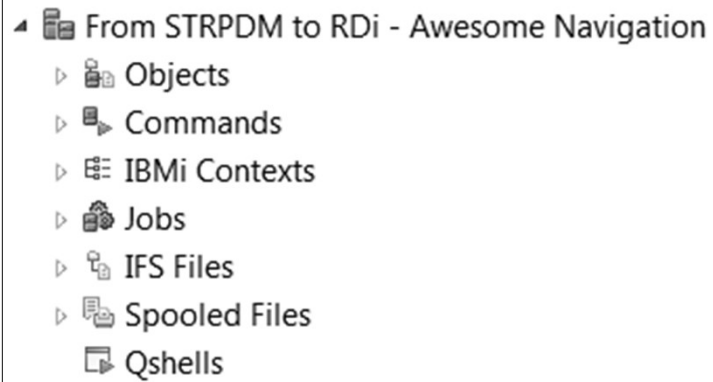
```
>>FETCH-----FROM-----  
+NEXT-----  
+FIRST-----  
+LAST-----  
+ (1) -----  
+BEFORE-----  
+ (2) -----  
+AFTER-----  
+CURRENT-----  
+RELATIVE-----variable-----  
+integer-----  
-----  
+single-fetch-----  
+multiple-row-fetch-----
```

What We'll Cover ...

- Hidden LPEX gems
- Climbing down the navigation tree
- Object tables
- The remote scratchpad
- Preferences
- Wrap Up

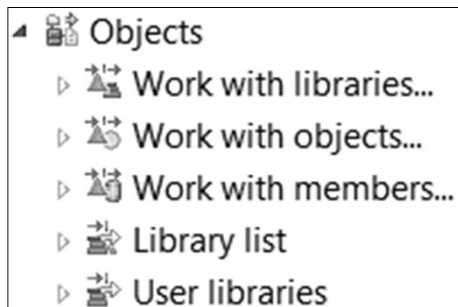
Climbing down the connection navigation tree

- Subsystems are added for each connection that you create
- Let's explore each one and discuss how each one adds value to your tool kit



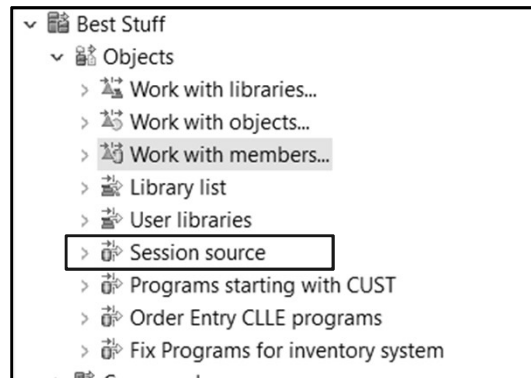
Introducing Objects Subsystem

- Resequencing filters
- Copying source members
- Using the connection's library list



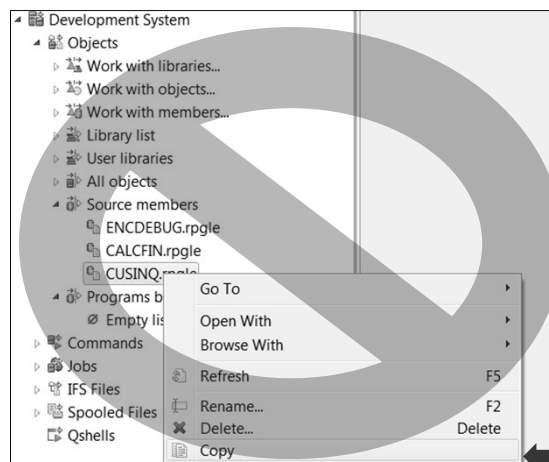
Resequencing Filters

- Filters are appended to the list as you create them
- Prior to RDi 9.5 they could be moved only one level at a time
- Can now be dragged and dropped



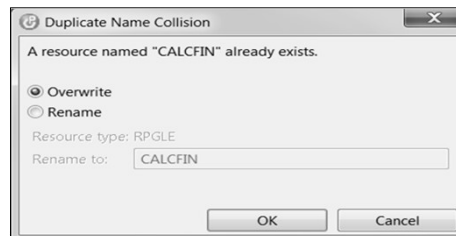
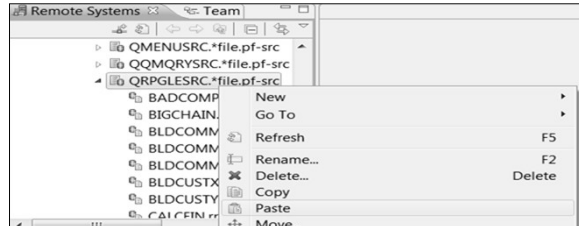
Copying source members

- The most obvious method doesn't actually work
 - You can't copy from one filter to another



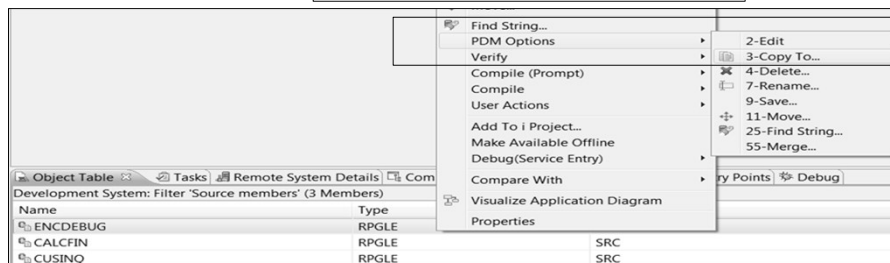
Copying source members (cont.)

- Instead right-click on the target source physical file
- Will receive a warning message if source already exists



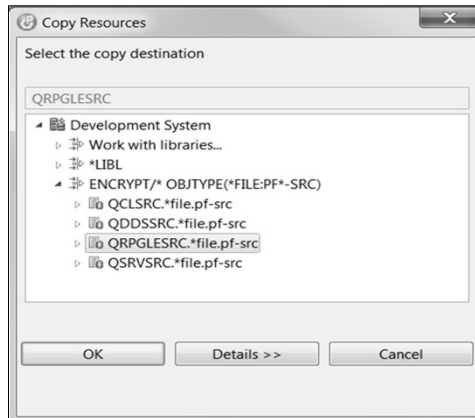
Copying source members (cont.)

- Another option is to show the filter's content in a table
- PDM-like options exist from the table's view



Copying source members (cont.)

- The PDM option 3 displays a more intuitive copy process
 - Can select a different library
 - Can select a DIFFERENT CONNECTION!



Source Compare – Method 1

ReturnDataLen	S	101 0	
D cleardataLen	S	101 0	
D encryptdataLen	S	101 0	
D Cities	ds		qualified
D CityData	ds		likeds(citydatads) dim(2)
D CityDatads	ds		qualified
D CityName	ds	20	
D Region	ds	20	
D State	ds	20	
D MonthlyData	ds		likeds(MonthlyData) dim(1)
D MonthlyData	ds		
D Month	ds	9	

 The right pane shows the target source code with the following structure:


```

    H bnddir('QC2LE') option(*nodebugio:*srcstnt) nomain
    FCitydata1 0 a e          DISK
    * Identify prototype
    D secretdata      pr      24
    D                 24      value
    D                 1      value
    *
    * Procedure interface
    p secretdata      b          export
    d datastring      pi      24
    d datastring      pi      24      value
    d direction       1      value
    d
    *
    D cleardata       s          24
    * Field returndata will always have a two byte field at the end
    * which will contain the length of the resulting function
    D returndata      s          24
    *
    ** The encrypted data variable
    D encodata       S          32A
    ** Different data length fields
    D cleardataLen   S          101 0
    D Cities         ds          qualified
    D CityData       ds          likeds(citydatads) dim(2)
    D CityDatads    ds          qualified
    D CityName       ds          20
    D Region         ds          20
    D State          ds          20
    D MonthlyData    ds          likeds(MonthlyData) dim(1)
    D MonthlyData    ds
    D Month          ds          9
    D Low            ds          3
    D High           ds          3
    
```

 The left pane shows the source code with the following structure:


```

    H bnddir('QC2LE') option(*nodebugio:*srcstnt) nomain
    FCitydata1 0 a e          DISK
    * Identify prototype
    D secretdata      pr      24
    D                 24      value
    D                 1      value
    *
    * Procedure interface
    p secretdata      b          export
    d datastring      pi      24
    d datastring      pi      24      value
    d direction       1      value
    d
    *
    D cleardata       s          24
    * Field returndata will always have a two byte field at the end
    * which will contain the length of the resulting function
    D returndata      s          24
    *
    ** The encrypted data variable
    D encodata       S          32A
    ** Different data length fields
    D cleardataLen   S          101 0
    D Cities         ds          qualified
    D CityData       ds          likeds(citydatads) dim(2)
    D CityDatads    ds          qualified
    D CityName       ds          20
    D Region         ds          20
    D State          ds          20
    D MonthlyData    ds          likeds(MonthlyData) dim(1)
    D MonthlyData    ds
    D Month          ds          9
    
```

 The bottom left pane shows the 'Properties' window for the selected source file, with the following details:

Property	Value
Attribute	SRC
Name	SOURCE1
Number of children	0
Source	DEVLIB/QRPGLESRC
Text	For FROM STRPDM TO RDP PA
Type	RPGLE

 The top of the window shows the title bar 'Remote System Explorer - Compare (SOURCE1.RPGLE - SOURCE2.RPGLE) - IBM Rational Developer for i' and the menu bar 'File Edit Navigate Search Project Data Run Window Help'."/>

Source Compare – Method 2

Line	Column 1	Replace
Line 36	...	DName+++++ETDsFrom+++To/L+++IDc.Keywords+++++Con
000115	d	
000116	*	
000117	D cleardata	s 24
000118		* Field returndata will always have a two byte field at the end
000119		* which will contain the length of the resulting function
000120	D returndata	s 24
000121	*	
000122		** The encrypted data variable
000123	D encdata	S 32A
000124		** Different data length fields
000125	D returndata	len S 10 0
000126	D cleardata	len S 10I 0
000127	D encryptdata	len S 10I 0
000128	D Cities	ds qualified
000129	D CityData	liked(citydatads) dim(2)
000130	D	
000131	D CityDatads	ds qualified
000132	D CityName	20
000133	D Region	20
000134	D State	20
000135	D MonthlyData	liked(MonthlyData) dim(3)

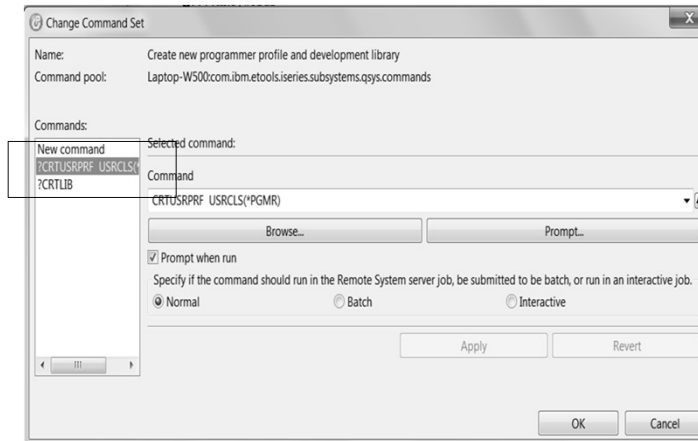
Introducing Commands and Command Sets

- A “command” is really a script of multiple commands
- There are several pre-defined commands
- Here I created a “command” to create a new user profile and also create a default development library for the new user:



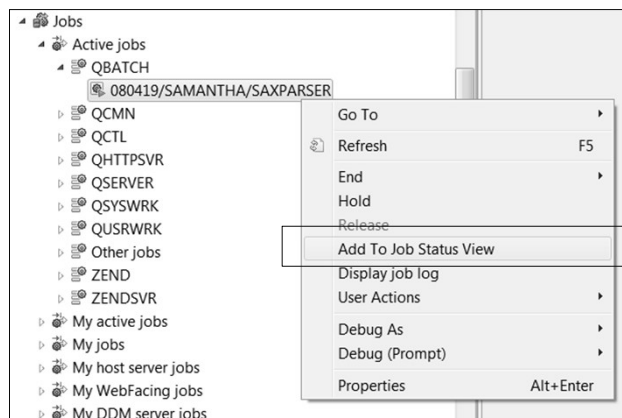
Creating your own command set

- Here I issue CRTUSRPRF and CRTLIB commands
- The question mark in front of the commands forces a prompt



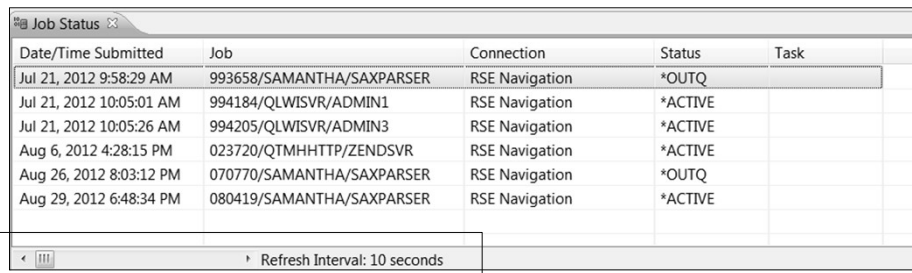
Introducing Jobs

- The jobs list is segregated into different active subsystems
- Right clicking on a job allows you to control and monitor it



Jobs (cont.)

- The jobs status view allows you to subset the active jobs regardless of the subsystem it is running in.
- Click on a column heading to sort that particular column
- There is a refresh slider bar with a range of 10 seconds to 5 hours to Never Refresh

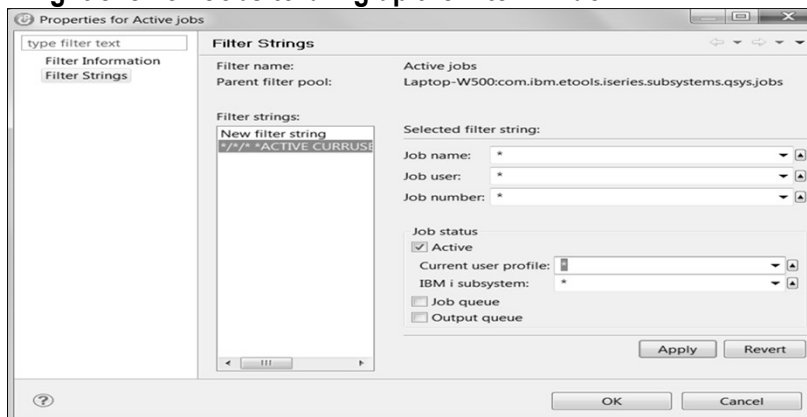


Date/Time Submitted	Job	Connection	Status	Task
Jul 21, 2012 9:58:29 AM	993658/SAMANTHA/SAXPARSER	RSE Navigation	*OUTQ	
Jul 21, 2012 10:05:01 AM	994184/QLWISVR/ADMIN1	RSE Navigation	*ACTIVE	
Jul 21, 2012 10:05:26 AM	994205/QLWISVR/ADMIN3	RSE Navigation	*ACTIVE	
Aug 6, 2012 4:28:15 PM	023720/QTMHHTTP/ZENDSVR	RSE Navigation	*ACTIVE	
Aug 26, 2012 8:03:12 PM	070770/SAMANTHA/SAXPARSER	RSE Navigation	*OUTQ	
Aug 29, 2012 6:48:34 PM	080419/SAMANTHA/SAXPARSER	RSE Navigation	*ACTIVE	

Refresh Interval: 10 seconds

Jobs (cont.)

- The default view of the Jobs subsystem is to show ALL jobs.
- A Job Filter allows you to hone in on a particular job, job name or user profile
- Right click on Jobs to bring up the filter window



Properties for Active jobs

Filter Information
Filter Strings:

Filter name: Active jobs
Parent filter pool: Laptop-W500:com.ibm.etools.iseries.subsystems.qsys.jobs

Filter strings:
New filter string
// *ACTIVE CURRUS:

Selected filter string:

Job name: *
Job user: *
Job number: *

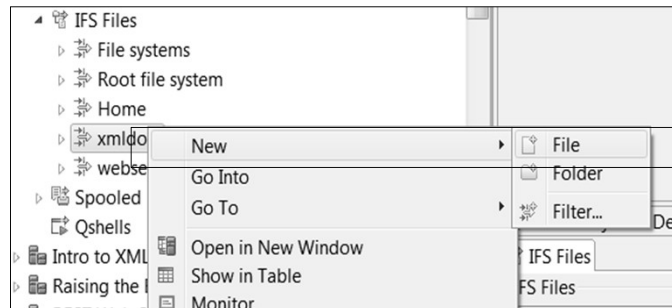
Job status
 Active
Current user profile: *
IBM i subsystem: *
 Job queue
 Output queue

Apply Revert

OK Cancel

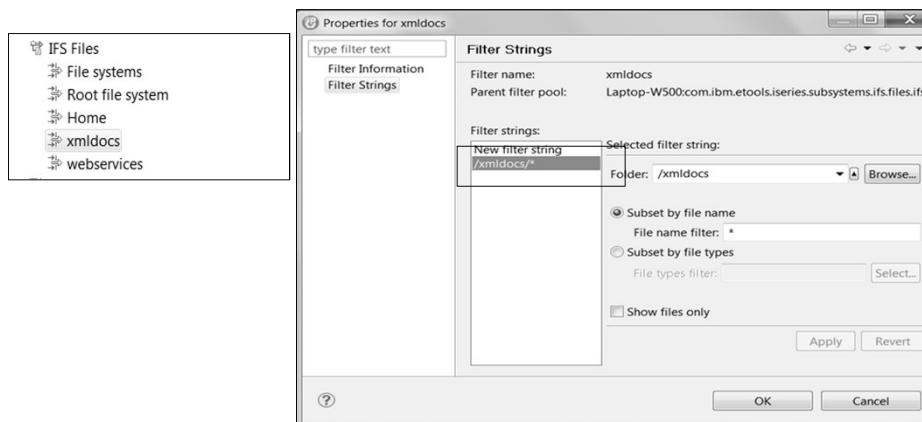
Introducing IFS

- A very easy way to navigate through the IFS
- Can create filters as a shortcut to a particular folder
- Makes copying documents to folders a snap using copy and paste
- Can also easily create files and folders in a particular directory

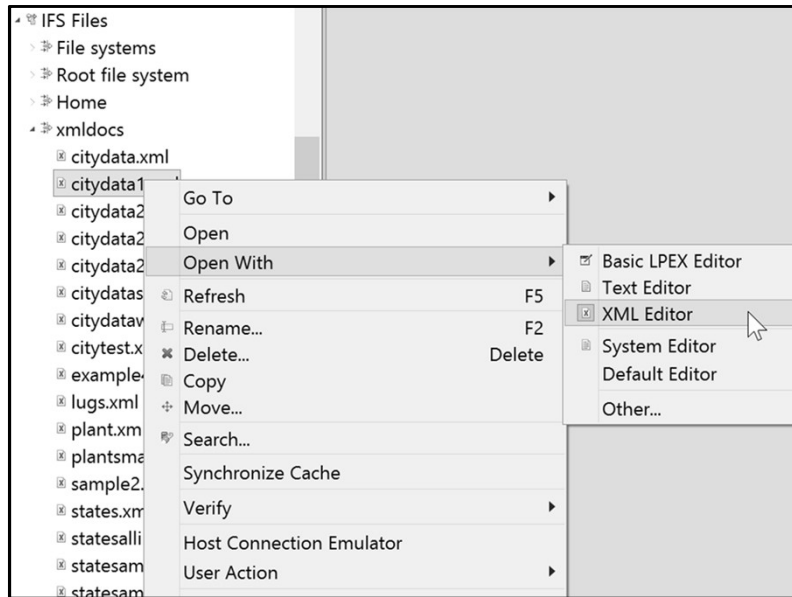


IFS Filters

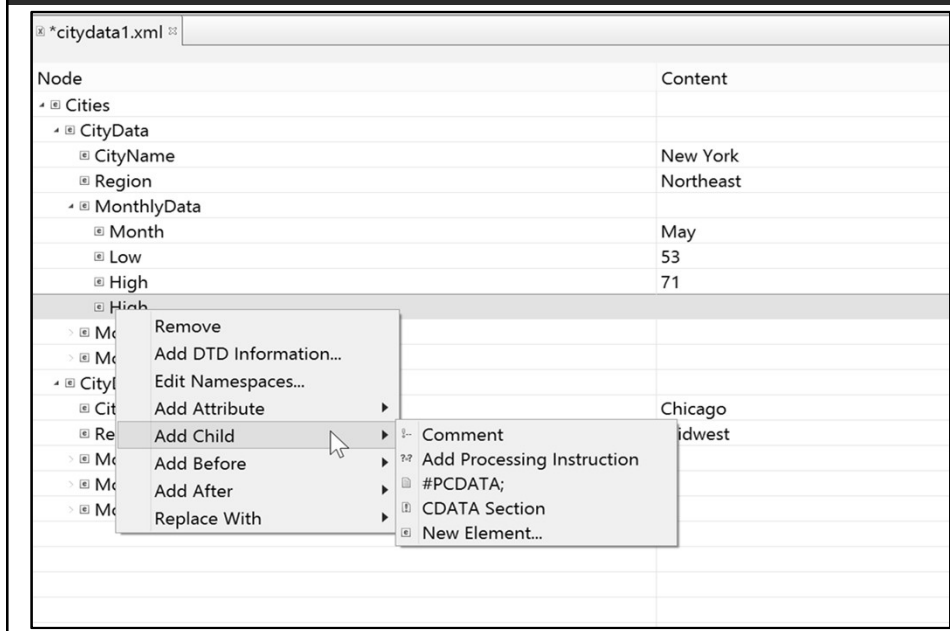
- An IFS filter allows you quick access to a selected folder(s)
- Can specify which file types will be shown in the filter
- Can limit a filter to show files only, very helpful



IFS – RDi has an easy to use built in XML Editor

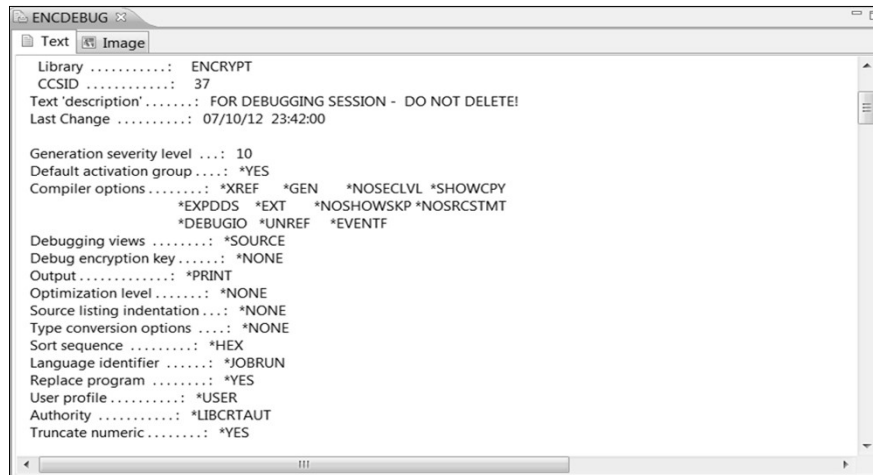


IFS – The editor understands XML



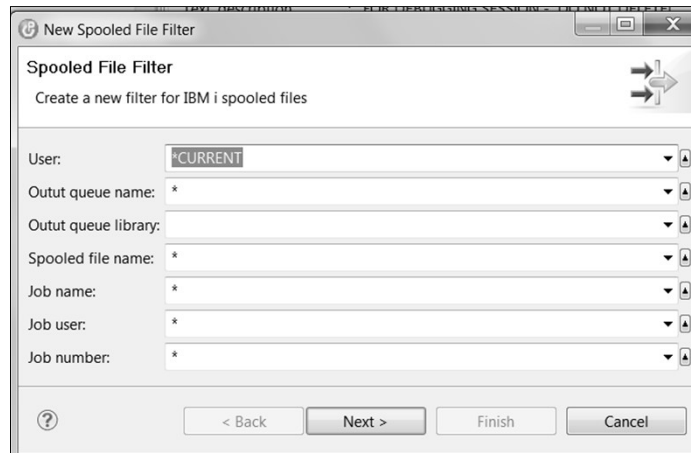
Introducing Spooled Files

- A built-in spool file viewer is available
- Once again system authority fully applies



Spooled Files

- Multiple filters can be created to further speed up your searches



Launch Printer Output

Printer output on i-lachsoftinc.com

File Edit View Actions

Outbox name	User-specified data	User	Status	Printer	Pages per copy	Copies left	Time created	Date created	Output queue	Printer device type	Number	Job name
CUSTOMT		CGUARDNO	READY		16	1	11:42:06 PM	4/30/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/285189
QPDDTALOG		CGUARDNO	READY		1	1	11:39:05 PM	4/30/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/285196
CUSTOMT		CGUARDNO	READY		15	1	11:37:06 PM	4/30/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/285199
CUSTOMT		CGUARDNO	READY		15	1	11:35:06 PM	4/30/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/285211
CUSTOMTRM		CGUARDNO	READY		6	1	11:10:21 PM	4/30/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/284901
CUSTOMTRM		CGUARDNO	READY		6	1	11:01:54 PM	4/30/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/284824
QPDDTALOG		CGUARDNO	READY		1	1	3:46:38 PM	4/28/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/251839
QREDSK	PRTSQDNF	CGUARDNO	READY		3	1	3:44:19 PM	4/22/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/223472
QREDSK	PRTSQDNF	CGUARDNO	READY		12	1	6:01:55 PM	3/29/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/171954
QREDSK	PRTSQDNF	CGUARDNO	READY		3	1	6:00:38 PM	3/29/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/161646
QPCMPRT		CGUARDNO	READY		1	1	5:38:50 PM	3/29/16	QGRU_QPRINT	*SCS	6	CGUARDNO/QPRINT/171736
QPCMPRT		CGUARDNO	READY		1	1	5:38:42 PM	3/29/16	QGRU_QPRINT	*SCS	5	CGUARDNO/QPRINT/171736
QPCMPRT		CGUARDNO	READY		1	1	5:38:40 PM	3/29/16	QGRU_QPRINT	*SCS	4	CGUARDNO/QPRINT/171736
QPCMPRT		CGUARDNO	READY		2	1	5:24:11 PM	3/29/16	QGRU_QPRINT	*SCS	3	CGUARDNO/QPRINT/171736
QPCMPRT		CGUARDNO	READY		2	1	5:23:02 PM	3/29/16	QGRU_QPRINT	*SCS	2	CGUARDNO/QPRINT/171736
QPCMPRT		CGUARDNO	READY		1	1	5:22:38 PM	3/29/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/171736
QPDDTALOG		CGUARDNO	READY		1	1	6:34:36 PM	3/17/16	QGRU_QPRINT	*SCS	2	CGUARDNO/QPRINT/1991860
QPDDTALOG		CGUARDNO	READY		1	1	6:33:22 PM	3/17/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/1991860
QPDDTALOG		CGUARDNO	READY		1	1	2:54:50 PM	3/17/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/1991842
QPDDTALOG		CGUARDNO	READY		1	1	2:44:55 PM	3/17/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/1991820
SAVPARSE		CGUARDNO	READY		11	1	8:12:40 PM	3/12/16	QGRU_QPRINT	*SCS	1	CGUARDNO/SAVPARSE/1982131
SAICL1		CGUARDNO	READY		4	1	8:12:27 PM	3/12/16	QGRU_QPRINT	*SCS	1	CGUARDNO/SAICL1/1982132
SAVPARSE		CGUARDNO	READY		11	1	8:12:00 PM	3/12/16	QGRU_QPRINT	*SCS	1	CGUARDNO/SAVPARSE/1982130
QPDDTALOG		CGUARDNO	READY		1	1	8:28:18 PM	3/12/16	QGRU_QPRINT	*SCS	2	CGUARDNO/QPRINT/1982122
QPDDTALOG		CGUARDNO	READY		1	1	8:28:22 PM	3/12/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/1982122
QPDDTALOG		CGUARDNO	READY		3	1	9:46:08 PM	3/11/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/1982113
BILLETAG		CGUARDNO	READY		7	1	4:53:02 PM	3/11/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/1979784
BILLETAG		CGUARDNO	READY		7	1	2:50:49 PM	3/11/16	QGRU_QPRINT	*SCS	1	CGUARDNO/QPRINT/1979782

Retrieved 2307 spooled files (0 selected)

Downloaded files

Name	Size	Modified

Active tasks

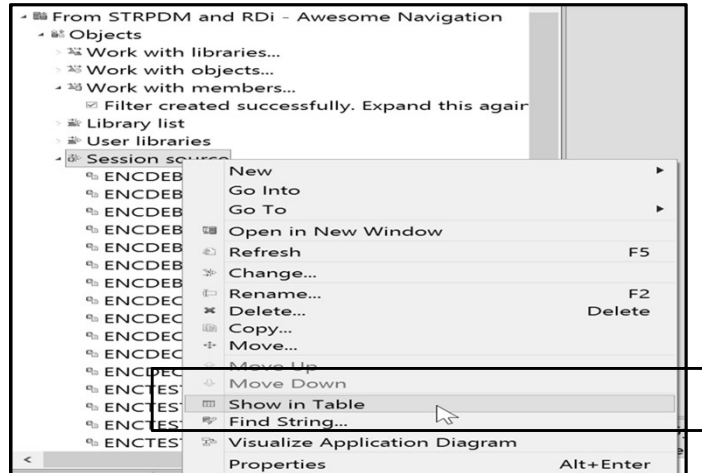
Spooled File Action Progress

What We'll Cover ...

- Hidden LPEX gems
- Climbing down the navigation tree
- Object tables
- The remote scratchpad
- Preferences
- Wrap Up

Object Tables

- The object table is available from many locations within RDi.
- Experiment! Right click and select “Show in Table”



Object Tables (cont...)

- Click on any column heading to sort the table
- Double click for a reverse sort
- Right click on any table entry for member specific options

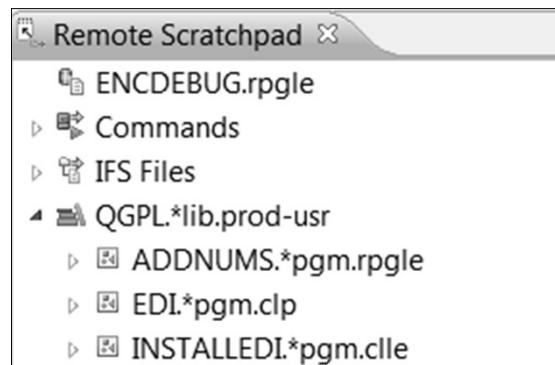
Name	Type	Attribute	Text	Last modified	Created	File	Library
%ENCDEBUGZ	RPGL	SRC	FOR DEBUGGING SESSION FREE FORM - DO NOT ...	Apr 18, 2015 6:43 PM	Apr 18, 2015 4:16 PM	QRPGLESRC	ENCRYPT
%ENCTEST3	RPGL	SRC	FOR DEBUGGING SESSION FIXED FORM - DO NOT ...	Nov 29, 2014 6:58 PM	Nov 29, 2014 6:17 PM	QRPGLESRC	ENCRYPT
%ENCTEST2	RPGL	SRC	FOR DEBUGGING SESSION FIXED FORM - DO NOT ...	Nov 29, 2014 6:14 PM	Nov 29, 2014 6:14 PM	QRPGLESRC	ENCRYPT
%ENCTEST1	RPGL	SRC	FOR DEBUGGING SESSION FIXED FORM - DO NOT ...	Nov 29, 2014 6:12 PM	Nov 29, 2014 6:10 PM	QRPGLESRC	ENCRYPT
%ENCDEBUG2	RPGL	SRC	FOR DEBUGGING SESSION FREE FORM - DO NOT ...	Nov 29, 2014 5:17 PM	Nov 29, 2014 5:00 PM	QRPGLESRC	ENCRYPT
%ENCDECRYPT	RPGL	SRC	DEMONSTRATION SERVICE PROGRAM - DO NOT D...	Sep 23, 2014 7:52 PM	Apr 25, 2009 8:43 PM	QRPGLESRC	ENCRYPT

What We'll Cover ...

- Hidden LPEX gems
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- Object tables
- **The remote scratchpad**
- Preferences
- Wrap Up

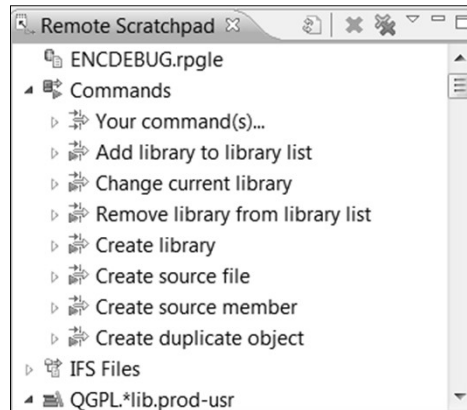
The Remote Scratchpad

- The graphical equivalent to a yellow sticky note
 - Provides a convenient place to temporarily store objects
 - Contents are removed from the scratchpad when you exit RDi



The Remote Scratchpad (cont.)

- Objects remain “live” while on the scratchpad
- Objects can be used on the scratchpad as if they were in the normal RSE tree

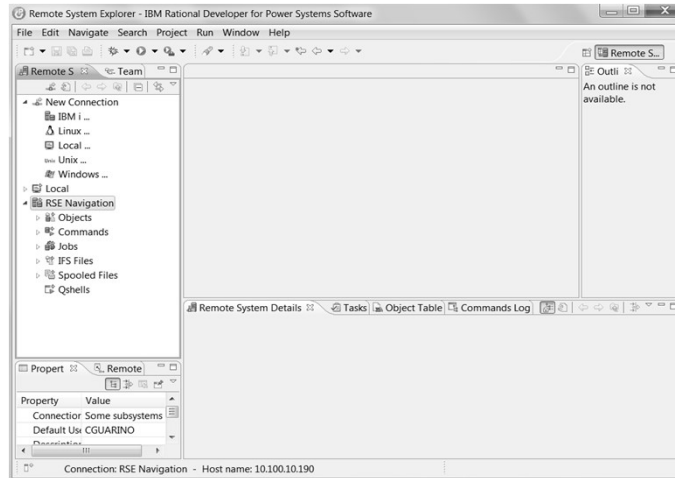


What We'll Cover ...

- Hidden LPEX gems
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- The remote scratchpad
- Preferences
- Wrap Up

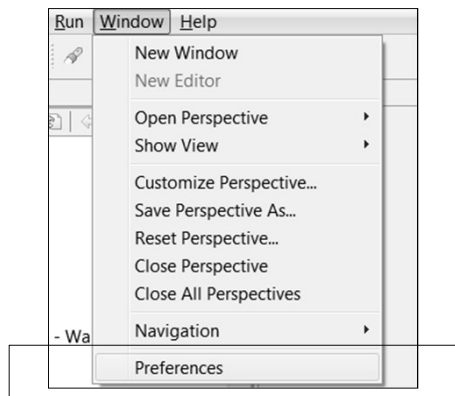
A world of options – What's your Preference?

- Here is the workbench with only one defined connection
- Many “hidden” options, you need to know where to find them!



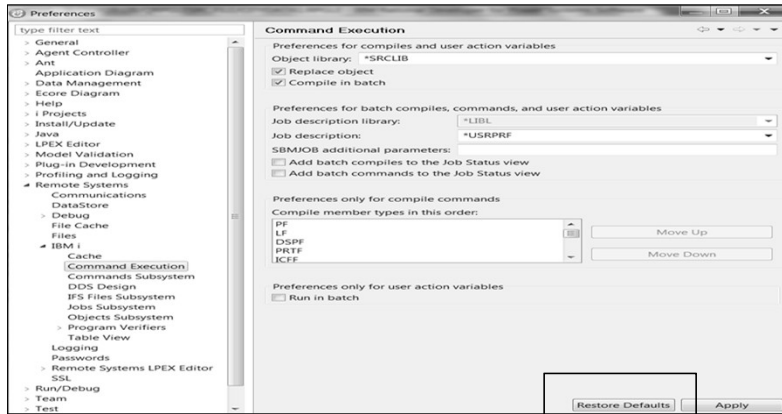
Preferences

- There are **MANY** available in RDi
 - Not all apply to RPG and COBOL development
 - Preferences ‘stick’ to a particular workspace
 - To access them click **Window>Preferences**



What's your preference?

- A Filter Text window is available to help you find what you need
- A “Restore Defaults” exists in most so don't be afraid!
- Window>Preference>Remote Systems>IBM i > Command Execution



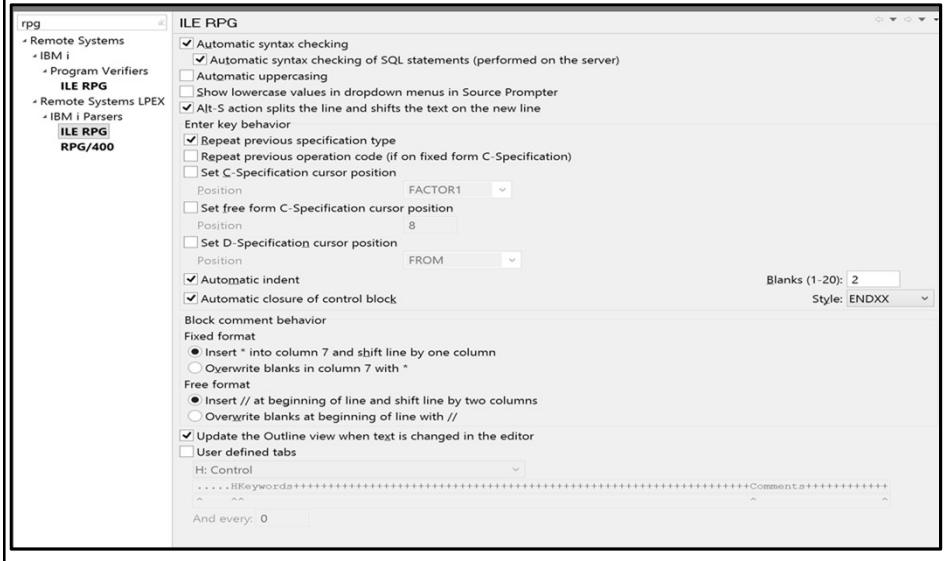
Tagging your mods – How often do you do this?

- Add an automatic signature to every changed line!
- Windows>Preferences>type “parsers”>IBM i parsers
- The signature is placed in columns 1 through 5

```
*CITYDATA1RPGLE
Line 26      Column 92      Insert 13 changes
.....DName+++++++ETDsFrom+++To/L+++IDC.Keywords+++++++Comments
000200
000201 CMG01
000202 CMG01 *           Program modified March 2011
000203 CMG01 *           Changed MonthlyData dimension from 3 to 4
000204 CMG01 *           to accommodate new XML requirements
000205 CMG01
000300          Fcitydata1 o a e           disk
000400
000500          D Cities           ds           qualified
000600          D CityData           ds           likeds(citydatads) dim(2)
000700          D
000800          D CityDatads        ds           qualified
000900          D CityName           ds           20
001000          D Region           ds           20
001100          D State            ds           20
001200 CMG01D**          MonthlyData       ds           likeds(MonthlyData) dim(3)
001201 CMG01D          MonthlyData       ds           likeds(MonthlyData) dim(4)
001300
001400          D MonthlyData       ds
```

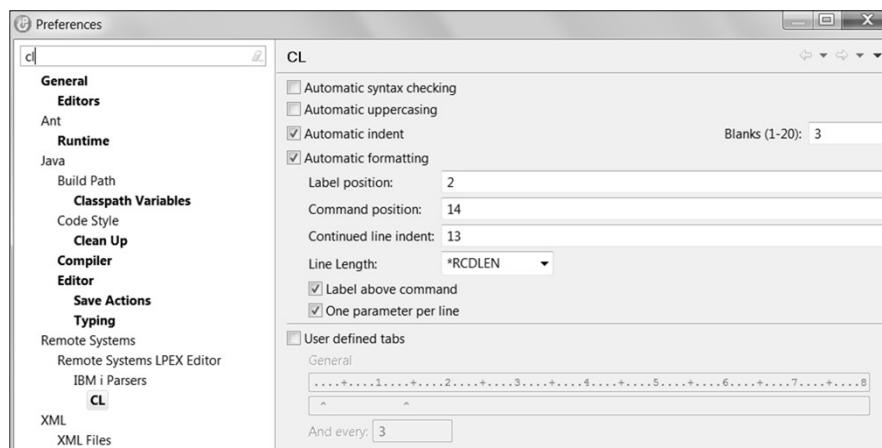

RPG Parsers – What they mean and how to use them

- Window>Preferences>type “rpg” > ILE RPG



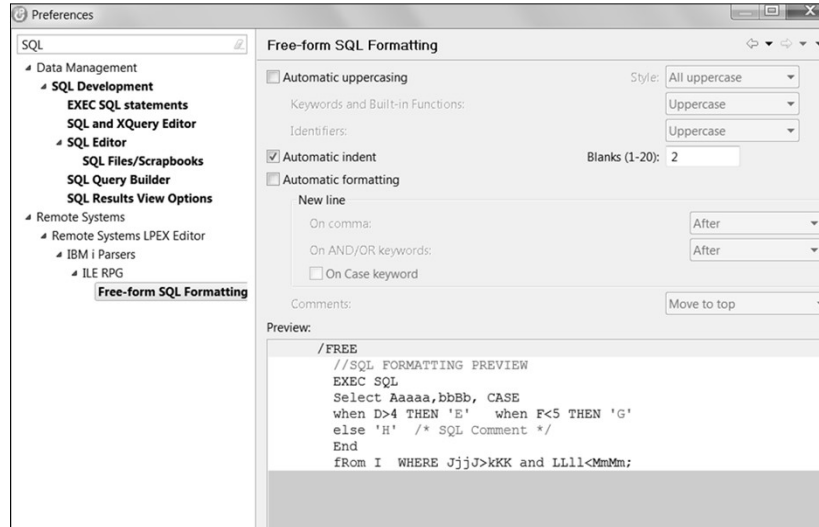
CL Parser – What it means and how to use it

- Window>Preferences>type “CL”



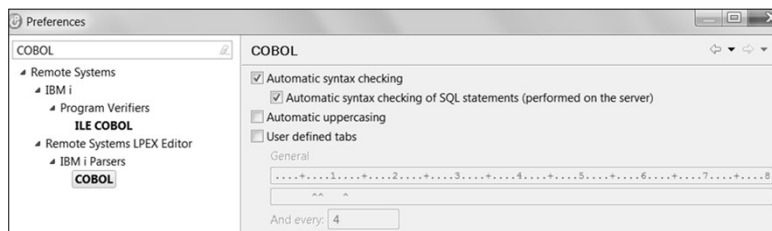
SQL Parser – What it means and how to use it

- **“SQL Formatting” or Window>Preferences>type “SQL”**

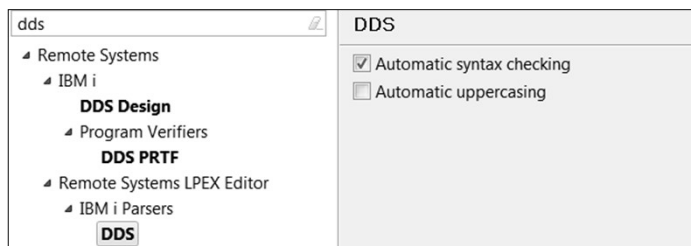


COBOL and DDS Parsers- What they mean and how to use them

- **Window>Preferences>type “COBOL”**

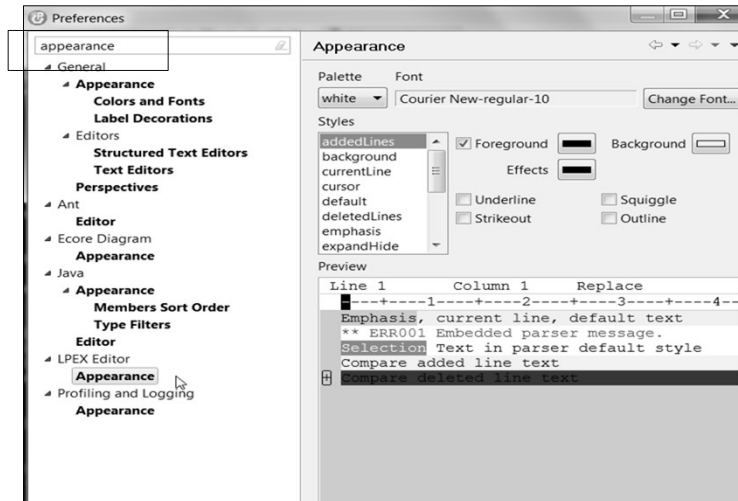


Window>Preferences>type “DDS”



LPEX Preferences

- Windows>Preferences>type “appearance” > LPEX Editor > Appearance



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**Looking Inside the Developer's Toolkit:
"Best Stuff" from the Advanced RDi Topics**



Charles Guarino

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THANK YOU !!!**