



(E)JES Update

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Aug 13, 2013 Session Number 14348







Compatibility Matrix

	1			
Operating	V5R3	V5R2	V5R1	V4R8
System	09/13*	09/12	09/11	09/10
z/OS 2.1	JES2/JES3	JES3		
z/OS 1.13	JES2/JES3	JES2/JES3	JES2/JES3	JES3
z/OS 1.12	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.11	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.10	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.9	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.8	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.7		JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.6			JES2/JES3	JES2/JES3
z/OS 1.5				JES2/JES3

- V5R3 GA is scheduled for September 2013.
- New release required to support z/OS 2.1 JES2
- z/OS 2.1 JES3 support rolled back to V5R2.
- V4R8 became stabilized at the end of March 2013.





Minimum OS Level and W-OSLVL Delay

```
Jobs
      Resources Devices Tools Filter View Options Help
INPUT
        59S
             0 X
                 4 W
                    55H
                                                                Row 1 of 59
Command ===>
                                                           Scroll ===> CSR
Cmd JobName JobID
                     QTime Spin System-Affinity TGNum TGPct MinOSLvl
                                                            .00 z 2.1.0
   SYMBOLS
            J0172445 12:18:24.62
   WAIT4REP J0138872 15:55:09.39 SPIN
                                                            .00
   WAIT4REP J0138871 15:13:53.70
                                     SBO
                                                            . 00
   LOGSAVAO J0040007 00:01:00.77 SPIN SAO
                                                            .00
   LISTCAT8 J0038176 16:48:16.62 SPIN
                                                            .00
           F3=Exit F7=Up F8=Down F10=Left F11=Right F12=Cancel
F1=Help
 File Edit Edit_Settings Menu Utilities Compilers Test Help
VIEW
          EDJXADM.A.CNTL(SYMBOLS) - 01.00
                                             Columns 00001 00072
Command ===>
                                                           Scroll ===> CSR
***** *************************** Top of Data *********************
000001 //SYMBOLS JOB 1, JAFFE, CLASS=D, MSGCLASS=T, NOTIFY=&SYSUID
000002 // EXEC PGM=IEFBR14
000003 //SYSIN DD *,SYMBOLS=JCLONLY
000004 SYMBOLS
000005 //
F1=Help
                                                  F6=Rchange F12=Cancel
             F3=Exit
                         F4=Expand
                                      F5=Rfind
                                                                     04/015
```



z/OS 2.1 JES2 Eight-Character Job Classes and Job Class Groups



- z/OS 2.1 JES2 now supports eight-character job classes and allows job classes to be associated with named, eightcharacter job class groups.
 - Features previously available to JES3 customers only.
- Where ambiguity is possible, the new JES2 syntax for job class lists is used for tabular columns and overtypes:
 - ABCDE means classes A, B, C, D, and E
 - (ABCDE) means job class or group ABCDE
 - (ABCDE,FGHIJ) denotes two classes or groups
- (E)JES retrofits much JES3 job class function to JES2
 - Up to four, eight-character job class wildcard masks
 - JES2 tabular displays reworked to look more like JES3
 - Job class group column shown for z/OS 2.1 JES2+



<u>J</u> obs <u>R</u> eso	urces <u>D</u> evices	<u>T</u> ools <u>F</u> ilt	er <u>V</u> iew	<u>O</u> ptions <u>H</u> elp	
STATUS 3,4 Command ===> Cmd JobName				:	Row 128 of 3703 Scroll ===> CSR v Mode ARM PrtD
	J0172445 D T0172444 TSU S0172443 STC S0172435 STC	ВАТСН			LOCA LOCA LOCA LOCA
	urces <u>D</u> evices		er <u>V</u> iew	<u>O</u> ptions <u>H</u> elp	D 1 5 -00
INIT PHX Command ===>	HQ2 Initiator S	tatus			Row 1 of 20 Scroll ===> <mark>CSR</mark>
	_ tus Classes	JobName J	obID C	ASID Owner	SysName JMbr JE
/					
	CTIVE (ABCD)			004C	MVS70 S70 JE
	CTIVE A CTIVE A			004D 004F	MVS70 S70 JE MVS70 S70 JE
<u>J</u> obs <u>R</u> eso	urces <u>D</u> evices	<u>T</u> ools <u>F</u> ilt	er <u>V</u> iew	<u>O</u> ptions <u>H</u> elp	
MVSAO CLASS Command ===>		Status			Row 49 of 608 Scroll ===> PAGE
Cmd Class		p Mode Wa	itCt RunCt		un MbrAff JobRC
D	S60 BATC S70	H WLM	0	0 0 *	YES MAXRC YES MAXRC





Job Class Mask Length Control

- JCMLEN command sets job class mask length to 1 or 8
- The setting also affects the Entry Panel and Primary Selection Criteria pop-ups:
 - With JCMLEN=1 there is one eight-character job class mask input field. It is treated as eight, one character job classes.
 - With JCMLEN=8 there are four eight-character job class mask input fields. Each field is treated as an eight-byte job class mask. (Wildcard characters accepted.)
- JCMLEN can also be set from the Options Panel or by using the Set job class mask length... dialog, accessed from the Filter pull-down under ISPF
- This feature applies to both JES2 and JES3



```
Devices Tools Filter View
                                                  Options Help
 Jobs
        Resources
2013/07/26 (2013.207)
                               (E) JES Entry Panel
                                                         MVSAO/SAO V5R3.0 17:49
Command ===> jcmlen 1
Default Command ===> ST
                                                                     More:
Job Names/Nums
                              ===>
                ===>
                                             ===>
                                                            ===>
                ===>
                              ===>
                                             ===>
                                                            ===>
Owner IDs
                ===>
                              ===>
                                             ===>
                                                            ===>
                ===>
                              ===>
                                             ===>
                                                            ===>
Origins
                ===>
                              ===>
                                             ===>
                                                            ===>
Destinations
                                             ===>
                ===>
                              ===>
                                                            ===>
Job Classes
                ===> ABCDEFGH
       Resources Devices Tools Filter View Options Help
 Jobs
2013/07/26 (2013.207)
                                                         MVSAO/SAO V5R3.0 17:49
                               (E) JES Entry Panel
Command ===> jcmlen 8
Default Command ===> ST
                                                                     More:
Job Names/Nums
                ===>
                               ===>
                                             ===>
                                                            ===>
                ===>
                               ===>
                                             ===>
                                                            ===>
Owner IDs
                ===>
                               ===>
                                             ===>
                                                            ===>
                ===>
                               ===>
                                             ===>
                                                            ===>
Origins
                ===>
                               ===>
                                             ===>
                                                            ===>
Destinations
                ===>
                               ===>
                                             ===>
                                                            ===>
Job Classes
                ===> ABCDEFGH ===>
                                                            ===>
                                             ===>
```



<u>J</u> obs <u>R</u> esources	s <u>D</u> evices	<u>T</u> ools <u>F</u> ilter <u>V</u> iew <u>O</u> ptions <u>H</u> elp	
		W 56H 45T 16,953,521 Records Row 1 of	
Command ===> jcm	len 1;p	Jobs Resources Devices Tools Filter View Options	Help
Cmd JobName Job	ID Sta -	Primary Selection —	7 ·
	/ \$		Row 1 of 3670
EDJX1 T01	72583 ACT C	Job Names	Scroll ===> CSR axComp Records
SMFDUMP S017		Owner IDs	>
NETTESTR S017	72581 ACT		o Î
EJESC510 S017	72579 ACT	Origins	C 0000 76
EJESC510 S017	72580 ACT	Destinations	0
EJESC520 S017	72578 ACT	Job Classes Sysout Classes	0
EJESC520 S01	72577 OUE	Display John VES (VES or MO)	
<u>J</u> obs <u>R</u> esources	<u>D</u> evices	<u>T</u> ools <u>F</u> ilter <u>V</u> iew <u>O</u> ptions <u>H</u> elp	'8 14,103
			0
		W 56H 45T 16,953,521 Records Row 1 of	3670
Command ===> jcml			
		Jobs Resources Devices Tools Filter View Options	1 200
	ID Sta	Jobs Resources Devices Tools Filter View Options Primary Selection	Help
Cmd JobName Jobl	ID St; -	Primary Selection —	Help Row 1 of 3670
	ID St; -	Job Names	Row 1 of 3670 Scroll ===> CSR
Cmd JobName Jobl	ID Sta - s 72583 AC C	Job Names	Help Row 1 of 3670
Cmd JobName Job1 EDJX1 T017	ID St: - S 72583 AC1 C 72582 QUE _	Job Names	Row 1 of 3670 Scroll ===> CSR
Cmd JobName Job1 EDJX1 T017 SMFDUMP S017	TD St: - \$72583 ACT C \$72582 QUE - \$72581 ACT	Job Names	Row 1 of 3670 Scroll ===> CSR axComp Records
EDJX1 T017 SMFDUMP S017 NETTESTR S017	TD Sta - s 72583 ACT 72582 QUE 72581 ACT 72579 ACT	Job Names	Row 1 of 3670 Scroll ===> CSR axComp Records 0
Cmd JobName Job1 EDJX1 T017 SMFDUMP S017 NETTESTR S017 EJESC510 S017	TD Sta - S 72583 ACT 72582 QUE 72581 ACT 72579 ACT 72580 ACT	Job Names	Row 1 of 3670 Scroll ===> CSR axComp Records 0
EDJX1 T017 SMFDUMP S017 NETTESTR S017 EJESC510 S017	TD Sta - S 72583 ACT 72582 QUE 72581 ACT 72579 ACT 72578 ACT	Job Names Owner IDs Destinations Job Classes Sysout Classes .	Row 1 of 3670 Scroll ===> CSR axComp Records 0 C 0000 76 0 0
EDJX1 T017 SMFDUMP S017 NETTESTR S017 EJESC510 S017 EJESC520 S017 EJESC520 S017	TD Stars 72583 ACT 72582 QUE 72581 ACT 72579 ACT 72578 ACT 72578 ACT 72577 QUE	Job Names Owner IDs Destinations Job Classes Sysout Classes . Display Jobs YES (YES or NO)	Row 1 of 3670 Scroll ===> CSR axComp Records 0 C 0000 76 0 0
EDJX1 T017 SMFDUMP S017 NETTESTR S017 EJESC510 S017 EJESC520 S017 EJESC520 S017 EJESCAS S017	TD Sta - S C C C C C C C C C C C C C C C C C C	Job Names Owner IDs Destinations Job Classes Sysout Classes .	Row 1 of 3670 Scroll ===> CSR axComp Records 0 C 0000 76 0 0
EDJX1 T017 SMFDUMP S017 NETTESTR S017 EJESC510 S017 EJESC520 S017 EJESC520 S017 EJESCAS S017 EJESCAS S017	TD Stars 72583 ACT 72582 QUE 72581 ACT 72579 ACT 72578 ACT 72577 QUE 72575 ACT 72576 ACT	Owner IDs Destinations Job Classes Sysout Classes . Display Jobs YES (YES or NO) Display STCs YES (YES or NO)	Row 1 of 3670 Scroll ===> CSR axComp Records 0 C 0000 76 0 0 0 B S878 14,103
EDJX1 T017 SMFDUMP S017 NETTESTR S017 EJESC510 S017 EJESC520 S017 EJESC520 S017 EJESCAS S017 EJESCAS S017 EDJX1 T017	TD Sta - S C C C C C C C C C C C C C C C C C C	Owner IDs Origins Destinations Job Classes Sysout Classes . Display Jobs YES (YES or NO) Display STCs YES (YES or NO) Display TSUs YES (YES or NO)	Row 1 of 3670 Scroll ===> CSR axComp Records 0 C 0000 76 0 0 B S878 14,103

Enhanced Symbolic Substitution in Filters (Primary, Additional, Metafilters, etc)



- V3R5 introduced Environment Variables—symbols derived from the current environment that can be used in filters
 - These have been renamed to (E)JES Environment Symbols
- Beginning in this release, z/OS system symbols can also be used. If an ampersand remains after substitution of (E)JES environment symbols, a z/OS symbol substitution service is invoked to process the string.
- Both static (e.g., &SYSNAME) and dynamic (e.g., &WDAY) symbols are supported



Substitution for Metafilters is Dynamic

 Most filters are substituted immediately when the filter is established. Substitution for metafilters occurs at the time the filter is actually used. What you type is unchanged.

```
Resources Devices Tools Filter View Options Help
 Jobs
                   3,115W 35H
STATUS
       3,295S 145X
                              0T
                                  44,583,780 Records
                                                       Row 1 of 3295
Command ===> fil own=a&sysname.b*
                                                    Scroll ===> CSR
Cmd JobName
                          Process StepNum StepName JP MaxComp Records
          JobID
                  Status
       Jobs Resources
                      Devices Tools Filter View Options
                                                        Help
                                   Metafilters
         Filter Help
               STATUS (MIN)
        FILTER
                                                               Row 1 of 1
        Command ===>
                                                          Scroll ===> CSR
        Cmd Column
                   Title
                                             Op Value
                                                                     Bool
           OWNER
                                               A&SYSNAME.B*
                   Owner
```





Console Name Collision Resolution

- "Default" console name is chosen by EJESUX10
- Standard behavior is to make the default name = userid
- Many customers implement our distributed modification to derive the last character of the console name from the ISPF window id (1-9,A-W)
 - This allows unique consoles within an ISPF session
- In this release we allow a placeholder character to be inserted anywhere into the console name (e.g. JAFFE%)
- If the placeholder character is present, (E)JES will replace it with blank (only if last character) and then retry again and again with 0-9,A-Z until the console is successfully activated.

Previously Documentation Was Distributed in the Following Formats



- IBM BookManager books
 - Individual parts in SEJEPUBS and SEJEPSHF target libraries
- Adobe PDF documents
 - Individual parts in SEJEPDF target library
- HTML documents
 - A single part (zip file) in SEJEHTML target library
 - These HTML documents were built by exporting Microsoft Word documents. They were poorly formatted, intended for use only by seeing-impaired individuals who required HTML for their assistive technologies.



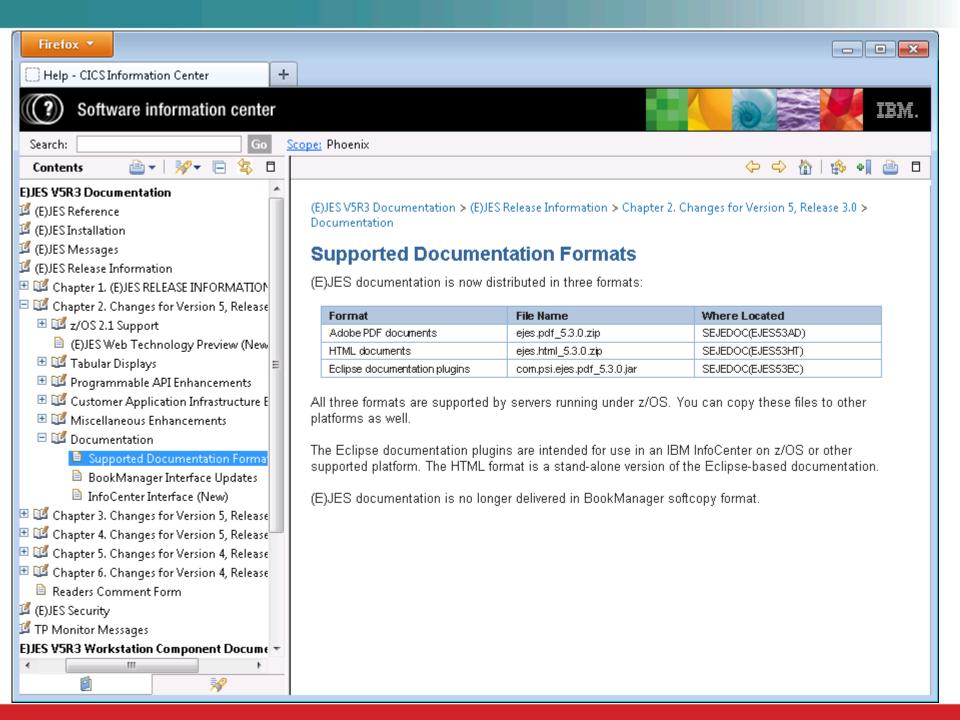


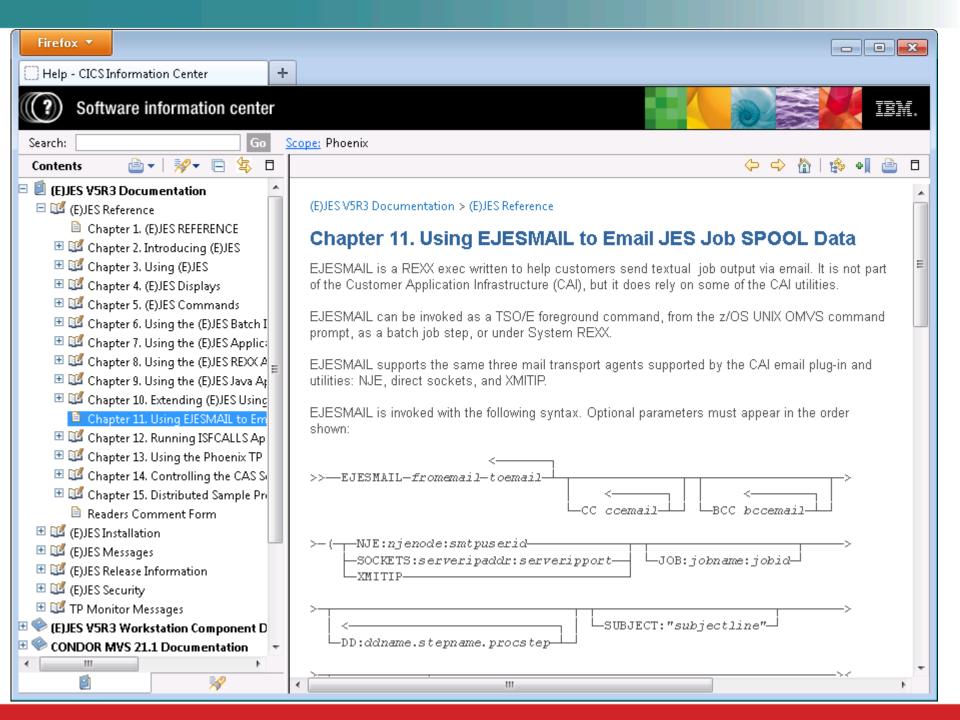
Documentation Distributed with V5R3

- Eclipse documentation plugins for use with IBM InfoCenter
- Adobe PDF documents
- HTML documents (generated from the Eclipse plugins)
- Each format is delivered as a single part in the new SEJEDOC target library
- New sample job EJES\$DOC used to copy the three parts to z/OS UNIX directories of your choosing

Format	File Name	
Eclipse	com.psi.ejes_doc.5.3.0.jar	
Adobe	ejes_pdf.5.3.0.zip	
HTML	ejes_html.5.3.0.zip	





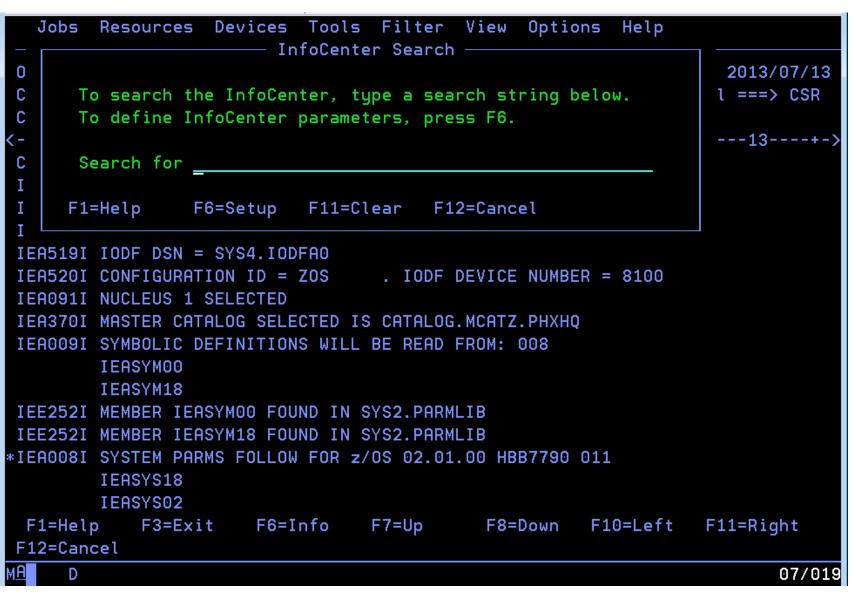




InfoCenter Search Integration Under ISPF

- F6 is now assigned to the INFO command
 - Previously F6 was assigned to the BOOK command
 - BOOK command moved to F18 (Shift+F6)
- INFO command with no explicitly-specified search words and cursor not positioned results in display of InfoCenter Search pop-up
 - Search words can be entered and search launched
 - InfoCenter parameters pop-up is requested by pressing F6 on InfoCenter Search pop-up
- INFO command with explicitly-specified search words or cursor positioned to word within scrollable area initiates an InfoCenter search





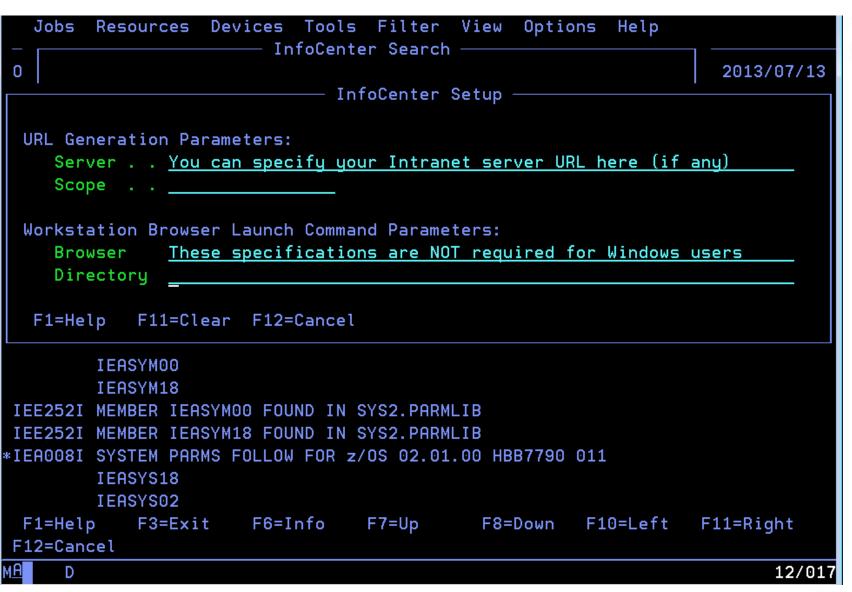




InfoCenter Setup Pop-up

- Accessed via F6 from InfoCenter Search pop-up
- Specify URL of InfoCenter server. If not specified, defaults as follows based upon the current z/OS release:
 - http://publib.boulder.ibm.com/infocenter/zos/v2r1
 - http://publib.boulder.ibm.com/infocenter/zos/v1r13
 - http://publib.boulder.ibm.com/infocenter/zos/v1r12
 - http://publib.boulder.ibm.com/infocenter/zos/v1r11
- Scope defaults to All Topics
- Browser name and directory not required for Windows









InfoCenter Search Behavior

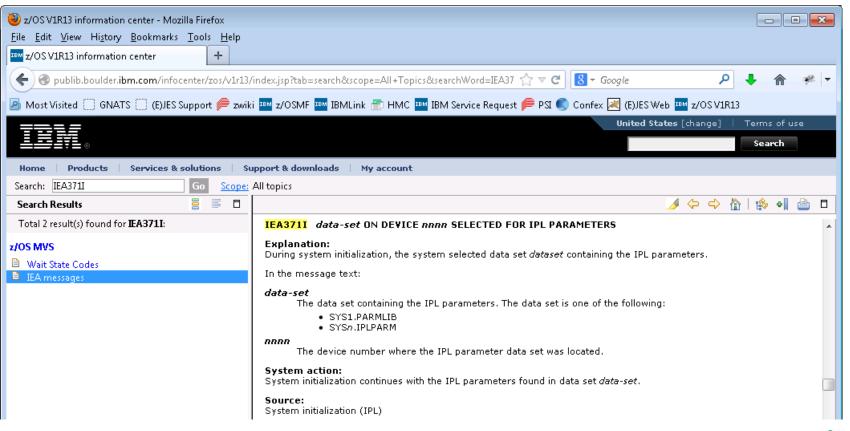
- If ISPF Workstation Agent (WSA) connected, web browser is launched on local workstation to initiate the InfoCenter search
 - Connect WSA using WSCON command
 - Do not confuse WSA with ISPF C/S; GUI not required
- If WSA not connected, URL is displayed on 3270 screen
 - Most modern 3270 emulators provide "hot spot" support for URLs displayed within the 3270 presentation area
 - Clicking on the URL usually results in a launching of web browser to process the URL





InfoCenter Search URL

http://publib.boulder.ibm.com/infocenter/zos/v1r13/index.jsp?tab=search&scope=A ll+Topics&searchWord=IEA371I





BookManager Support Enhanced (Ironically)



- Set default bookshelf... pull-down choice removed.
- Previously, BOOK command with no explicitly-specified search terms or cursor positioned to word within scrollable area, invoked BookManager READ stopping at the default bookshelf.
- Support enhanced to stop at new BookManager Search pop-up (analog of InfoCenter Search pop-up.) F6 now displays the new Default Bookshelf pop-up.
- If default bookshelf not established, z/OS Messages and Codes bookshelf appropriate to the current z/OS release is used (e.g., EZ2MZ940 used for z/OS 1.13).





```
Resources Devices Tools Filter View Options Help
 Jobs
                         BookManager Search
                                                                     /07/13
     To search the default bookshelf, type a search string below.
С
                                                                     > CSR
     To define the default bookshelf, press F6.
     Search for ____
Ι
    F1=Help F6=BkShelf F11=Clear F12=Cancel
IEA519I IODF DSN = SYS4.IODFA0
```







(E)JES Web Technology Preview

- (E)JES Web is a new, browser-based interface to (E)JES.
 The initial release, which we currently classify as a technology preview, allows many basic (E)JES functions to be performed.
- Phoenix intends to re-architect, enhance, and federate this technology over time. It is our intent to create a de-Facto interface to (E)JES for users that are uncomfortable navigating traditional 3270 interfaces.
- The RESTful API backing this technology will provide a framework for the creation of Eclipse plug-ins, mobile applications, and other web services clients.



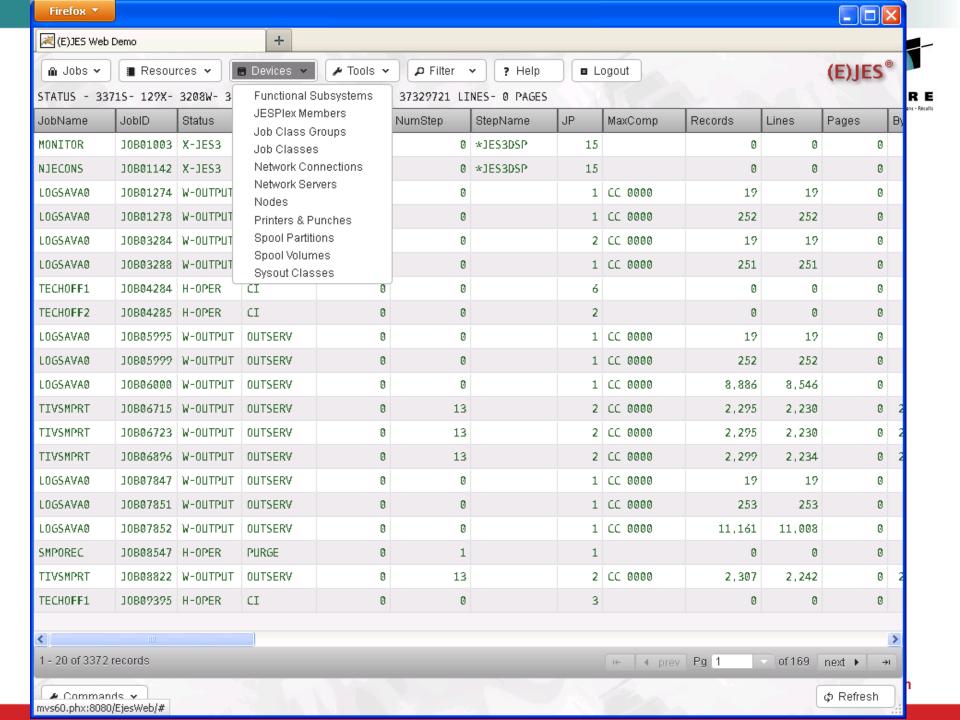


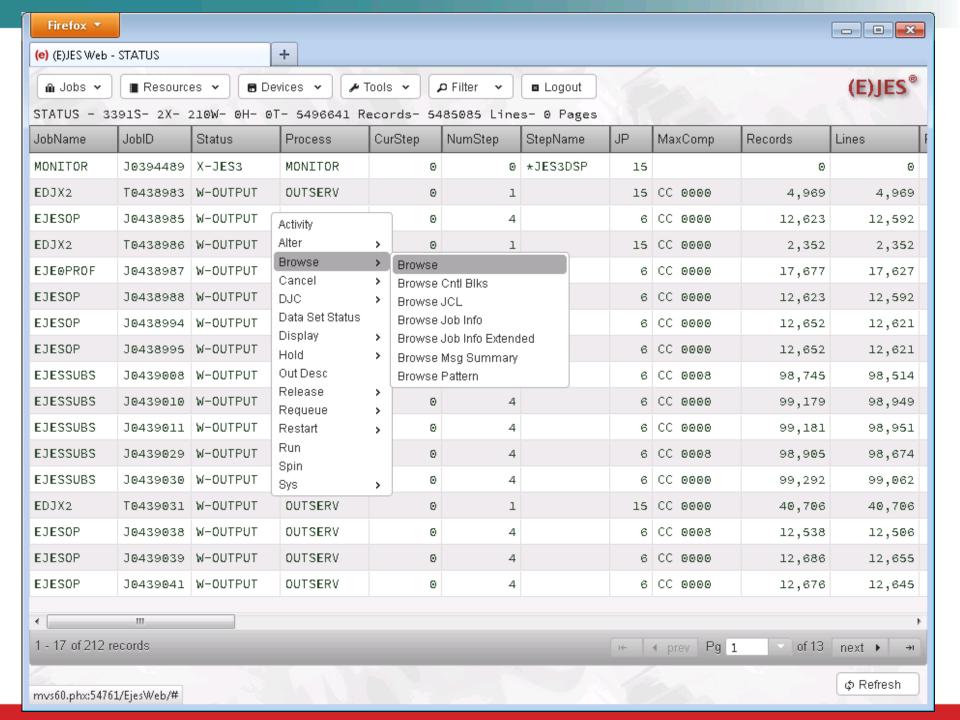
(E)JES Web Technology Stack

- In addition to the wealth of technologies already inherent in the (E)JES base product, (E)JES Web leverages the following core technologies:
 - Ajax
 - C++
 - CSS3
 - HTML5
 - Java
 - Javascript

- JNI
- Jquery
- JqueryUI
- JSON
- JSP
- REST
- Non-core technologies include Apache Tomcat (currently used as the web server), Ifragistics igGrid, HTTP and others.







The Updated (E)JES "Solar System" INTERACTIVE TSO Users •ISPF application •TSO cmd processor (TPUT) **PHOENIX** •Thread-safe CICS transaction Batch Job **Users** •Phoenix TP Monitor transaction (No Language) •Windows PC via (E)JES workstation component client/server **TSO** •Web interface under Apache Tom cat **BATCH ISPF** Cmd Proc Commands **CLIST Language PROGRAMMABLE** •TSO cmd processor (GET/PUTLINE) **PHOENIX TSO** •MVS program (QSAM GET/PUT) •EJESREXX environment for REXX **CLIST** •ISFCALLS environment for REXX **EJESTSO** (run SDSF REXX execs!) Windows **BATCH** •EJESJAVA for Java programs •EJESAPI callable from HLASM. **CLIST PC** Users C/C++, COBOL, PL/I, etc. (REXX and Java interfaces are API exploiters.) E)JES **CICS Users EJESCICS EJESLNK EJWSMVS EJWS4WIN EJESCICI CICS EJESREXX REXX Language EJESAPI HLASM TSO EJESISFX REXX** Console (ISFCALLS) C/C++ **Operators IRXJCL EJESJAVA COBOL REXX** High Level **SYSREXX** Languages PL/I **WWW Users Apache** JAVA **Tomcat** Server in Boston Complete your sessions evaluation online at SHARE.org/BostonEval



(E)JES Web Deployment

- Each running instance of (E)JES Web must be deployed.
- A sample JCL procedure is provided. The same procedure can be shared by multiple deployments.
- Batch JCL is provided to create a small, read/write zFS file system for running an instance.
- A z/OS UNIX OMVS shell script prompts for eight basic parameters—most of which default naturally.
- The script populates the target instance file system and creates a parmlib member unique to the instance.
- An (E)JES Web instance typically runs as a started task.
- An instance is stopped via the MVS STOP command.





Improved Control of Settings Notices

- There are three settings notices that can appear on scrollable displays: Filter, Option and View. In prior releases, you could choose to display all of them (ON) or none of them (OFF).
- The DISPLAY command and Options panel have been updated to allow specification of a string consisting of the characters F, O and V (in any order) that indicates which settings notice(s) you would like to see displayed.
 - But you cannot choose the order in which lines are displayed.
- The value ON is the same as F, which displays the Filter notice only. This represents a change in behavior from prior releases where ON caused all three settings notices to be displayed.

```
Jobs Resources Devices Tools Filter View Options Help
STATUS
        3,493S 141X 2,411W 35H 0T 54,935,116 Records Row 86 of 2587
Command ===> display
                                                            Scroll ===> CSR
FILTER=MaskChar=*%, PSelect=(JName=(/AUTO*) Type=ALL), XSelect=(), Filter=()
Cmd JobName JobID
                     Status
                             Process StepNum StepName JP MaxComp Records
   BKUPLOCL J0451546 W-OUTPUT OUTSERV
                                            1
                                                        2 CC 3072
 Jobs Resources Devices Tools Filter View Options Help
STATUS
        3,493S 141X 2,411W 35H OT 54,935,116 Records
                                                              Row 86 of 2587
Command ===> display v
                                                            Scroll ===> CSR
VIEW=Arrange=DEFAULT, Detail=MIN, Sort=TIME/D, TopFind=OFF
Cmd JobName JobID
                             Process StepNum StepName JP MaxComp Records
                     Status
                                                        2 CC 3072
   BKUPLOCL J0451546 W-OUTPUT OUTSERV
                                            1
 <u>Jobs Resources Devices Tools Filter View Options Help</u>
        3,493S 141X 2,411W 35H OT 54,935,116 Records Row 86 of 2587
STATUS
Command ===> display ofv
                                                            Scroll ===> CSR
FILTER=MaskChar=*%, PSelect=(JName=(/AUTO*) Type=ALL), XSelect=(), Filter=()
OPTION=CRDelay=1, Cursor=(Retain=ON, Select=OFF), Confirm=ON, DateFmt=YYYY/MM/DD,
OPTION=NumChar=',.',OClass=' ',OvrTupe=ON,SelCmd=S,Snap=ON,TopSel=OFF,WClass=P,
OPTION=XSelect=NOSAVE
VIEW=Arrange=DEFAULT, Detail=MIN, Sort=TIME/D, TopFind=OFF
Cmd JobName
            JobID
                     Status Process StepNum StepName JP MaxComp
                                                                   Records
```

2 CC 3072



BKUPLOCL J0451546 W-OUTPUT OUTSERV 1



ISPF Panel Title Line Overlay Protection

- ISPF users can request that up to 17 bytes of sessionidentifying information be superimposed at the start of the title line for every panel displayed by ISPF. This information includes system name, userid, panel id and/or screen name. In the past, these identifiers could obscure important information being displayed by (E)JES.
- (E)JES will now shift its title line information to the right, as needed, to make room for these identifiers. Right-side truncation of the title line data might occur.

```
<u>Jobs Resources Devices Tools Filter View Options Help</u>
            T0451279 <
MVS60 EDJX1
                                      .JESMSGLG>
                                                         Line 1 of 142
Command ===>
                                                       Scroll ===> CSR
Current Find Text: IPL
                                                        Dataset 1 of 3
   ----1----5----6----
IAT6140 JOB ORIGIN FROM GROUP=ANYLOCAL, DSP=SR , DEVICE=STC
       ---- IAT6853 THE CURRENT DATE IS SATURDAY, 20 JUL 2013
```



z/OS UNIX Extract Enhancements

- If the path name input field on the z/OS UNIX Extract
 Parameters panel specifies a directory, then the file
 system is interactively traversed. If it specifies a full path
 and file name, the extract occurs immediately.
- In previous releases, the path name input field was replaced with the full path and file name of a selected file. This meant that subsequent z/OS UNIX extract operations would always write to the same file unless the path name input field was manually altered by the user.
- The path name input field on the z/OS Extract Parameters panel is no longer updated during traversal of the file system except when the L line command is issued. Other line commands and operations do not update the path name input field.



Batch Extract Enhancements

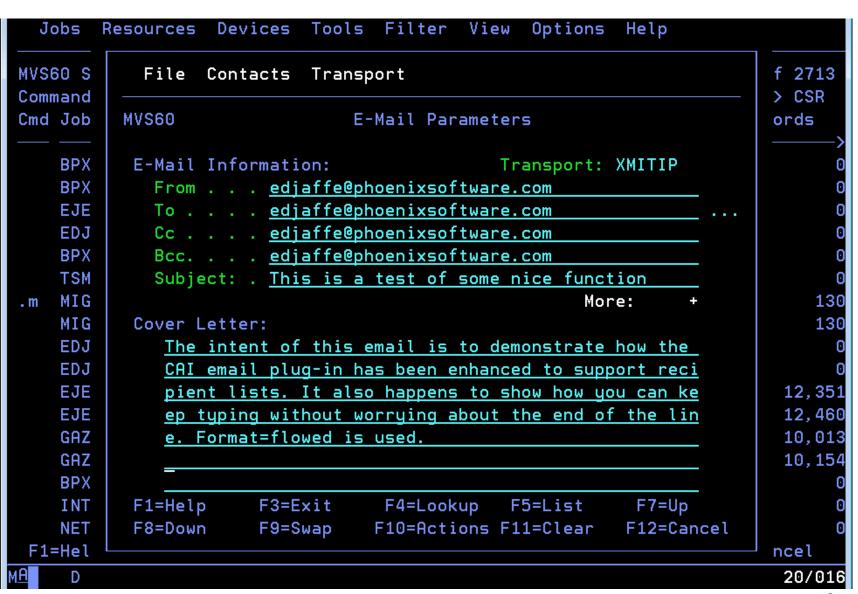
- New KEEPOPEN option for non-directed batch extract (i.e., to the EJESEXT DD name) allows many jobs to be sent to the same output file without incurring the overhead of OPEN/CLOSE for each extract operation
- New MARK option for extract operations inserts a unique, yet human-readable, identification record to help postprocessors detect the boundary between the results of two different extracts to the same target location
 - The mark record contains ____(E)JES_EXTRACT_MARK___
 with JOBNAME=jobname,JOBID=jobid appended if job
 information is present. Variable-length values are used so
 that no embedded blanks appear in a mark record.
 - Although technically MARK works for all extract operations, it should be particularly useful with KEEPOPEN



CAI Email Plug-in Recipient Lists

- The CAI plug-in for email (EJES#RM) has been enhanced to support recipient lists for To: and Cc: addresses. Bcc: addresses have been added as well.
 - These new limits are considerably more flexible than the old limits of one, one, and zero respectively ©
- Pressing F5 with the cursor positioned to the To:, Cc:, or Bcc: line invokes the recipient list dialog for the selected list
- On the main dialog, only the first email address from the list is shown. An ellipsis is displayed when a list is present.









Recipient List Dialog

- The dialog supports I (insert) and D (delete) line commands.
- A recipient may be hand-typed or selected from the address book. F4 invokes the address book dialog and pop-up just as it does from the main email dialog.





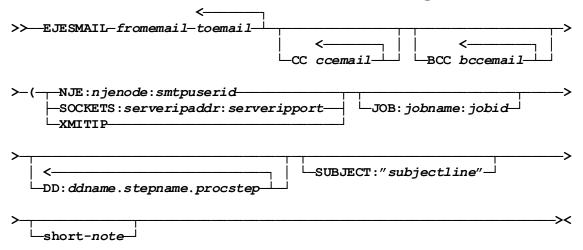
Batch Utility to Email Jobs and Data Sets

- EJESMAIL is a new REXX exec written to help customers send textual job output via email. It is not part of the Customer Application Infrastructure (CAI), but it does rely on some of the CAI utilities.
- EJESMAIL can be invoked as a TSO/E foreground command, from the z/OS UNIX OMVS command prompt, as a batch job step, or under System REXX.
- EJESMAIL supports the same three mail transport agents supported by the CAI email plug-in and utilities: NJE, direct sockets, and XMITIP (from Lionel Dyck).
- EJESMAIL can be a convenient way for a batch job to email some or all of its own output.





EJESMAIL Invocation Syntax



- Operands must appear in the order shown
- njenode and smtpuserid default to the current node and SMTP respectively
- jobname and jobid default to the current running job
- stepname is used only when ddname is not unique; procstep is used only when ddname.stepname is not unique.
- short-note is flowed as a simple paragraph—ideal for cell phone email
- The NOTEDD DD statement is used to provide the text of a more formal cover letter



EJESMAIL Usage Examples

```
//**************
//* Email Output of our Job to JOEUSER */
//************
//EMAILJOB EXEC PGM=IKJEFT01
//SYSEXEC DD DSN=EJES.SEJEEXEC,DISP=SHR
//SYSTSPRT DD SYSOUT=*
//SYSTSIN DD *
EJESMAIL mysystem@mycompany.com joeuser@mycompany.com +
CC: edjaffe@phoenixsoftware.com paulscott@phoenixsoftware.com +
(NJE Subject: "Output from &JNA" +
Please find attached the output from job &JNA. Thanks!
/*
//*************
//* Email LISTVTOC Output to JOEUSER
//*************
//EMAILRPT EXEC PGM=IKJEFT01
//SYSEXEC DD DSN=EJES.SEJEEXEC,DISP=SHR
//SYSTSPRT DD SYSOUT=*
//SYSTSIN DD *
EJESMAIL mysystem@mycompany.com joeuser@mycompany.com +
(XMITIP DD: SYSPRINT Subject: "Result of LISTVTOC command"
//NOTEDD
         DD *
Dear Joe,
The LISTVTOC output you requested is attached. We hope it provides you
with the enlightenment you seek.
Thanks,
The Management
/*
```





Support CMF for ACPLEX=SYS

- Previously, we documented that ACPLEX=SYS worked for IBM's RMF but not for BMC's CMF.
- Our (erroneous) assumption was that the required support was missing from CMF. In fact, the problem was that CMF abended internally with a too-small initial work area size.
- APAR BCM0849 from BMC as well as a somewhat larger initial work area size from (E)JES allowed CMF to operate properly.
 - PTFs available for CMF 5.7, 5.8, and 5.9 are BQM0852, BQM0853, and BQM0854, respectively.
- In addition, msgEJES412 was enhanced to display the service reason code. This should help diagnose further RMF/CMF issues without requiring SLIP dumps or traces.





API Updates

- Tabular row attributes (active emphasis, metafilters colorization, etc.)
- Line commands array
 - Command value, text description, intended function
- New environment variables:
 - JES member name, job name, jobid, userid
- Note: As requirements are recognized, they are implemented throughout the entire API stack:
 - EJESAPI and EJESAPI4 (HLASM, C/C++, etc.)
 - EJESREXX (REXX)
 - EJESJAVA (Java)
 - (E)JES Web has become a major API exploiter.





Self-describing SMF Record Format

- Since inception, the (E)JES SMF record has been a fixedformat structure.
- You can now optionally use a new, self-describing format that uses "triplets" to contain offsets, lengths and counts of the various sub-segments that comprise the record.
- The advantage of the new format is that existing segments can be extended and new segments can be added nondisruptively.
- Your choice is specified via the SMFREC installation options parameter. The default is the original 'Format 0' record. You specify 'Format 1' to get the self-describing records.





Date Format Consistency in SMF Record

- There are two date fields in the (E)JES SMF record: ESMFDATE and ESMFDBGN. The first is part of the SMF record header; its format follows the standard set forth by SMF: 0cyydddF. The second has, until now, always been in (E)JES internal date format: 0yyyyddd.
- This inconsistency created a challenge for customers that tried to post-process (E)JES SMF records.
- Beginning with this release, both date fields will use the standard SMF date format.
- Note: MXG 30.09 and higher automatically recognizes and handles both old and new date formats in the (E)JES SMF record.





Miscellaneous Updates

- Support for z/OS 2.1 JES3 dynamic spool removal
 - This is a major feature, but there's not much to show, so it shows up as "miscellaneous." Suffice it to say that (E)JES won't abend when a SPOOL volume is removed in z/OS 2.1.
- Function key to clear input on pop-up windows (F11)
- New CRETAIN=NEVER setting
 - Forces cursor back to the command line in all cases, even when returning from a sub-function. (CRETAIN=NO keeps the cursor on the row when returning from a sub-function.)
- SRESET command renamed to PRESET. SRESET will continue to work for the foreseeable future.





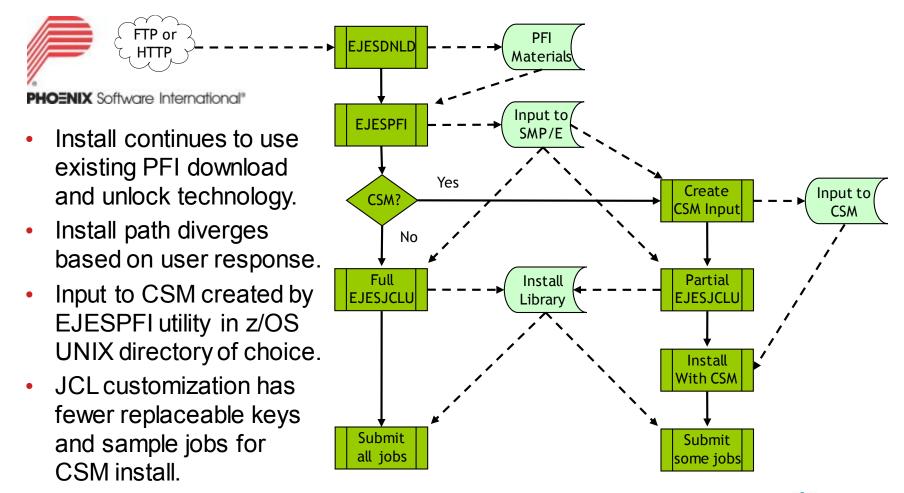
New Security Extensions User Exit

- New user exit EJESUX14 is designed to provide various security extensions. Currently only one function is provided: <u>Data Set Browse Authority</u>.
- The exit gets control just before security checking is performed when browsing (or otherwise displaying the contents of) a SPOOL data set.
- Return codes can choose to always accept, always reject, or continue with normal security processing.



Installation via Chorus Software Manager from CA Technologies







```
------ PFI Installation Utility ------
Command ===>
                               Transform _
                       Transform PFI Installation
                       Materials into SMP/E Input
SMP/E Data Set Parameters:
   Data set prefix ===> EDJX1.SMPE530
                                 (Volume serial or NONE)
   Volume serial ===> NONE
Local Work Files Parameters:
   Your TSO/E Prefix ===> EDJX1
   Volume serial ===> NONE
                                  (Volume serial or NONE)
CA Chorus Software Manager Choice:
   Install via CSM? ===> YES
                                  (YES or NO)
Press HELP for help with this utility.
F1=Help
         F3=Exit F12=Cancel
                                                                   02/015
```



```
Install JCL Customization Utility -----
                                                                          V5R3
Command ===>
                                                                   More:
Customization Library Parameters:
  Data Set Name
                         ===> EDJX1.SMPE530.INSTALL
Target Library Parameters:
  Dsname Prefix
                         ===> EJES
                                                            Fleven
                         ===> /usr/lpp/ejes
  z/OS UNIX Path
                                                           prompts
                                                         disappear for
Maintenance Data Set Parameters:
                                                          CSM install
  Dsname Prefix
                         ===> EJES
Documentatation Parameters:
   Adobe Document Path ===> /local/PDFdocs
  HTML Document Path
                         ===> /local/HTMLdocs
  Eclipse Plugins Path
                         ===> /local/infocenter/eclipse/plugins
System Data Set Parameters:
  JES Library Prefix
                         ===> SYS1
  TCPIP Library Prefix
                         ===> TCPIP
CICS Profile Data Set Parameters:
 F1=Help
           F3=Exit
                      F12=Cancel
                                                                         02/01
```





PTF and USERMOD Transformation

- For traditional install, PTFs and USERMODs are delivered as batch JCL.
- When using CSM install, these members are transformed into pure SMP/E input and renamed.
 - PTFs renamed from EJES\$xxx to PTFCxxx
 - USERMODs renamed from EJES\$xxx to UMODxxx

```
//EJES$LIC JOB 1, 'LICENSING',
... (JECL and comments)
//PROCLIB JCLLIB ORDER=EDJXADM.SMPE530.INSTALL
// EXEC PROC=EJES$SMP
//SMPCNTL DD *
 SET BDY(GLOBAL) OPTIONS(EJESGOPT) .
 RECEIVE SYSMODS LIST .
 SET BDY (EJESTZN) OPTIONS (EJESGOPT) .
APPLY S(EJESLIC) REDO C(ALL) .
//SMPPTFIN DD *
++USERMOD (EJESLIC) REWORK (2013069) .
++VER(Z038) FMID(QEJ5300) .
++SRC (EJESLIC) .
* REL=V5R3 GRACE=2013-01-01
EJESGLIC DATA=001307508CD994D2F181590816EF82FF
 EJESGLIC DATA=C4C4E0
EJESGLIC CKSUM=0000021813
END ,
++USERMOD (EJESLIC) REWORK (2013069) .
++VER(Z038) FMID(QEJ5300) .
++SRC (EJESLIC) .
* REL=V5R3 GRACE=2013-01-01
*---+---4----5
EJESGLIC DATA=001307508CD994D2F181590816EF82FF
EJESGLIC DATA=C4C4E0
EJESGLIC CKSUM=0000021813
END ,
```

```
Some are
                    Some
                                                                         transformed
                 members are
                                                                        and renamed
                   not used
MVS60 ----- PFI Installation Utility ----- V5R3
Command ===>
                                    CSM
                        CA Chorus Software Manager
To use CA Chorus Software Manager to perform the SMP/E install, supply the
                                                                                     24/008
 following parameters and press the ENTER key. The Java and SMP/E class
 paths are needed only if ICSF is not available.
 CA Chorus Software Manager Install Parameters:
   Output path ===> /u/edjx1
   Work path ===> /tmp/edjx1/EJES530
   Java path ===> /usr/lpp/java/J6.0_64/
   SMP/E path ===> /usr/lpp/smp/classes
 Press ENTER to create input to CA Chorus Software Manager.
 Press the END key to continue without creating this file.
                    F12=Cancel
F1=Help
           F3=Exit
                                                                     02/015
```



```
MVS60 ----- PFI Installation Utility ----- V5R3
Command ===>
                              Congratulations! _
                       You have completed all of the
                         early installation steps!
                                                                                       24/008
You should now be ready to use CA Chorus Software Manager to install
 (E) JES. Please continue with Chapter 7. Install (E) JES Using CA Chorus
Software Manager in (E) JES V5R3.0 Installation to perform the remainder
of the product installation.
A copy of your customization library in NETDATA format has been included
 with the CSM package, making it available for post-installation tasks if
you install on another system. Use member EJES$CSX to retrieve this data.
```



02/015

F3=Exit

F12=Cancel

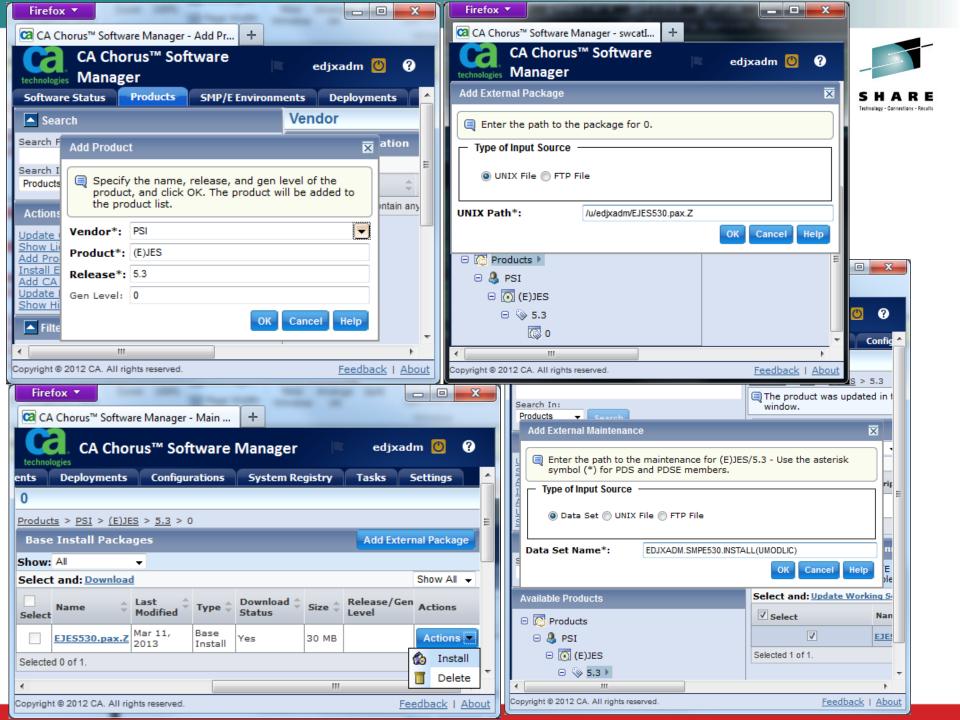
F1=Help



CSM Checklist

- Add (E)JES Product to CSM Software Catalog
- Add (E)JES Install Package (created by EJESPFI)
- Install the (E)JES Product
 - Three install choices:
 - Complete install all FMIDs
 - Standard install all FMIDs except Uppercase English
 - Custom install allows bypass of (E)JES Java and Web components as well as Uppercase English feature
 - You will be prompted for data set HLQs, volumes, etc.
 - If there are any seemingly "redundant" prompts between CSM and EJESJCLU, be sure to specify the same value.
- Install customization USERMODs like normal maintenance







Performance Study





Importance of a Performance Value-Add

- One key goal of any good ISV software product is to try to provide a value-add in the area of performance. This has been one of our primary areas of focus since 1978.
- Back then, there were no specialty engines. Writing wellperforming code was the only way to save run-time "hard dollars" for customers.
 - There was/is also the issue of increased user productivity through a rich feature set. Such gains, while substantial, are more difficult to quantify with benchmarks.
- CPU savings is our most important objective. VWLC-style pricing makes this even more important today, especially for products that might run during the afternoon peak.
- I/O performance savings is a close second.





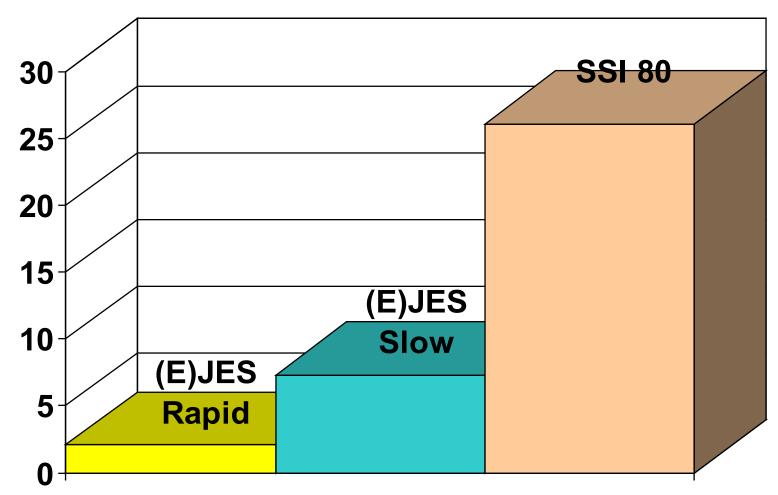
JES2 CPU Performance Quantified

- Competing products tend to rely on the most resourceintensive interface available: the JES-provided SSI 80.
- Our internal benchmark testing against the most readilyavailable JES2 SSI 80 exploiter showed it needed 3.5x as much CPU as (E)JES to refresh the JES2 HOLD display pressing <Enter> slowly, once every five seconds.
- Pressing <Enter> as rapidly as possible yielded a 12.5x
 CPU requirement!
- The benchmark was run on an idle 2098-D04 running z/OS 1.13.



JES2 CPU Performance Quantified: Between 3.5x and 12.5x





JES2 Held Output Display



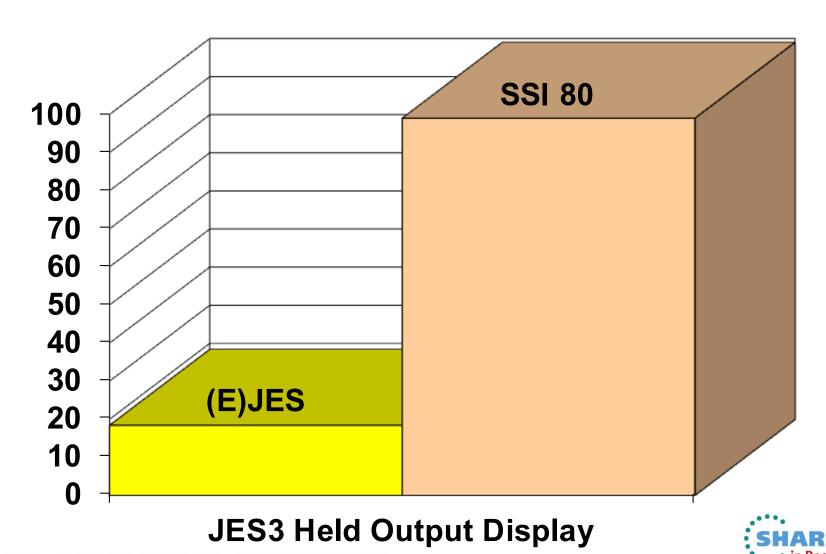


JES3 CPU Performance Quantified

- JES3 benchmarking is slightly more difficult than JES2, because a significant amount of SSI 80 processing runs as high-priority work in the JES3 global address space.
- All JES3 activity must be quiesced (so that JES3 is waiting) and its CPU utilization carefully measured.
- Our internal benchmark testing against the most readilyavailable JES3 SSI 80 exploiter showed it needed 5.4x as much CPU as (E)JES to refresh the JES3 HOLD display.
- This includes both CPU consumed by the TSO user and CPU consumed by the high-priority JES3 address space.
- Rapidity of refreshes makes no difference for JES3.
- Like the previous test, the benchmark was run on an idle 2098-D04 running z/OS 1.13.



JES3 CPU Performance Quantified: 5.4x





Performance Differences in Perspective

- The benchmark savings occur using apples-to-apples measurements with TCB-mode only, GCP execution.
- Customers with zIIP processors will observe an entirely different situation.
- Not only does (E)JES use far less CPU than any SSI 80 exploiter, but nearly all of it is eligible for redirection to zIIP.
- In the case of SSI 80, none of the CPU resources are eligible for zIIP redirection—even for customers with zIIP processors available.

JOEUSER 00:01.01 00:16.92 00:15.77 00:00.97 00:00.00 DIFFERENCE





Questions?



