

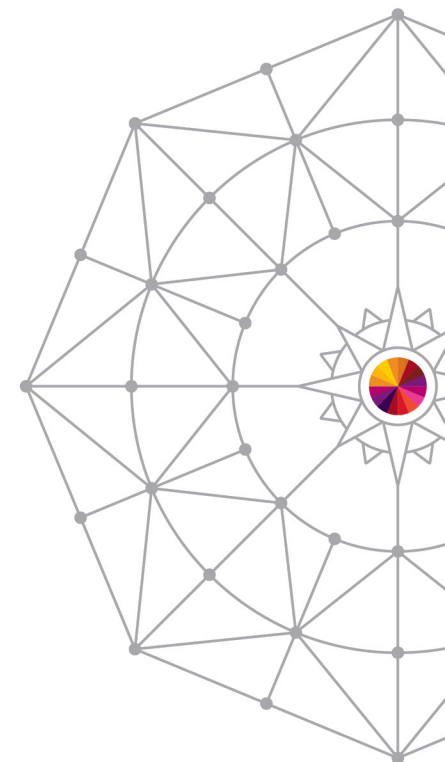
# (E)JES Update

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*Phoenix Software International*

*5 August 2014*

*Session Number 16262*



#SHAREorg



# New Release Support Policy Better Aligns with z/OS Release Strategy

- Prior to April 2014:
  - Release stabilized 3-6 months after becoming N-2
  - Diagnostic technical support (i.e., dump analysis) ends two years after Release Stabilization.
- Regular, annual releases meant these events occurred 2 ½ and 4 ½ years after GA respectively.
- Beginning April 2014:
  - Release stabilized three years after GA.
  - Diagnostic technical support (i.e. dump analysis) ends four years after GA.

# Compatibility Matrix

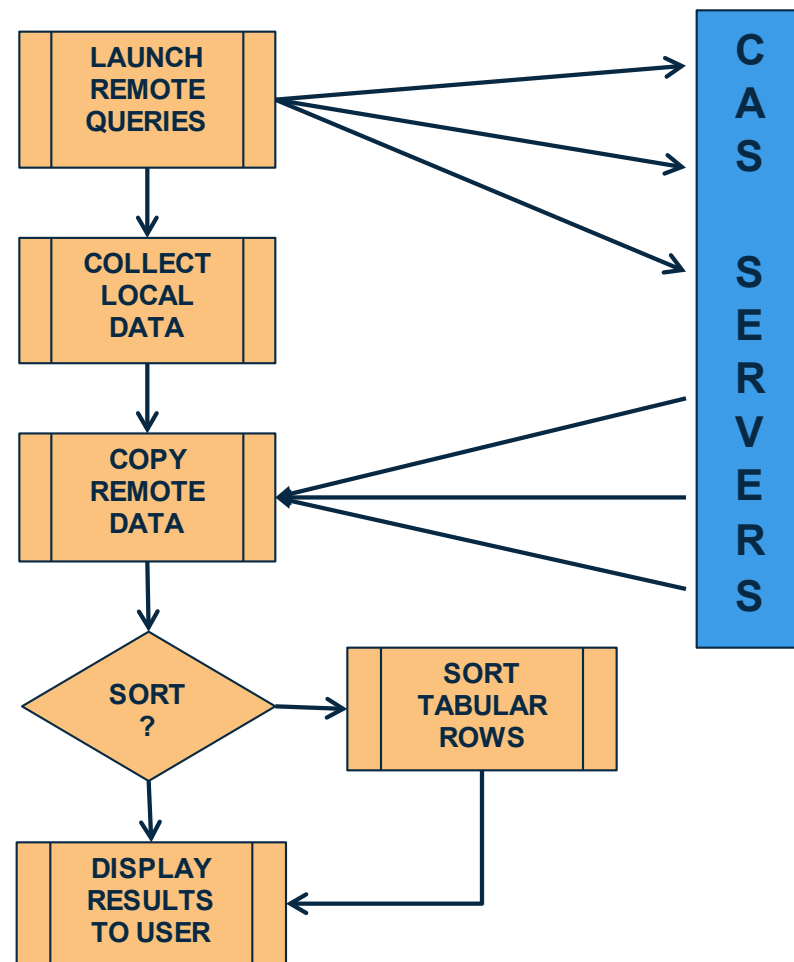
Operating System	V5R4 09/14	V5R3 09/13	V5R2 09/12	V5R1 09/11
z/OS 2.1	JES2/JES3	JES2/JES3	JES3	
z/OS 1.13	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.12	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.11	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 1.10	JES2/JES3	JES2/JES3	JES2/JES3	JES2/JES3
z/OS 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
z/OS 1.6				JES2/JES3

- V5R4 planned GA next month.
- V5R3 was released September 2013.
  - New release required to support z/OS 2.1 JES2
  - z/OS 2.1 JES3 support rolled back to V5R2.
- Based on the new policy, V5R3 will not be stabilized until September 2016. 😊
- Note: z/OS 1.12 goes out of IBM support beginning 4Q14.

# (E)JES V5R4 Highlights

# Asynchronous Multisystem Displays

- Remote queries are launched. CAS collects and readies the data.
- Local data is collected.
- Remote data is retrieved from CAS.
- Optional sorting of tabular rows occurs as normal
- Side effect: STD sort now always places current system first.



## 64-bit Addressing Mode

- Most (E)JES programs will run in 64-bit addressing mode.
- (E)JES will be among a very select few HLASM-authored z/OS software products that can make this claim.
  - Perhaps the only one?
- Areas of known virtual storage constraint will be moved above the 2G bar. Others will move as needed.
- User exits will continue to be given control in 31-bit mode (via BASSM) and all data areas passed to them will still reside below the 2GB bar. Return is now via BSM.
  - A standard 144-byte F4SA save area is passed and the distributed user exit linkage has been updated to use it.
  - This allows user exits to use “grande” instructions and/or switch to 64-bit mode if they so choose. Not required.

# Parallelism

- Much has been said about the physics of existing chip technology having reached the point where single core speeds will no longer increase as they have done historically.
- We have implemented some new highly-parallel, algorithms to the parts of our code that are the highest CPU consumers. The results so far are encouraging!
- For example, we observed that the clock time required for **Expensive Task X** was reduced by 64% by splitting the work across three dispatchable units (SRBs).
- Moore's Law be Damned!! ?

## (E)JES Web Production Release

- Performance should now satisfy users accustomed to the response time characteristics of the (E)JES ISPF interface.
- Any operation that processes more than one screen worth of data e.g., sort, search, etc. are all now performed at the host using (E)JES API facilities.
- No more reliance on Infragistics igGrid UI.
  - Always intended as a temporary technology bridge.
  - No more tabular pages concept. Now everything is line/row oriented, just like other (E)JES interfaces.
- Vertical scroll processing is now fully virtualized.
- Time-oriented browser support (OPERLOG).
- Command pop-up when slash key pressed.



# API Improvements

- New flag (EJESApiUPHIDDENTC) requests tabular columns array include “hidden” columns (those with zero-length title).
- A new indicator (EJESApiTCScroll) set when a tabular column can scroll horizontally. This lets the caller know where the scroll point is positioned without requiring use of the ARRANGE display.
- EJESApiUlgCART added to provide Command and Response Token (CART) of last command issued.
  - Can be matched up with lines on ULOG to obtain a complete command response.
- All commands now generated with CART.
  - Previously, only commands for which an in-line command response was expected – *and* CRDELAY>0 – were assigned a CART.

# Group ARRANGE by Column Name

- Some (E)JES tabular displays have grouped columns.
  - Multiple contiguous columns that appear under a single title.
- Column groups can be moved on the ARRANGE dialog.
- Previously, any attempt to use the ARRANGE command to move a grouped column by name would generate an error message. ARRANGE using the title was required.
- In this release, any grouped column moved by the ARRANGE command will move the entire group.

```

Help                               Arrange
-----
ARRANGE STATUS (MIN)               Row 1 of 45
Command ==>                         Scroll ==> CSR
Cmd Column  Title                   Width
-----
JNAME       JobName                   8
JTYPJID     JobID                       8
/           /                           0
STATUS      Status                     8
PROCESS     Process                     8
CURSTEP     StepNum(1)                       3
NUMSTEP     StepNum(2)                       3
SNAME       StepName                     8
  
```

# QUERY AUTH DISPLAY

- QUERY AUTH listed authorized commands, but provided no understanding of menu structure.
- This release implements an optional DISPLAY keyword that will return the menu structure and commands within.

```

Jobs Resources Devices Tools Filter View Options Help
2014/07/30 (2014.211) (E)JES Menu MVS60 V5R4.0 15:56
Command ==> QUERY AUTH_
AUTH=ABEND,ACTIVITY,CLASS,DEST,DJC,DUMP,DYNAMIC,ENCLAVE,FSS,GROUP,HCHECK,HOLD,
AUTH=INPUT,JCLASS,JESPLEX,JNAME,LOG,MAX,MDS,MIN,NATX,NETCONN,NETSERV,NJE,NJOB,
AUTH=NODE,NSTC,NTSU,ORIGIN,OWNER,PREFIX,PRINTER,PSTATUS,REFRESH,RESOURCE,
AUTH=SCHENV,SCLASS,SPART,SPVOL,STATUS,SYSCLS,SYSNAME,SYSREQ,TRACE,ULOG,USER,
AUTH=WRITER,YATX,YJOB,YSTC,YTSU,ZERO
Input      Input queue          NETConn   Network connections
MDS        Job setup queues        NETServ   Network servers

```

```

Jobs Resources Devices Tools Filter View Options Help
2014/07/30 (2014.211) (E)JES Menu MVS60 V5R4.0 15:47
Command ==> QUERY AUTH DISPLAY_
JOBS=ACTIVITY,DJC,HOLD,INPUT,MDS,NJE,PSTATUS,STATUS,WRITER,ZERO
RESOURCES=ENCLAVE,HCHECK,LOG,RESOURCE,SCHENV,SYSREQ
DEVICES=CLASS,FSS,GROUP,JESPLEX,NETCONN,NETSERV,NODE,PRINTER,SPART,SPVOL,
DEVICES=SYSCLS
TOOLS=DUMP,ULOG
Input      Input queue          NETConn   Network connections
MDS        Job setup queues        NETServ   Network servers

```

# Initial LOG Horizontal Positioning

- The JES2 SYSLOG, JES3 SYSLOG and OPERLOG displays have “smart” routines for setting initial horizontal display position.
- An assumption was made that these routines need not be called when 3270 screen width was greater than 80; far left positioning was fine. That assumption was wrong. ☹️
- In this release, far left positioning is used only when the 3270 screen is wide enough to display all of the data.

```

OPERLOG PHXHQ                                     2014/07/31
Command ==>                                       Scroll ==> CSR
Current Find Text:
<--3-----+----4-----+----5-----+----6-----+----7-----+----8-----+----9-----+---10-----+>
12:13:06.48          00000281 IEA989I SLIP TRAP ID=X33E MATCHED.  JOBNAME=*UNA
12:13:12.55 ISZSMGR  00000090 ISZ0283I DROURK2 LU A60TCP60 signed off
12:13:12.56 ISZSMGR  00000090 ISZ0031I LU A60TCP60 terminated
15.55.19             *2283 ISTEYC200 - DYN COMMANDS MAY BE ENTERED
15.42.53             *2270 ISTEYC200 - DYN COMMANDS MAY BE ENTERED
15.33.03             *2260 ISTEYC200 - DYN COMMANDS MAY BE ENTERED
***** Bottom of Data *****

```

# Title Line Suppression for Tabular Extract

- Traditionally, three lines appear at the beginning of a tabular extract:
  - Line one is identical to the 3270 screen title line.
  - Line two contains the tabular column titles.
  - Line three contains the tabular column title underscores.
- Skipping over those three lines, adjusting record count, etc., can be inconvenient for post-processing programs.
- The new NOTITLES keyword on the EXTRACT command will suppress generation of these three lines.
- **Note:** previously, an empty data set was not possible. It is now.

# Rename of TP Monitor Parts

- Previously, TP Monitor parts started with GA, PHNX or CAM (their “native” names).
- That had the potential for conflict when multiple, unrelated products with TP Monitor componentry were co-located or co-executed.
- In this release, all TP Monitor parts shipped with (E)JES start with QPX.

# MXGEJES

- (E)JES produces SMF records, but provides no code to help analyze them. (Left as an exercise for the customer...)
- MXG is a product from Merrill Consultants used for analyzing z/OS SMF records. See: <http://mxg.com/>
- MXGEJES is “*a standalone MXG code execution*” that will help analyze and report the contents of (E)JES SMF records.
- (E)JES supports two SMF record formats:
  - Format 0 is the default.
  - Format 1 uses self-describing triplets for various sections of the record and is the format required by MXGEJES.
- MXGEJES comes with MXG (32.047+); not with (E)JES.
- Many thanks to Barry Merrill for his help in understanding how SMF records *should* be formatted, for authoring the MXGEJES tooling, and for making it available to our customers. 😊

# Highlights from the (E)JES V5R3 Press Release



# (E)JES V5R3 Press Release

- z/OS 2.1 Support
- EJESMAIL utility
- DASD Extract Cataloged Data Set List
- Filtering using system symbols
- InfoCenter Integration
- CA Chorus Software Manager Install/Service
- (E)JES Web Technology Preview

**“The timing of the availability and the functionality included in this release should provide a smooth migration path for customers interested in becoming early adopters of the first new version of IBM's flagship operating system for System z in over twelve years.”**

**– Ed Jaffe, Chief Technology Officer**

# z/OS 2.1 Support

- MinOSLvl column and W-OSLVL delay reason
- JES2 eight-character job classes and job class groups
- JES3 support for in-stream data in JCL procedures

```

INPUT      59S  0X  4W  55H                               Row 1 of 59
Command ==>                               Scroll ==> CSR
Cmd JobName  JobID      QTime      Spin System-Affinity TGNum TGPct MinOSLvl
-----
SYMBOLS  J0172445  12:18:24.62          1      .00 z 2.1.0
WAIT4REP J0138872  15:55:09.39  SPIN          1      .00
WAIT4REP J0138871  15:13:53.70          SBO          1      .00
LOGSAVA0 J0040007  00:01:00.77  SPIN SAO          3      .00
LISTCAT8 J0038176  16:48:16.62  SPIN          1      .00
F1=Help  F3=Exit  F7=Up    F8=Down  F10=Left F11=Right F12=Cancel
. . . . .
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
  
```

# EJESMAIL Utility

- 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 Usage Examples

```
//*****/
// * Email Output of our Job to JOEUSER */
//*****/
//EMAILJOB EXEC PGM=IKJEFT01
//SYSEXEC DD DSN=EJES.SEJEEEXEC,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.SEJEEEXEC,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

/\*

# DASD Extract Cataloged Data Set List

Jobs Resources Devices Tools Filter View Options Help

LETTRGEN J0483014 Extract Parameters DASD

Command ==> \_

For Extract to DASD Dataset:

Dataset name ==> THIS.CAN.NOW.BE.A.MASK.\*\*  
Disposition ==> OLD (OLD, MOD, NEW or SHR)  
Page eject ==> NO (YES or NO to force eject for each dataset)

For New DASD Dataset to be Created:

Management class ==> (Blank for default management class)  
Storage class ==> (Blank for default storage class)  
Volume serial ==>  
Unit name ==> (Blank for default unit)  
Data class ==> (Blank for default data class)  
Space units ==> (REC, BLK, TRK, CYL, B, KB, MB, or blank)  
Primary qty ==> (In above units)  
Secondary qty ==> (In above units)  
Record format ==> (\*' to derive from data)  
Record length ==>  
Block size ==>  
Expiration ==> (YYYY/MM/DD, YYYY.DDD, or DDDD for RETPD)  
Data set type ==> (LIB, PDS, BASIC, LARGE, EXTP, EXTR, blank)  
Extended attr ==> (NO, OPT or blank)

Use ENTER to perform extract; Use END command to cancel extract.

Dataset Mask: THIS.CAN.NOW.BE.A.MASK.\*\*

Row 1 of 3

Command ==>

Scroll ==> CSR

Cmd Dataset Name

Volume

EDJX1.THIS.CAN.NOW.BE.A.MASK.A

MVSNV1

EDJX1.THIS.CAN.NOW.BE.A.MASK.B

MVSNV1

s\_ EDJX1.THIS.CAN.NOW.BE.A.MASK.C

MVSNV1

\*\*\*\*\* Bottom of Data \*\*\*\*\*

# 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

```
Jobs Resources Devices Tools Filter View Options Help
2013/08/05 (2013.217) (E)JES Entry Panel MVS60 V5R3.0 10:45
Command ==> J=(A&SYSCLONE.B,&WDAY.*) _
Default Command ==>
More: +
Job Names/Nums ==> A60B ==> MON* ==> ==>
==> ==> ==> ==>
```

# 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.

```

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

```



# 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



```

Jobs Resources Devices Tools Filter View Options Help
----- InfoCenter Search -----
O
C To search the InfoCenter, type a search string below.
C To define InfoCenter parameters, press F6.
<-
C Search for _____
I
I F1=Help F6=Setup F11=Clear F12=Cancel
I

IEA519I IODF DSN = SYS4.IODFA0
IEA520I CONFIGURATION ID = ZOS . IODF DEVICE NUMBER = 8100
IEA091I NUCLEUS 1 SELECTED
IEA370I MASTER CATALOG SELECTED IS CATALOG.MCATZ.PHXHQ
IEA009I SYMBOLIC DEFINITIONS WILL BE READ FROM: 008
        IEASYM00
        IEASYM18
IEE252I MEMBER IEASYM00 FOUND IN SYS2.PARMLIB
IEE252I MEMBER IEASYM18 FOUND IN SYS2.PARMLIB
*IEA008I SYSTEM PARMS FOLLOW FOR z/OS 02.01.00 HBB7790 011
        IEASYS18
        IEASYS02
        F1=Help F3=Exit F6=Info F7=Up F8=Down F10=Left F11=Right
        F12=Cancel
MA D

```

2013/07/13  
 1 ==> CSR  
 ---13-----+-->

# 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

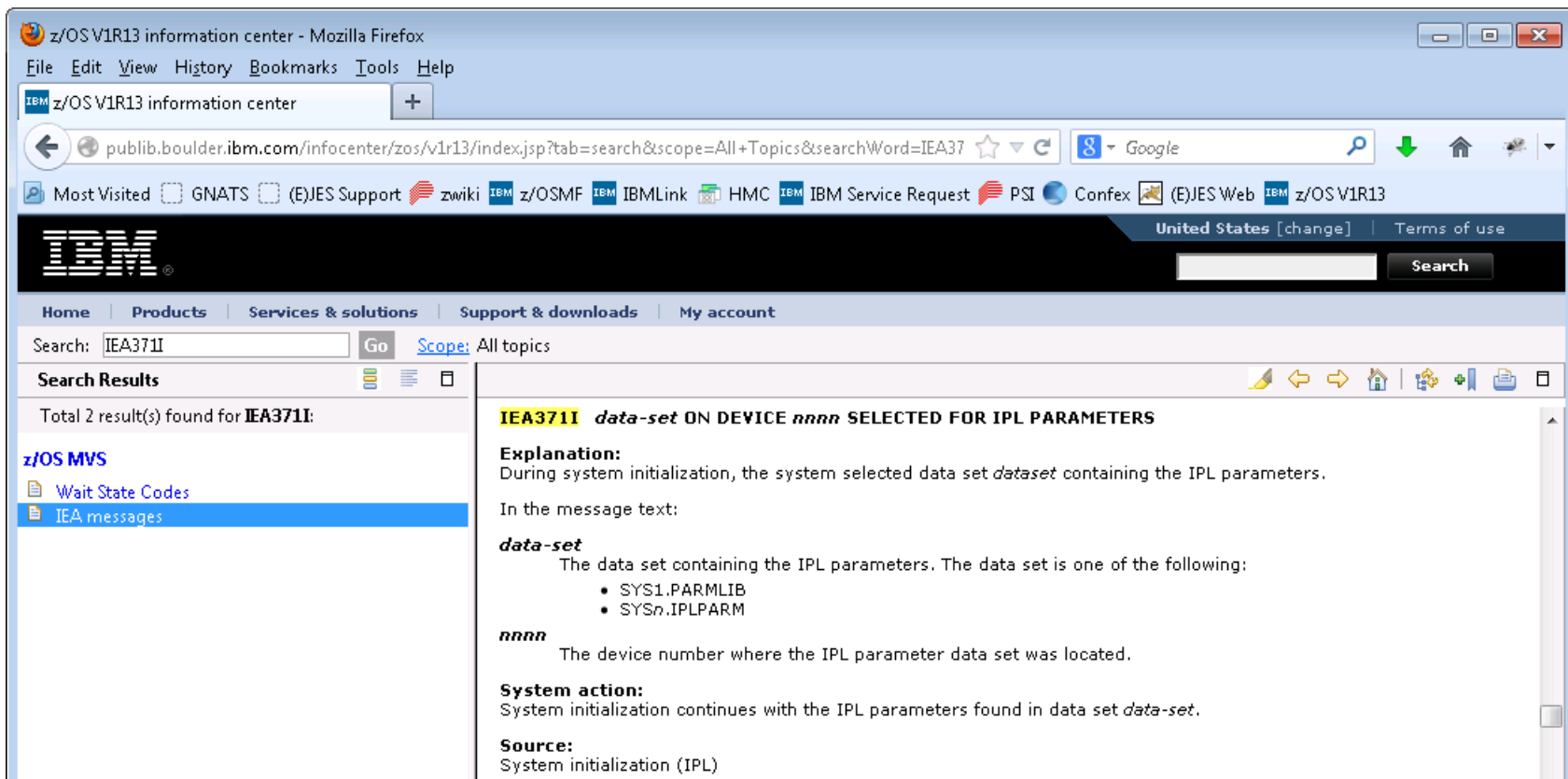


# InfoCenter Search Behavior

- 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=All+Topics&searchWord=IEA371I
```



The screenshot shows a Mozilla Firefox browser window displaying the IBM InfoCenter search results for the keyword "IEA371I". The search results page includes a navigation menu, a search bar, and a list of search results. The first result is highlighted and expanded to show detailed information.

**Search Results**

Total 2 result(s) found for **IEA371I**:

- z/OS MVS
  - Wait State Codes
  - IEA messages

**IEA371I data-set ON DEVICE nnnn SELECTED FOR IPL PARAMETERS**

**Explanation:**  
During system initialization, the system selected data set *dataset* containing the IPL parameters.

In the message text:

**data-set**  
The data set containing the IPL parameters. The data set is one of the following:

- SYS1.PARMLIB
- SYSn.IPLPARM

**nnnn**  
The device number where the IPL parameter data set was located.

**System action:**  
System initialization continues with the IPL parameters found in data set *data-set*.

**Source:**  
System initialization (IPL)

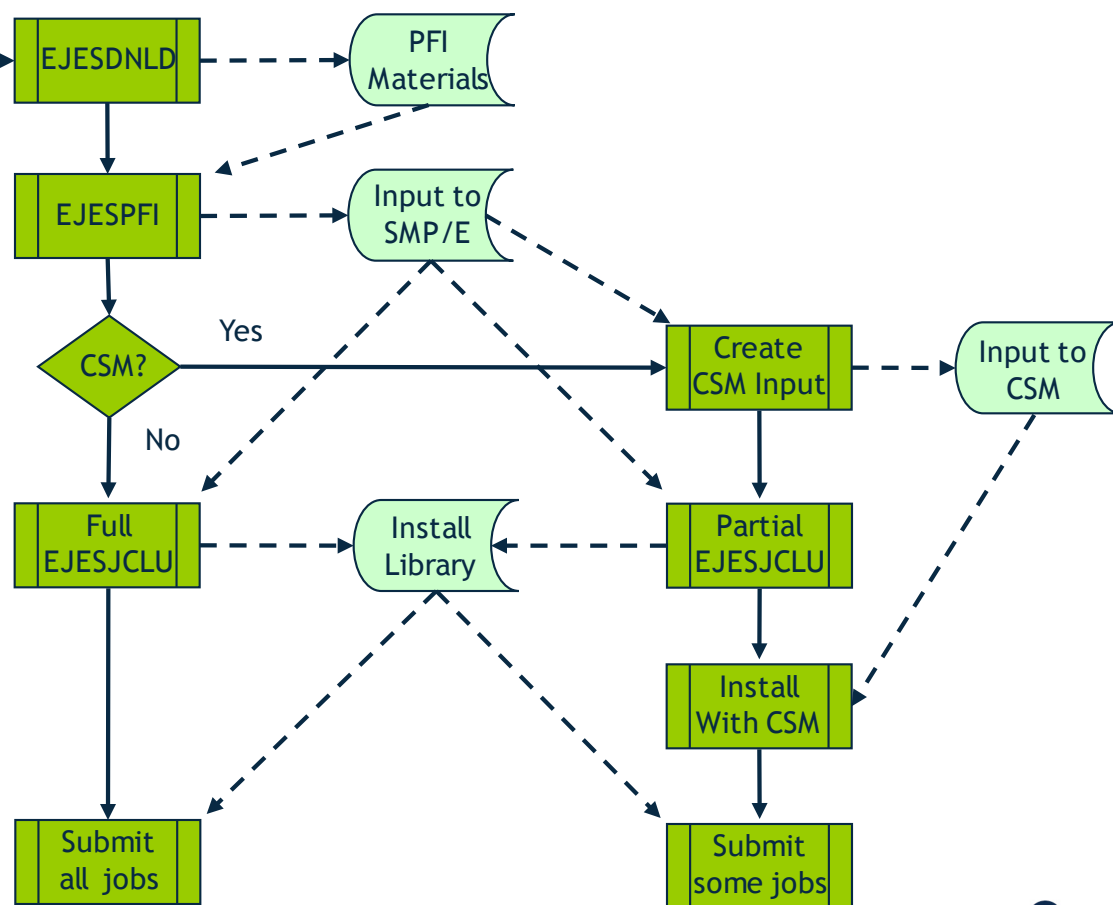
# Installation via Chorus Software Manager from CA Technologies

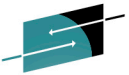


PHOENIX Software International®

FTP or HTTP

- Install continues to use existing PFI download and unlock technology.
- Install path diverges based on user response.
- Input to CSM created by EJESPFJ utility in z/OS UNIX directory of choice.
- JCL customization has fewer replaceable keys and sample jobs for CSM install.





```
MVS60 ----- PFI Installation Utility ----- V5R3
Command ==> _

          Transform
          -----
          Transform PFI Installation
          Materials into SMP/E Input

SMP/E Data Set Parameters:
  Data set prefix  ==> EDJX1.SMPE530
  Volume serial    ==> NONE          (Volume serial or NONE)

Local Work Files Parameters:
  Your TSO/E Prefix ==> EDJX1
  Volume serial     ==> NONE          (Volume serial or NONE)

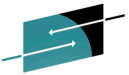
CA Chorus Software Manager Choice:
  Install via CSM? ==> YES           (YES or NO)

Press HELP for help with this utility.

F1=Help   F3=Exit   F12=Cancel

MA  D
```





```
----- Install JCL Customization Utility ----- V5R3
Command ==> _
More: - +

Customization Library Parameters:
  Data Set Name          ==> EDJX1.SMPE530.INSTALL

Target Library Parameters:
  Dsname Prefix          ==> EJES
  z/OS UNIX Path         ==> /usr/lpp/ejes

Maintenance Data Set Parameters:
  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

MA  D
```

Eleven prompts disappear for CSM install

# 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 PFCxxx
  - USERMODs renamed from EJES\$xxx to UMODxxx

```

++USERMOD(EJESLIC) REWORK(2013069) .
++VER(Z038) FMID(QEJ5300) .
++SRC(EJESLIC) .
* REL=V5R3 GRACE=2013-01-01
*---+----1-----+----2-----+----3-----+----4---
--+----5
  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
*---+----1-----+----2-----+----3-----+----4---
-+----5
  EJESGLIC
DATA=001307508CD994D2F181590816EF82FF
  EJESGLIC DATA=C4C4E0
  EJESGLIC CKSUM=0000021813
  END ,

```

```
Portable File Installation Detected ...
Allocating libraries ...
Copying members ...
Customizing members ...
EJES$ACC: not used for CSM install
EJES$APP: not used for CSM install
EJES$CAP: copied and customized
EJES$CPA: copied and customized
EJES$DAL: not used for CSM install
EJES$DDF: not used for CSM install
EJES$DOC: copied and customized
EJES$DRL: copied
EJES$ENA: copied
EJES$ENV: copied
EJES$ENV: renamed
EJES$EN2: copied
EJES$EN2: renamed
EJES$EN3: copied
EJES$EN3: renamed
EJES$GAL: copied
EJES$GAS: copied
EJES$ISF: copied
```

Some members are not used

```
EJES$ISF: renamed to PTFCISF for CSM install
EJES$JNL: copied and customized
EJES$LDL: copied and customized
EJES$LIC: copied and customized
EJES$LIC: renamed to UMODLIC for CSM install
EJES$LSR: copied and customized
EJES$LSV: copied and customized
EJES$OPT: copied and customized
EJES$OPT: renamed to UMODOPT for CSM install
EJES$PAC: not used for CSM install
EJES$PAP: not used for CSM install
EJES$PDL: copied and customized
```

Some are transformed and renamed

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 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.

F1=Help F3=Exit F12=Cancel

MA D

02/015

24/006



```
-----</FILEDEF>
-----<FILEDEF name="EDJX1.SMPE530.$QPX1L10.F2"
      archid="QPX1L10.F2" type="SMPRELF"
      description="Phoenix TP Monitor load modules">
-----</FILEDEF>
-----</GIMZIP>
GIM47500I  ARCHIVE PROCESSING IS COMPLETE FOR EDJX1.EJESPF1.CSM.SMPMCS.
GIM47500I  ARCHIVE PROCESSING IS COMPLETE FOR EDJX1.SMPE530.$QEJ5300.F1.
GIM47500I  ARCHIVE PROCESSING IS COMPLETE FOR EDJX1.SMPE530.$QEJ5300.F2.
GIM47500I  ARCHIVE PROCESSING IS COMPLETE FOR EDJX1.SMPE530.$ZEJ53U0.F1.
GIM47500I  ARCHIVE PROCESSING IS COMPLETE FOR EDJX1.SMPE530.$ZEJ53U0.F2.
GIM47500I  ARCHIVE PROCESSING IS COMPLETE FOR EDJX1.SMPE530.$ZEJ5300.F1.
GIM47500I  ARCHIVE
GIM47500I  ARCHIVE
GIM47500I  ARCHIVE
GIM47500I  ARCHIVE
GIM47500I  ARCHIVE
PAGE 0002
```

```
PSI.DEPLOYMENT.XML
PSI.EULA.TXT
PSI.PACKAGE.XML
PSI.README.TXT
PSI.SMPEINSTALL.XML
PSI.SMPESETUP.XML
Creating install package...
EJES530/
EJES530/PSI.DATASET.XML
EJES530/SMPPTFIN/
EJES530/SMPPTFIN/S0001.EDJX1.EJESPF1.CSM.SMPMCS.pax.Z
EJES530/SMPRELF/
```

MVS60 ----- PFI Installation Utility ----- V5R3

Command ===> \_

Congratulations!

You have completed all of the  
early installation steps!

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.

F1=Help F3=Exit F12=Cancel

MA D

02/015

24/006



Firefox CA Chorus™ Software Manager - Add Pr...

CA Chorus™ Software Manager edjxadm

Software Status Products SMP/E Environments Deployments

Search Vendor

Search Products

Search Products

Actions

Update Show List Add Product Install External Add CA Update Show History

Filter

**Add Product**

Specify the name, release, and gen level of the product, and click OK. The product will be added to the product list.

Vendor\*: PSI

Product\*: (E)JES

Release\*: 5.3

Gen Level: 0

OK Cancel Help

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Firefox CA Chorus™ Software Manager - swcat...

CA Chorus™ Software Manager edjxadm

Add External Package

Enter the path to the package for 0.

Type of Input Source

UNIX File  FTP File

UNIX Path\*: /u/edjxadm/EJES530.pax.Z

OK Cancel Help

Products

- PSI
  - (E)JES
    - 5.3
      - 0

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Firefox CA Chorus™ Software Manager - Main ...

CA Chorus™ Software Manager edjxadm

Products Deployments Configurations System Registry Tasks Settings

Products > PSI > (E)JES > 5.3 > 0

Base Install Packages Add External Package

Show: All

Select and: Download Show All

Select	Name	Last Modified	Type	Download Status	Size	Release/Gen Level	Actions
<input type="checkbox"/>	EJES530.pax.Z	Mar 11, 2013	Base Install	Yes	30 MB		Install Delete

Selected 0 of 1.

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Search In: Products Search

The product was updated in the window.

Add External Maintenance

Enter the path to the maintenance for (E)JES/5.3 - Use the asterisk (\*) for PDS and PDSE members.

Type of Input Source

Data Set  UNIX File  FTP File

Data Set Name\*: EDJXADM.SMPE530.INSTALL(UMODLIC)

OK Cancel Help

Available Products

- Products
  - PSI
    - (E)JES
      - 5.3

Select and: Update Working Set

Select

Selected 1 of 1.

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# (E)JES Web Technology Preview

- The (E)JES Web Technology Preview is a browser-based interface to (E)JES implemented in Java.
- The initial release, which we classify as a technology preview, allows many basic (E)JES functions to be performed.
- Our intent is to create a de-Facto interface to (E)JES for users that are uncomfortable navigating traditional 3270 interfaces.
- The REST 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 Preview

- (E)JES Web is built on top of the (E)JES Java API.
  - The (E)JES API (all flavors) keeps improving as a result of this effort.
- IBM has given z/OS Java highly-preferential treatment in System z hardware/software design and customer terms and conditions. This trend is expected to continue, making z/OS Java a solid language/platform choice with good investment protection for the foreseeable future.

STATUS - 326 5787424 Records- 5773671 Lines- 0 Pages

JobName	Process	CurStep	NumStep	StepName	JP	MaxComp	Records	Lines	Pag
LISTC	OUTSERV	0	0		1		27257	27257	
LISTC	OUTSERV	0	0		1		27257	27257	
LISTC	OUTSERV	0	0		1		27257	27257	
LISTC	OUTSERV	0	0		1		27257	27257	
LISTC	J0176086 W-OUTPUT	0	0		1		27257	27257	
MONITOR	J0394489 X-JES3	0	0	*JES3DSP	15		0	0	
EDJX2	T0464345 W-OUTPUT	0	1		15	AB S622	3948	3948	
COPYEJES	J0464351 W-OUTPUT	0	11		3	CC 0000	6184	6184	
EDJX2	T0464637 W-OUTPUT	0	1		15	AB S622	359	359	
COPYEJES	J0464702 W-OUTPUT	0	11		3	CC 0000	6184	6184	
MIGRATE	J0464782 W-OUTPUT	0	3		7	CC 0000	130	130	
EDJX2	T0464961 W-OUTPUT	0	1		15	AB S622	76930	76930	
MIGRATE	J0464997 W-OUTPUT	0	3		7	CC 0000	130	130	
V5100019	J0465023 W-OUTPUT	0	7		4	CC 0000	329	328	
V5200009	J0465024 W-OUTPUT	0	7		4	CC 0000	318	317	
PTFIE520	J0465029 W-OUTPUT	0	4		2	CC 0000	365	364	
PTFIE510	J0465030 W-OUTPUT	0	4		2	CC 0000	489	488	

- Enclaves
- Health Checker
- Log
- Scheduling Environments
- System Requests
- WLM Resources



STATUS



Jobs ▾

Resources ▾

Devices ▾

Tools ▾

Filter ▾

Logout

(E)JES®

STATUS - 3266S- 2X- 416W- 0H- 0T- 5787424 Records- 5773671 Lines- 0 Pages

JobName	JobID	Status	Process	CurStep	NumStep	StepName	JP	MaxComp	Records	Lines	Pag
LISTC	J0176080	W-OUTPUT	OUTSERV	0	0		1		27257	27257	
LISTC	J0176081	W-OUTPUT	OUTSERV	0	0		1		27257	27257	
LISTC	J0176082	W-OUTPUT	OUTSERV	0	0		1		27257	27257	
LISTC	J0176085	W-OUTPUT	OUTSERV	0	0		1		27257	27257	
LISTC	J0176086	W-OUTPUT	OUTSERV	0	0		1		27257	27257	
MONITOR	J0394489	X-JES3	MONITOR	0	0	*JES3DSP	15		0	0	
EDJX2	T0464345	W-OUTPUT	OUTSERV		1		15	AB S622	3948	3948	
COPYEJES	J0464351	W-OUTPUT	OUTS		11		3	CC 0000	6184	6184	
EDJX2	T0464637	W-OUTPUT	OUTS				15	AB S622	359	359	
COPYEJES	J0464702	W-OUTPUT	OUTS				3	CC 0000	6184	6184	
MIGRATE	J0464782	W-OUTPUT	OUTS				7	CC 0000	130	130	
EDJX2	T0464961	W-OUTPUT	OUTS				15	AB S622	76930	76930	
MIGRATE	J0464997	W-OUTPUT	OUTS				7	CC 0000	130	130	
V5100019	J0465023	W-OUTPUT	OUTS				4	CC 0000	329	328	
V5200009	J0465024	W-OUTPUT	OUTS				4	CC 0000	318	317	
PTFIE520	J0465029	W-OUTPUT	OUTS		4		2	CC 0000	365	364	
PTFIE510	J0465030	W-OUTPUT	OUTS		4		2	CC 0000	489	488	

Activity

Alter &gt;

Browse &gt;

Browse

Cancel &gt;

Browse Cntl Blks

DJC &gt;

Browse JCL

Data Set Status

Browse Job Info

Display &gt;

Browse Job Info Extended

Hold &gt;

Browse Msg Summary

Out Desc

Browse Pattern

Release &gt;

Requeue To &gt;

Restart &gt;

Run

Spin

Sys Cancel &gt;



prev

Pg 1

of 25

next



1 - 17 of 418 records

Refresh

COPYEJES J0464702

IAT6140 JOB ORIGIN FROM GROUP=ANYLOCAL, DSP=IR , DEVICE=INTRDR , 0000

11:01:07 ---- IAT6853 THE CURRENT DATE IS WEDNESDAY, 04 SEP 2013 ----

IRR010I USERID EDJX2 IS ASSIGNED TO THIS JOB.

11:01:07 IAT2000 JOB COPYEJES (J0464702) SELECTED MVS60 SRVCLASS=BATCH\_LO

11:01:08 ICH70001I EDJX2 LAST ACCESS AT 07:53:17 ON WEDNESDAY, SEPTEMBER 4, 2013

11:01:08 IEF403I COPYEJES - **STARTED** - TIME=11.01.08

11:01:28 - -----TIMINGS (MINS.)----- -----PAGING COL

TIME	STEPNAME	PROCSTEP	RC	EXCP	CONN	TCB	SRB	CLOCK	SERV	WORKLOAD	PAGE	SWAP	VI
11:01:28	-COPYMOD1		00	7240	389	.17	.00	.3	29660	BATCH	0	0	
11:01:28	-COPYMOD2		00	55	4	.00	.00	.0	393	BATCH	0	0	
11:01:32	-LINK1	LKED	00	2777	204	.03	.00	.0	7928	BATCH	0	0	
11:01:44	-ASMMNU		00	2588	547	.10	.00	.1	16759	BATCH	0	0	
11:01:45	-LKEDMNU		00	473	2	.00	.00	.0	1287	BATCH	0	0	
11:01:52	-ASMAINT\$		00	1371	406	.05	.00	.1	8762	BATCH	0	0	
11:01:52	-LKEDINT\$		00	58	1	.00	.00	.0	302	BATCH	0	0	
11:02:33	-COPYISPF		00	7568	762	.26	.01	.6	43058	BATCH	0	0	
11:02:35	-COPYEXEC		00	513	59	.01	.00	.0	1988	BATCH	0	0	
11:02:39	-COPYSAMP		00	1153	135	.02	.00	.0	5040	BATCH	0	0	
11:02:39	-NOTIFY		00	0	0	.00	.00	.0	65	BATCH	0	0	

11:02:39 IEF404I COPYEJES - ENDED - TIME=11.02.39

11:02:39 -COPYEJES ENDED. NAME=JAFFE TOTAL TCB CPU TIME= .69 TOTAL ELAPSED TIME= 1.5

//COPYEJES JOB (EDJX),JAFFE,MSGCLASS=T,REGION=64M,TIME=NOLIMIT

//\*MAIN ORG=EDJX2,USER=EDJX2

XT00GENR

//\* COPYEJES SUBMITTED 09/04/2013 AT 11:01:07 BY EDJX2 /LT04

//\*MAIN CLASS=GENERATE

//\*

// SET TGTLOAD=PHOENIX.PROD.LOADLIB

// SET LINKLIB=SYS2.LINKLIB

//\*

Refresh

## OPERLOG PHXHQ

```

N 00000000 MVS70      2013303 14:00:12.38 AUTOCPU 00000281 IEF403I AUTOCPU - STARTED - TIME=14.00.12
N 00010000 MVS60      2013303 14:00:25.19 ISZSMGR 00000090 ISZ0049I LU A60TCP19 LOSTERM 20
N 00010000 MVS60      2013303 14:00:25.20 ISZSMGR 00000090 ISZ0031I LU A60TCP19 terminated
N 00010000 MVS60      2013303 14:00:25.21 ISZSMGR 00000090 ISZ0243I MARNOLD LU A60TCP19 disconnected
N 00010000 MVS60      2013303 14:00:32.57 ISZSMGR 00000090 ISZ0030I LU A60TCP20 active
N 00010000 MVS60      2013303 14:00:32.95 ISZSMGR 00000090 ISZ0284I LU A60TCP20 starting D4C32XX3 - REBIND = NO
N 00000000 MVS60      2013303 14:00:35.40 JES3     00000290 IRR010I USERID DROURKE IS ASSIGNED TO THIS JOB.
N 00000000 MVS60      2013303 14:00:35.42 JES3     00000090 IAT6100 (J0483221) JOB EJESHC (J0483415), PRTY=06, ID=DR
N 00000000 MVS60      2013303 14:00:35.57 EJESHC   00000281 IAT2000 JOB EJESHC (J0483415) SELECTED MVS60 SRVCLASS=
N 00200000 MVS60      2013303 14:00:35.58 EJESHC   00000281 ICH70001I DROURKE LAST ACCESS AT 13:40:30 ON WEDNESDAY, OC
N 00000000 MVS60      2013303 14:00:35.60 EJESHC   00000281 IEF403I EJESHC - STARTED - TIME=14.00.35
N 00010000 MVS60      2013303 14:00:37.91 ISZSMGR 00000090 ISZ4012I Signon complete for MARNOLD IP address 192.168.4.1
N 00010000 MVS60      2013303 14:00:37.92 ISZSMGR 00000090 ISZ0281I MARNOLD LU A60TCP20 reconnected
N 41000000 MVS70      2013303 14:00:43.78 MARNOLD 00000281 IKT100I USERID MARNOLD CANCELED DUE TO UNCONDITIONAL LOGO
N 41000000 MVS70      2013303 14:00:43.79 MARNOLD 00000090 IKT122I IPADDR..PORT 192.168.10.144..55101
N 00000000 MVS70      2013303 14:00:43.80 00000281 IEA989I SLIP TRAP ID=X622 MATCHED. JOBNAME=MARNOLD , ASID=
N 00000000 MVS70      2013303 14:00:43.80 00000281 IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME=MARNOLD , ASID=
N 00000000 MVS70      2013303 14:00:43.80 00000281 IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME/ASID NOT AVAILA
N 00010000 MVS60      2013303 14:00:43.82 ISZSMGR 00000090 ISZ0262I MARNOLD LU A60TCP20 Session A70TCAS (101) ended
N 00000000 MVS70      2013303 14:00:43.83 00000281 IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME=MARNOLD , ASID=
N 00010000 MVS60      2013303 14:00:48.22 ISZSMGR 00000090 ISZ0261I MARNOLD LU A60TCP20 VTAM session A70TCAS (101) sta
NC00000000 MVS70      2013303 14:00:48.29 INSTREAM 00000290 LOGON
N 00600000 MVS70      2013303 14:00:48.86 MARNOLD 00000281 IEC999I IFG0TC0A,IFG0TC0B,MARNOLD , $IKJTEST,DEB ADDR=AB3048
N 00000000 MVS70      2013303 14:00:48.88 00000281 IEA989I SLIP TRAP ID=X47B MATCHED. JOBNAME=MARNOLD , ASID=
N 00000000 MVS70      2013303 14:00:49.14 00000281 IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME=MARNOLD , ASID=
M 40000000 MVS70      2013303 14:00:49.18 MARNOLD 00000000 IEF450I MARNOLD $IKJTEST $IKJTEST - ABEND=S622 U0000 REASON
E 991 00000000 TIME=14.00.49
N 00000000 MVS70      2013303 14:00:49.86 DROURK2 00000290 EJES510 USER-DROURK2- HQ3AF,J=483399,C
NC00000000 MVS60      2013303 14:00:49.87 DROURK2 00000290 HQ3AF,J=483399,C
MP00000000 MVS60      2013303 14:00:49.88 DROURK2 00000000 IAT6000 JOB EJESHC (J0483221) CANCEL ACCEPTED (PRINT-NO

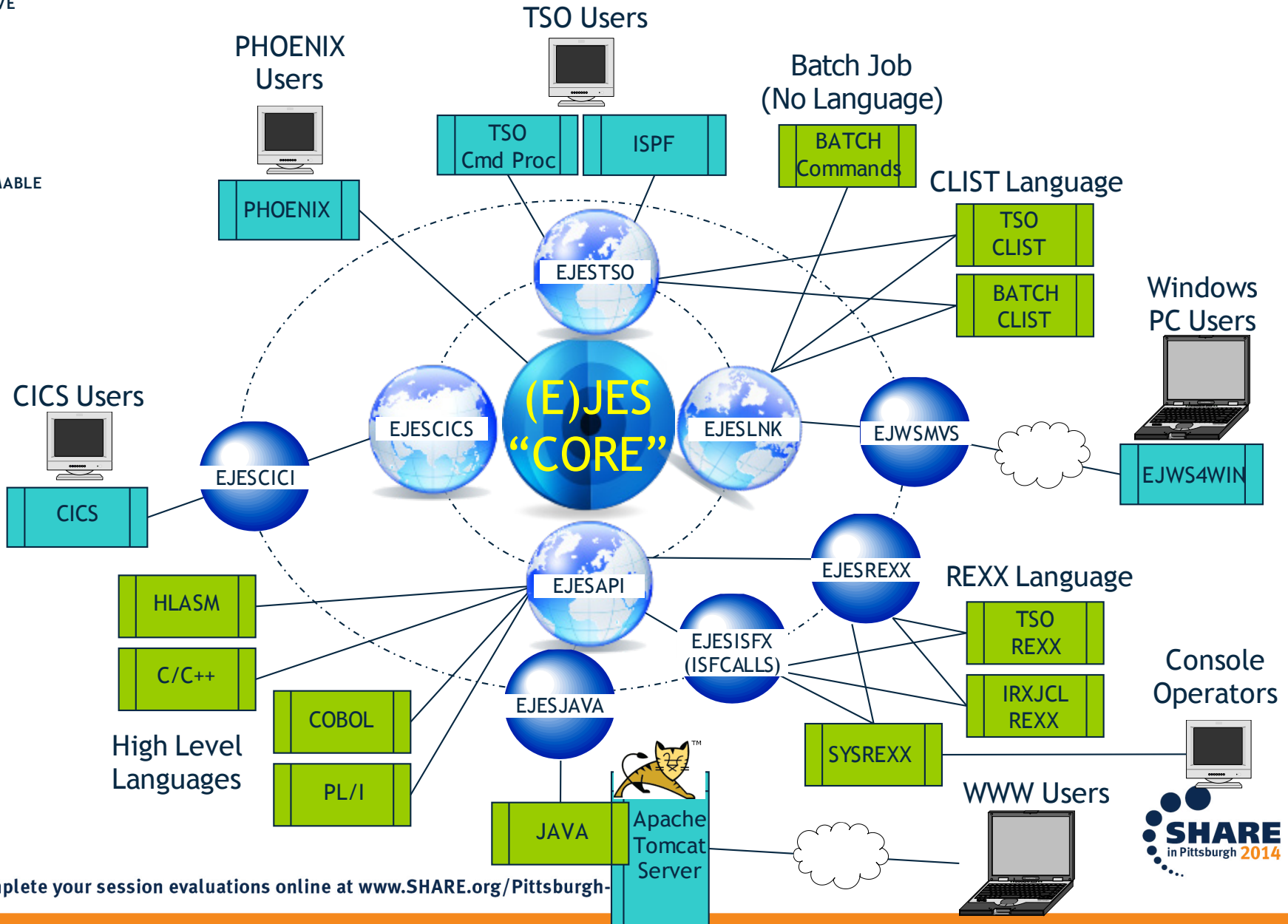
```

Refresh

# The Updated (E)JES “Solar System”

INTERACTIVE

PROGRAMMABLE



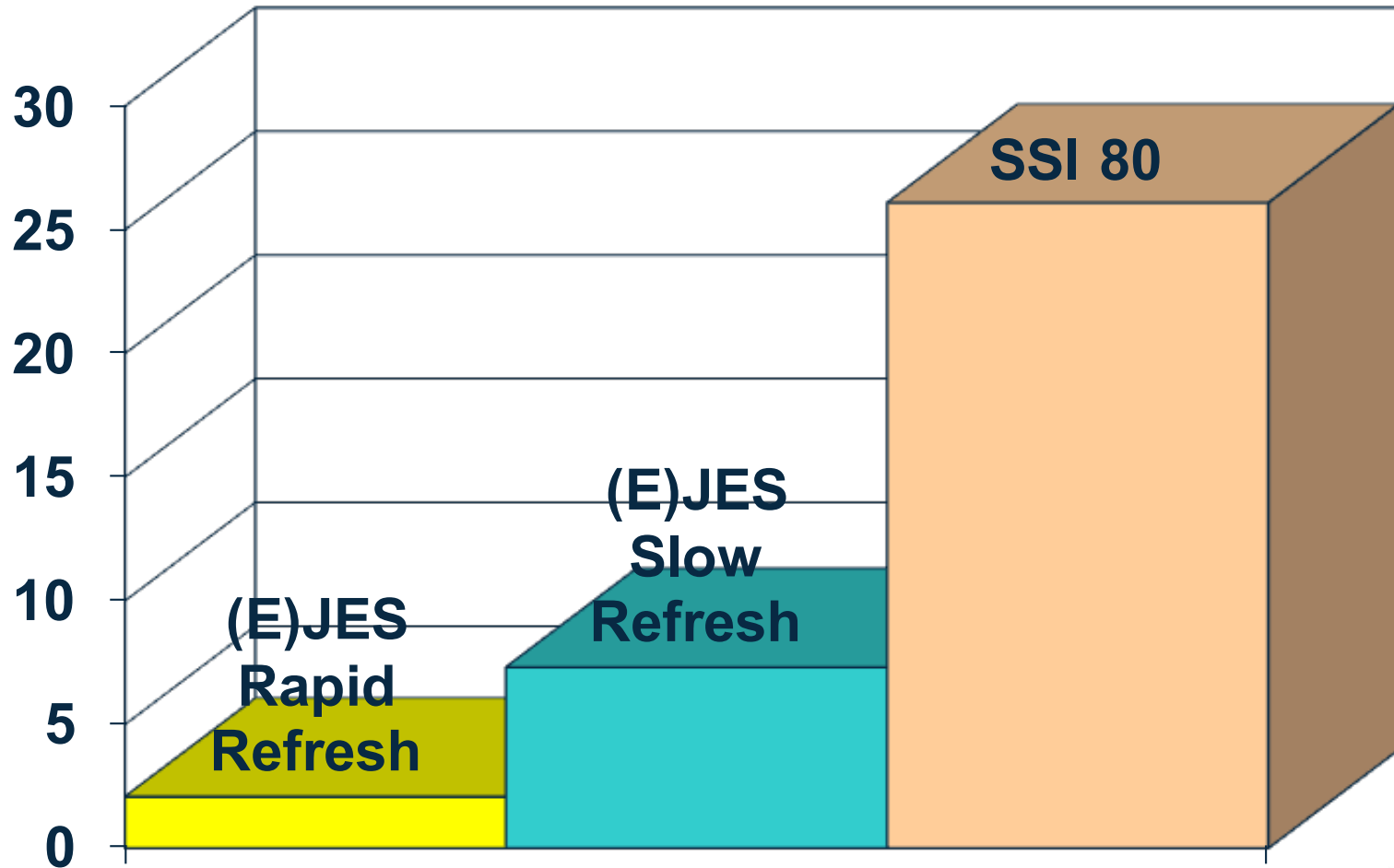
Complete your session evaluations online at [www.SHARE.org/Pittsburgh-](http://www.SHARE.org/Pittsburgh-)

## (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.

# CPU Performance Benchmark Results

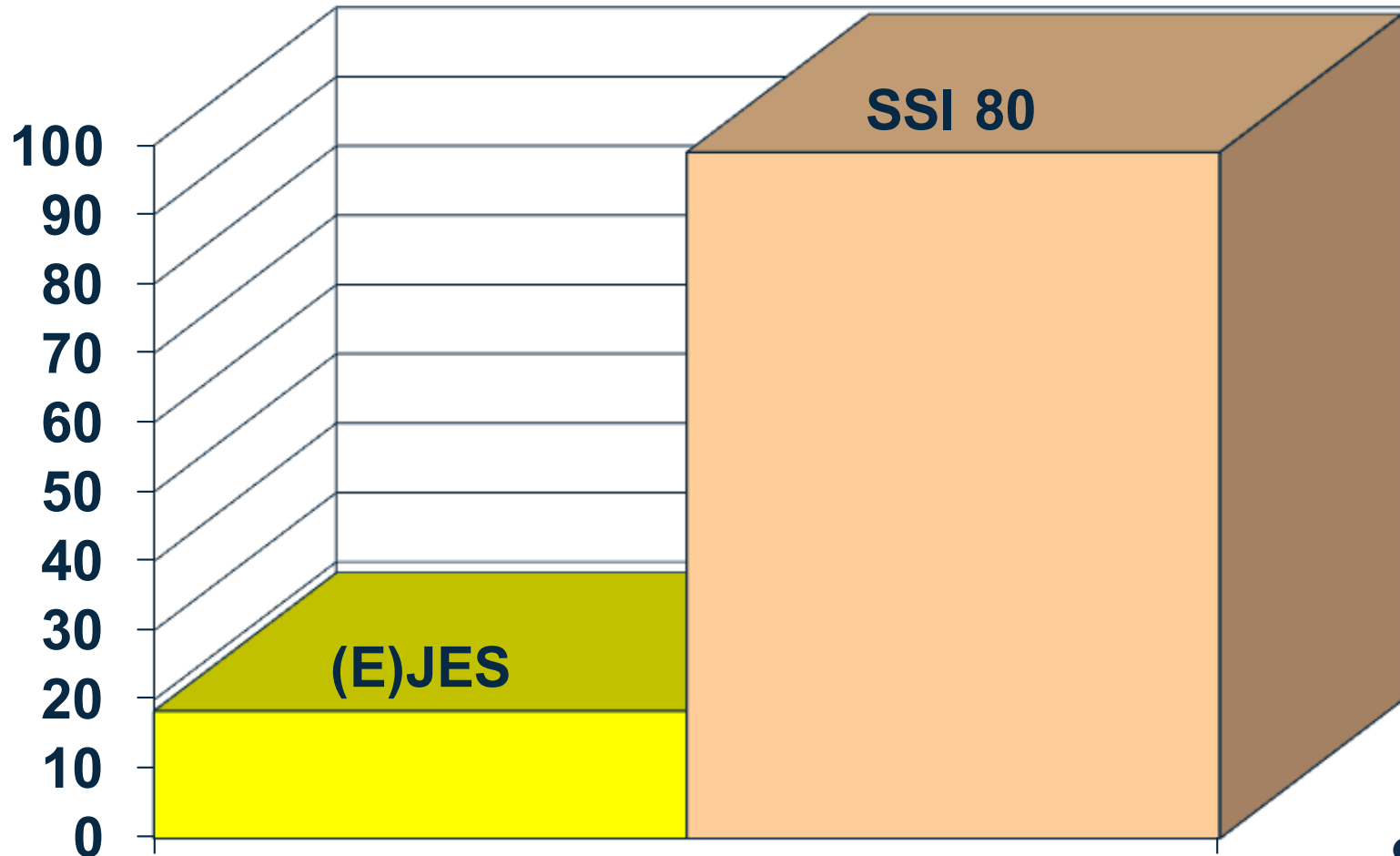
# JES2 CPU Performance Benchmark: Between 3.5x and 12.5x



## JES2 Held Output Display

Complete your session evaluations online at [www.SHARE.org/Pittsburgh-Eval](http://www.SHARE.org/Pittsburgh-Eval)

# JES3 CPU Performance Benchmark: 5.4x



**JES3 Held Output Display**



# Performance Differences in Perspective

- The benchmark savings occur using apples-to-apples measurements with TCB-mode only, GCP execution.
- Customers with zIIP processor(s) will gain additional benefits.
- 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.

JobName	CPU-Time	ACPU-Time	zIIP-Time	GCP-Time	zICP-Time	
-----/-----	-----	-----	-----	-----	-----	
JOEUSER	00:06.15	00:12.20	00:05.94	00:05.94	00:00.00	BEFORE
JOEUSER	00:07.16	00:29.12	00:21.71	00:06.91	00:00.00	AFTER
<b>JOEUSER</b>	<b>00:01.01</b>	<b>00:16.92</b>	<b>00:15.77</b>	<b>00:00.97</b>	<b>00:00.00</b>	<b>DIFFERENCE</b>

**94%**  
**Offload**

# Questions?

