(E)JES Update

Ed Jaffe
Phoenix Software International

11 March 2014
Session Number 15382

• 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) end four years after GA.
### Compatibility Matrix

<table>
<thead>
<tr>
<th>Operating System</th>
<th>V5R3 09/13</th>
<th>V5R2 09/12</th>
<th>V5R1 09/11*</th>
<th>V4R8 09/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>z/OS 2.1</td>
<td>JES2/JES3</td>
<td>JES3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>z/OS 1.13</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES3</td>
</tr>
<tr>
<td>z/OS 1.12</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
</tr>
<tr>
<td>z/OS 1.11</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
</tr>
<tr>
<td>z/OS 1.10</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
</tr>
<tr>
<td>z/OS 1.9</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
</tr>
<tr>
<td>z/OS 1.8</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
</tr>
<tr>
<td>z/OS 1.7</td>
<td></td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
</tr>
<tr>
<td>z/OS 1.6</td>
<td></td>
<td></td>
<td>JES2/JES3</td>
<td>JES2/JES3</td>
</tr>
<tr>
<td>z/OS 1.5</td>
<td></td>
<td></td>
<td></td>
<td>JES2/JES3</td>
</tr>
</tbody>
</table>

- **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. 😁
- * V5R1 will be stabilized at the end of March 2014 (new policy doesn’t take effect until April).
Highlights from the (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
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.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"
//NOTEDDD 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

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.
<table>
<thead>
<tr>
<th>Cmd</th>
<th>Dataset Name</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EDJX1.THIS.CAN.NOW.BE.A.MASK.A</td>
<td>MVSNV1</td>
</tr>
<tr>
<td></td>
<td>EDJX1.THIS.CAN.NOW.BE.A.MASK.B</td>
<td>MVSNV1</td>
</tr>
<tr>
<td></td>
<td>EDJX1.THIS.CAN.NOW.BE.A.MASK.C</td>
<td>MVSNV1</td>
</tr>
</tbody>
</table>

Row 1 of 3

Scroll ==> CSR

************************************************************************ 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
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.
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
To search the InfoCenter, type a search string below.
To define InfoCenter parameters, press F6.

Search for

F1=Help    F6=Setup    F11=Clear    F12=Cancel

IEA519I IODF DSN = SYS4.IODFAQ
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
    IEASYSO2

F1=Help    F3=Exit    F6=Info    F7=Up    F8=Down    F10=Left    F11=Right
F12=Cancel
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/v2r1)
  - [http://publib.boulder.ibm.com/infocenter/zos/v1r12](http://publib.boulder.ibm.com/infocenter/zos/v1r12)
- Scope defaults to **All Topics**
- Browser name and directory not required for Windows
InfoCenter Setup

URL Generation Parameters:
Server .. You can specify your Intranet server URL here (if any)
Scope ..

Workstation Browser Launch Command Parameters:
Browser These specifications are NOT required for Windows users
Directory

F1=Help   F11=Clear   F12=Cancel

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
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
**IEA3711**  *data-set on device aaaa selected for IPL parameters*

**Explanation:**
During system initialization, the system selected data set *data-set* 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

- **aaaa**
  - 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

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

Complete your session evaluations online at www.SHARE.org/Anaheim-Eval
MVS60 -------------------- PFI Installation Utility ---------------------- V5R3

Command ===> _

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
Install JCL Customization Utility

Command >>> _

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

Documentation 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

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$xxx to PTFCxxx
  • USERMODs renamed from EJES$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
*--------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 ,
```
Some members are not used

Some are transformed and renamed

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

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/EJES$30
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.
MV580  ------------------ 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.
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.
<table>
<thead>
<tr>
<th>JobName</th>
<th>Process</th>
<th>CurStep</th>
<th>NumStep</th>
<th>StepName</th>
<th>JP</th>
<th>MaxComp</th>
<th>Records</th>
<th>Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>LISTC</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td>27257</td>
</tr>
<tr>
<td>LISTC</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td>27257</td>
</tr>
<tr>
<td>LISTC</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td>27257</td>
</tr>
<tr>
<td>LISTC</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td>27257</td>
</tr>
<tr>
<td>LISTC</td>
<td>J0176086</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27257</td>
<td>27257</td>
</tr>
<tr>
<td>MONITOR</td>
<td>J0394489</td>
<td>X-JES3</td>
<td></td>
<td></td>
<td>15</td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>EDJX2</td>
<td>T0464345</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3948</td>
<td>3948</td>
</tr>
<tr>
<td>COPYEJES</td>
<td>J0464351</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6184</td>
<td>6184</td>
</tr>
<tr>
<td>EDJX2</td>
<td>T0464637</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>359</td>
<td>359</td>
</tr>
<tr>
<td>COPYEJES</td>
<td>J0464702</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6184</td>
<td>6184</td>
</tr>
<tr>
<td>MIGRATE</td>
<td>J0464782</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>EDJX2</td>
<td>T0464961</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>76930</td>
<td>76930</td>
</tr>
<tr>
<td>MIGRATE</td>
<td>J0464997</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>V5100019</td>
<td>J0465023</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>329</td>
<td>328</td>
</tr>
<tr>
<td>V5200009</td>
<td>J0465024</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>318</td>
<td>317</td>
</tr>
<tr>
<td>PTFIE520</td>
<td>J0465029</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>365</td>
<td>364</td>
</tr>
<tr>
<td>PTFIE510</td>
<td>J0465030</td>
<td>W-OUTPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>489</td>
<td>488</td>
</tr>
</tbody>
</table>

1 - 17 of 418 records
<table>
<thead>
<tr>
<th>JobName</th>
<th>JobID</th>
<th>Status</th>
<th>Process</th>
<th>CurStep</th>
<th>NumStep</th>
<th>StepName</th>
<th>JP</th>
<th>MaxComp</th>
<th>Records</th>
<th>Lines</th>
<th>Pag</th>
</tr>
</thead>
<tbody>
<tr>
<td>LISTC</td>
<td>J0176080</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LISTC</td>
<td>J0176081</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LISTC</td>
<td>J0176082</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LISTC</td>
<td>J0176083</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LISTC</td>
<td>J0176084</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LISTC</td>
<td>J0176085</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LISTC</td>
<td>J0176086</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONITOR</td>
<td>J0394489</td>
<td>X-JES3</td>
<td>MONITOR</td>
<td>0</td>
<td>0</td>
<td>*JES3DSP</td>
<td>15</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDJX2</td>
<td>T0464345</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPYEJES</td>
<td>J0464351</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDJX2</td>
<td>T0464637</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPYEJES</td>
<td>J0464702</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIGRATE</td>
<td>J0464782</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDJX2</td>
<td>T0464961</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIGRATE</td>
<td>J0464997</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V5100019</td>
<td>J0465023</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V5200009</td>
<td>J0465024</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTFIE520</td>
<td>J0465029</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTFIE510</td>
<td>J0465030</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>0</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
<td>27257</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Menu Options:**
- Activity
- Alter
- Browse
- Cancel
- DJC
- Data Set Status
- Display
- Hold
- Out Desc
- Release
- Requeue To
- Restart
- Run
- Spin
- Sys Cancel

**Additional Options:**
- Browse Cntl Blks
- Browse JCL
- Browse Job Info
- Browse Job Info Extended
- Browse Msg Summary
- Browse Pattern
COPYEJS J0464702

IA6140 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 COPYEJS (J0464702) SELECTED MVS00 SRVCLASS=BATCH_LO
11:01:08 ICH7000I EDJX2 LAST ACCESS AT 07:53:17 ON WEDNESDAY, SEPTEMBER 4, 2013
11:01:08 IEF403I COPYEJS - STARTED - TIME=11.01.08

-----TIMINGS (MINS.)------

-STEPNAME PROCSTEP RC EXCP CONN TCB SRB CLOCK SERV WORKLOAD PAGE SWAP V1
-COPYMOD1 00 7240 389 .17 .00 .3 29660 BATCH 0 0
-COPYMOD2 00 55 4 .00 .00 .0 393 BATCH 0 0
-LINK1 LKED 00 2777 264 .03 .00 .0 7928 BATCH 0 0
-ASMMNU 00 2588 547 .10 .00 .1 16759 BATCH 0 0
-LKEDMNU 00 473 2 .00 .00 .0 1287 BATCH 0 0
-ASMAIN$ 00 1371 406 .05 .00 .1 8762 BATCH 0 0
-LKEDINT$ 00 58 1 .00 .00 .0 302 BATCH 0 0
-COPYISPF 00 7568 762 .26 .01 .6 43058 BATCH 0 0
-COPYEXEC 00 513 59 .01 .00 .0 1988 BATCH 0 0
-COPYEXEC 00 1153 135 .02 .00 .0 5040 BATCH 0 0
-COPYAMP 00 0 0 .00 .00 .0 65 BATCH 0 0

11:02:39 IEF404I COPYEJS - ENDED - TIME=11.02.39
11:02:39 -COPYEJS ENDED. NAME-JAFFE TOTAL TCB CPU TIME= .69 TOTAL ELAPSED TIME= 1.5

//COPYEJS JOB (EDJX),JAFFE,MSGCLASS=T,REGION=64M,TIME=NOLIMIT
//MAIN ORG=EDJX2,USER=EDJX2
// MAIN CLASS=GENERATE
/*/ SET TGTLOAD=PHOENIX.PROD.LOADLIB
// SET LINKLIB=SYS2.LINKLIB
//
OPERLOG PHXHQ

N 000000  MV50  201303  14:00:12.38  AUTOCPU  00000000  IEF4031 AUTOCPU - STARTED - TIME=14.00.12
N 000100  MV50  201303  14:00:25.19  ISZSMGR  00000000  ISZ0649I LU A60TCP19 LOSTERM 20
N 000100  MV50  201303  14:00:25.20  ISZSMGR  00000000  ISZ0631I LU A60TCP19 terminated
N 000100  MV50  201303  14:00:25.21  ISZSMGR  00000000  ISZ0243I MARNOLD LU A60TCP19 disconnected
N 000100  MV50  201303  14:00:32.57  ISZSMGR  00000000  ISZ0283I LU A60TCP20 active
N 000100  MV50  201303  14:00:32.95  ISZSMGR  00000000  ISZ0284I LU A60TCP20 starting D4C32XX3 - REBIND = NO
N 000000  MV50  201303  14:00:35.40  JES3  00000000  IRR010I USERID DROURKE IS ASSIGNED TO THIS JOB.
N 000000  MV50  201303  14:00:35.42  JES3  00000000  IAT6100 (J0483221) JOB EJESC (J0483415), PRTY=06, ID=DRO
N 000000  MV50  201303  14:00:35.57  EJESC  00000000  IAT2000 JOB EJESC (J0483415) SELECTED MV50 SRVCLASS=
N 000000  MV50  201303  14:00:35.58  EJESC  00000000  ICH7000I DROURKE LAST ACCESS AT 13:40:30 ON WEDNESDAY, 02
N 000000  MV50  201303  14:00:35.60  EJESC  00000000  IEF403I EJESC - STARTED - TIME=14.00.35
N 000000  MV50  201303  14:00:37.91  ISZSMGR  00000000  ISZ2402I Signon complete for MARNOLD IP address 192.168.4.1
N 000000  MV50  201303  14:00:37.92  ISZSMGR  00000000  ISZ2828I MARNOLD LU A60TCP20 reconnected
N 410000  MV50  201303  14:00:43.78  MARNOLD  00000028  IKT100I USERID MARNOLD CANCELED DUE TO UNCONDITIONAL LOGO
N 410000  MV50  201303  14:00:43.79  MARNOLD  00000028  IKT122I IPADDR..PORT 192.168.10.144..55101
N 000000  MV50  201303  14:00:43.80  ISZSMGR  00000000  IEA989I SLIP TRAP ID=X622 MATCHED. JOBNAME=MARNOLD, ASID=
N 000000  MV50  201303  14:00:43.80  ISZSMGR  00000000  IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME=MARNOLD, ASID=
N 000000  MV50  201303  14:00:43.80  ISZSMGR  00000000  IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME/MARNOLD, ASID=
N 000000  MV50  201303  14:00:43.80  ISZSMGR  00000000  IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME/MARNOLD, ASID=
N 000000  MV50  201303  14:00:43.80  ISZSMGR  00000000  IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME/MARNOLD, ASID=
N 000000  MV50  201303  14:00:43.83  MARNOLD  00000028  ISZ0262I MARNOLD LU A60TCP20 Session A70TCPAS (101) ended
N 000000  MV50  201303  14:00:43.83  MARNOLD  00000028  ISZ0262I MARNOLD LU A60TCP20 Session A70TCPAS (101) started
N 000000  MV50  201303  14:00:43.83  MARNOLD  00000028  INSTREAM 00000289
N 000000  MV50  201303  14:00:48.29  MARNOLD  00000028  IEC999I IFG0TCeA,IFG0TCeB,MARNOLD,$IKJTEST,DEB ADDR=AB3648
N 000000  MV50  201303  14:00:48.86  MARNOLD  00000028  IEA989I SLIP TRAP ID=X47B MATCHED. JOBNAME=MARNOLD, ASID=
N 000000  MV50  201303  14:00:48.86  MARNOLD  00000028  IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME/MARNOLD, ASID=
N 000000  MV50  201303  14:00:49.14  MARNOLD  00000028  IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME/MARNOLD, ASID=
N 400000  MV50  201303  14:00:49.14  MARNOLD  00000028  IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME/MARNOLD, ASID=
N 000000  MV50  201303  14:00:49.18  MARNOLD  00000000  IEF4501 MARNOLD $IKJTEST $IKJTEST - ABEND=S622 U0000 REASON=
N 000000  MV50  201303  14:00:49.18  MARNOLD  00000000  IEF4501 MARNOLD $IKJTEST $IKJTEST - ABEND=S622 U0000 TIME=14.00.49
N 000000  MV50  201303  14:00:49.86  DROURK2  00000290  EJESS10 USER-DROURK2- HQ3AF,J=483399,C
N 000000  MV50  201303  14:00:49.87  DROURK2  00000290  HQ3AF,J=483399,C
N 000000  MV50  201303  14:00:49.87  DROURK2  00000290  H81538,J=483399,C
N 000000  MV50  201303  14:00:49.87  DROURK2  00000290  IAT8882 JOB EJESC (J0483223) CANCEL ACCEPTED (PRNT-MO
The Updated (E)JES “Solar System”

INTERACTIVE
- ISPF application
- TSO cmd processor (TPUT)
- Thread-safe CICS transaction
- Phoenix TP Monitor transaction
- Windows PC via (E)JES workstation component client/server
- Web interface under Apache Tomcat

PROGRAMMABLE
- TSO cmd processor (GET/PUTLINE)
- MVS program (QSAM GET/PUT)
- EJESREXX environment for REXX
- ISFCALLS environment for REXX (run SDSF REXX execs!)
- EJESJAVA for Java programs
- EJESAPI callable from HLASM, C/C++, COBOL, PL/I, etc. (REXX and Java interfaces are API exploiters.)

(E)JES “CORE”

PHOENIX
- ISPF
- TSO Cmd Proc
- Batch Commands

PHOENIX Users

TSO Users

Batch Job (No Language)

CLIST Language

TSO CLIST

BATCH CLIST

EJESTSO

EJESCICS

EJESLNK

EJESAPI

EJESREXX

EJESJAVA

EJESISFX (ISFCALLS)

EJESLINK

EJESCICI

CICS Users

PHOENIX

COBOL

PL/I

JAVA

Java Tomcat Server

WWW Users

Console Operators

Windows PC Users

Mobile workstation: Evo N800w

High Level Languages

CICS

HLASM

C/C++

COBOL

PL/I

JAVA

Complete your session evaluations online at www.SHARE.org/Anaheim-E
(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.
Other Nice Enhancements that Didn’t Make the Press Release

- Automatic console name collision resolution
- Improved control over settings notices
- ISPF panel title line overlay protection
- Extract enhancements
- Recipient lists for CAI email plug-in
- SMF record enhancements
- Security extensions user exit
- Eclipse documentation plug-ins
  - IBM Information Center-ready
Automatic Console Name Collision Resolution

• Default console name is chosen by EJESUX10
• Many customers implemented our distributed modification to append ISPF window id (1-9,A-W) to userid
  • Allowed unique consoles within an ISPF session, but not across the sysplex once multiple logon became allowed.
• New MCSXSUF installation option controls what happens if console name is already in use elsewhere in sysplex.
• If enabled, (E)JES will attempt to automatically resolve the name conflict when the console name has been assigned by (E)JES and not explicitly specified by the end user.
• It does this by varying the name in the last positions until it finds one that will activate.

Complete your session evaluations online at www.SHARE.org/Anaheim-Eval
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.
<table>
<thead>
<tr>
<th>Jobs</th>
<th>Resources</th>
<th>Devices</th>
<th>Tools</th>
<th>Filter</th>
<th>View</th>
<th>Options</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATUS</td>
<td>3,493S</td>
<td>141X</td>
<td>2,411W</td>
<td>35H</td>
<td>OT</td>
<td>54,935,116 Records</td>
<td>Row 86 of 2587</td>
</tr>
<tr>
<td>Command</td>
<td>display</td>
<td>Scroll</td>
<td>CSR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILTER=MaskChar=**, PSel=(JName=/<em>AUTO</em>/, Type=ALL), XSel=(), Filter=()</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cmd</td>
<td>JobName</td>
<td>JobID</td>
<td>Status</td>
<td>Process</td>
<td>StepNum</td>
<td>StepName</td>
<td>JP</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>BKUPOCL</td>
<td>J0451546</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>1</td>
<td>2</td>
<td>CC</td>
<td>3072</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jobs</th>
<th>Resources</th>
<th>Devices</th>
<th>Tools</th>
<th>Filter</th>
<th>View</th>
<th>Options</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATUS</td>
<td>3,493S</td>
<td>141X</td>
<td>2,411W</td>
<td>35H</td>
<td>OT</td>
<td>54,935,116 Records</td>
<td>Row 86 of 2587</td>
</tr>
<tr>
<td>Command</td>
<td>display v</td>
<td>Scroll</td>
<td>CSR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIEW=Arrange=DEFAULT, Detail=MIN, Sort=TIME/D, TopFind=OFF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cmd</td>
<td>JobName</td>
<td>JobID</td>
<td>Status</td>
<td>Process</td>
<td>StepNum</td>
<td>StepName</td>
<td>JP</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>BKUPOCL</td>
<td>J0451546</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>1</td>
<td>2</td>
<td>CC</td>
<td>3072</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jobs</th>
<th>Resources</th>
<th>Devices</th>
<th>Tools</th>
<th>Filter</th>
<th>View</th>
<th>Options</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATUS</td>
<td>3,493S</td>
<td>141X</td>
<td>2,411W</td>
<td>35H</td>
<td>OT</td>
<td>54,935,116 Records</td>
<td>Row 86 of 2587</td>
</tr>
<tr>
<td>Command</td>
<td>display ofv</td>
<td>Scroll</td>
<td>CSR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILTER=MaskChar=**, PSel=(JName=/<em>AUTO</em>/, Type=ALL), XSel=(), Filter=()</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPTION=CRDelay=1, Cursor=(Retain=ON, Select=OFF), Confirm=ON, DateFmt=YYYY/MM/DD, OPTION=NumChar=', ', OClass=' ', OvrType=ON, SelCmd=S, Snap=ON, TopSel=OFF, WClass=P, OPTION=XSel=NOSAVE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIEW=Arrange=DEFAULT, Detail=MIN, Sort=TIME/D, TopFind=OFF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cmd</td>
<td>JobName</td>
<td>JobID</td>
<td>Status</td>
<td>Process</td>
<td>StepNum</td>
<td>StepName</td>
<td>JP</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>BKUPOCL</td>
<td>J0451546</td>
<td>W-OUTPUT</td>
<td>OUTSERV</td>
<td>1</td>
<td>2</td>
<td>CC</td>
<td>3072</td>
</tr>
</tbody>
</table>
ISPF Panel Title Line Overlay Protection

• ISPF users can request that up to 17 bytes of session-identifying 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.
Extract Enhancements

• 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.

• 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 post-processors detect the boundary between the results of two different extracts to the same target location.
Recipient Lists for CAI Email Plug-in

- 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.
E-Mail Information:  
Transport: XMITIP  
From ... edjaffe@phoenixsoftware.com  
To ... edjaffe@phoenixsoftware.com ...  
Cc ... edjaffe@phoenixsoftware.com  
Bcc ... edjaffe@phoenixsoftware.com  
Subject: This is a test of some nice function

Cover Letter:  
The intent of this email is to demonstrate how the CAI email plug-in has been enhanced to support recipient lists. It also happens to show how you can keep typing without worrying about the end of the line. Format=flowed is used.
Recipient Lists Dialog for CAI Email Plug-in

- 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.
SMF Record Enhancements

• A new, self-describing format, that uses “triplets” to describe record segments, is used if you specify Format 1 on the SMFREC installation option. (Default is Format 0.)

• The advantage of the new format is that existing segments can be extended and new segments can be added in an upward-compatible way.

• 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.

• Beginning with this release, both date fields will use the standard SMF date format.
New Security Extensions User Exit

• New user exit EJESUX14 is designed to provide various security extensions. Currently only one function is provided: Data Set Browse Authority.

• 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.
Eclipse Documentation Plug-ins

Supported Documentation Formats

(E)JES documentation is now distributed in three formats:

<table>
<thead>
<tr>
<th>Format</th>
<th>File Name</th>
<th>Where Located</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe PDF documents</td>
<td>ejes.pdf_5.3.0.zip</td>
<td>SE/EDOCEJESS3AD</td>
</tr>
<tr>
<td>HTML documents</td>
<td>ejes.html_5.3.0.zip</td>
<td>SE/EDOCEJESS3HT</td>
</tr>
<tr>
<td>Eclipse documentation plugins</td>
<td>com.psi.ejes.pdf_5.3.0.jar</td>
<td>SE/EDOCEJESS3EC</td>
</tr>
</tbody>
</table>

All three formats are supported by servers running under z/OS. You can copy these files to other platforms as well.

The Eclipse documentation plugins are intended for use in an IBM InfoCenter on z/OS or other supported platform. The HTML format is a stand-alone version of the Eclipse-based documentation.

(E)JES documentation is no longer delivered in BookManager softcopy format.
Chapter 11. Using EJESMAIL to Email JES Job SPOOL Data

EJESMAIL is a 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.

EJESMAIL is invoked with the following syntax. Optional parameters must appear in the order shown:

```
>>>EJESMAIL-fromemail-toemail

CC cceemail
BCC bccemail
```

```
>-(NJE:njenode:smtpuserid
  SOCKETS:serveripaddr:serveripport
  JOB:jobname:jobid
  XMITIP

<-(DD:ddname.stepname.procstep
  SUBJECT:"subjectline"
```
Next Release Sneak Peek
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 \textbf{Expensive Task X} was reduced by 64% by splitting the work across three dispatchable units (SRBs).

• Moore's Law be Damned!! ?
(E)JES Web Performance

• 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.
• Vertical scroll processing is now fully virtualized.
• 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.
CPU Performance Benchmark Results
JES2 CPU Performance Benchmark: Between 3.5x and 12.5x
JES3 CPU Performance Benchmark: 5.4x
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.

<table>
<thead>
<tr>
<th>JobName</th>
<th>CPU-Time</th>
<th>ACPU-Time</th>
<th>zIIP-Time</th>
<th>GCP-Time</th>
<th>zICP-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOEUSER</td>
<td>00:06.15</td>
<td>00:12.20</td>
<td>00:05.94</td>
<td>00:05.94</td>
<td>00:00.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BEFORE</td>
</tr>
<tr>
<td>JOEUSER</td>
<td>00:07.16</td>
<td>00:29.12</td>
<td>00:21.71</td>
<td>00:06.91</td>
<td>00:00.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AFTER</td>
</tr>
<tr>
<td>JOEUSER</td>
<td>00:01.01</td>
<td>00:16.92</td>
<td>00:15.77</td>
<td>00:00.97</td>
<td>00:00.00</td>
</tr>
</tbody>
</table>
|          |          |           |           |          | DIFFERENCE

94% Offload

Complete your session evaluations online at www.SHARE.org/Anaheim-Eval
Questions?