## 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 GA is *expected* in September 2013.
- z/OS 2.1 JES3 support for (E)JES V5R2 still not fully validated.
  - Watch this space.
- V4R8 is the only active release to still support ESA/390 architecture.
- V4R8 will be stabilized after March 2013.
V5R1 Highlights
Pop-up Input Window

- Previously, an overtypeable column had to be defined and displayable as wide as any input to be placed into it.
- The new pop-up input window provides space for up to 126 characters to be input into any overtypeable field.
- To activate the pop-up input window, place your cursor on the column to be overtyped and press the Prompt key (usually F4).
Sysplex-wide Activity Display Scope

- Previously, ACTIVITY was always JESplex-wide. That is now the default value specified with ACPLEX JES.
- JESplex-wide information can be obtained using RMF, CMF or native (E)JES facilities.
- The new ACPLEX SYS value indicates a sysplex-wide scope. This scope depends entirely on RMF Sysplex Data Gathering Services, even for the current system's data. Sysplex-wide data cannot be obtained using CMF or native (E)JES facilities.

<table>
<thead>
<tr>
<th>JobName</th>
<th>Process</th>
<th>ASID</th>
<th>Pos</th>
<th>DP</th>
<th>Real</th>
<th>Paging</th>
<th>ExCP</th>
<th>CPU%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EJESC480</td>
<td>006F</td>
<td>N/S</td>
<td>F5</td>
<td>136MB</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>EJESC480</td>
<td>013D</td>
<td>N/S</td>
<td>F6</td>
<td>9MB</td>
<td>.00</td>
<td>.00</td>
<td>.08</td>
<td></td>
</tr>
</tbody>
</table>
Enhancements to Enclaves Display

• The following columns were added:

<table>
<thead>
<tr>
<th>Default Title</th>
<th>Description</th>
<th>Overtype</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prom</td>
<td>Promoted address space indicator.</td>
<td>No</td>
</tr>
<tr>
<td>zAAP-Time</td>
<td>CPU time consumed on zAAP processors</td>
<td>No</td>
</tr>
<tr>
<td>zACP-Time</td>
<td>GCP time consumed by zAAP-eligible work</td>
<td>No</td>
</tr>
<tr>
<td>zIIP-Time</td>
<td>CPU time consumed on zIIP processors</td>
<td>No</td>
</tr>
<tr>
<td>zICP-Time</td>
<td>GCP time consumed by zIIP-eligible work</td>
<td>Yes</td>
</tr>
</tbody>
</table>

• The following line command was added:

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Recursively invoke Enclaves display for work-dependent enclave.</td>
</tr>
</tbody>
</table>
Enhancements to Health Checker Display

- The following columns were added:

<table>
<thead>
<tr>
<th>Default Title</th>
<th>Description</th>
<th>Overtype</th>
</tr>
</thead>
<tbody>
<tr>
<td>RexxIn</td>
<td>REXX input data set name</td>
<td>No</td>
</tr>
<tr>
<td>RexxOut</td>
<td>REXX output data set name</td>
<td>No</td>
</tr>
<tr>
<td>LogStream</td>
<td>Name of the logstream used to record checks.</td>
<td>No</td>
</tr>
</tbody>
</table>

- The following line commands were added:

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>En</td>
<td>Extract health check messages to any extract target.</td>
</tr>
<tr>
<td>L</td>
<td>Invoke long Health Check History for selected check.</td>
</tr>
<tr>
<td>P#</td>
<td>Extract health check messages to Print 1 or Print 2.</td>
</tr>
<tr>
<td>S</td>
<td>Invoke short Health Check History for selected check.</td>
</tr>
</tbody>
</table>
New Health Check History Display

- Run history of a selected check.
- Either short history (up to 10 rows) or the complete long history (from the log stream).
- Browse and extract messages from any check iteration.

<table>
<thead>
<tr>
<th>HCHKHIST MVS60 ASM_LOCAL_SLOT_USAGE/IBMASM</th>
<th>Command</th>
<th>Run</th>
<th>Status</th>
<th>Result</th>
<th>Diag1</th>
<th>Diag2</th>
<th>RunDate</th>
<th>RunTime</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>17:22:08</td>
</tr>
<tr>
<td>63 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>16:52:08</td>
</tr>
<tr>
<td>62 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>16:22:08</td>
</tr>
<tr>
<td>61 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>15:52:08</td>
</tr>
<tr>
<td>60 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>15:22:08</td>
</tr>
<tr>
<td>59 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>14:52:08</td>
</tr>
<tr>
<td>58 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>14:22:08</td>
</tr>
<tr>
<td>57 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>13:52:08</td>
</tr>
<tr>
<td>56 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>13:22:08</td>
</tr>
<tr>
<td>55 SUCCESSFUL</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>00000000</td>
<td>00000000</td>
<td>2012/02/20</td>
<td>12:52:08</td>
</tr>
</tbody>
</table>

******************************************** Bottom of Data ********************************************
Action Messages on JES2 Syslog Browser

- Previously this support existed for JES3 only.

SYSLOG MVSA0/SA0 S0118897(SYSLOG006) 2012/02/19 10:02

Command ==> Scroll ==> PAGE
Current Find Text: Dataset 58 of 60

<-- 3----4----5----6----7----8----9----10-++>
10:02:28.99 INTERNAL 00000280 IXC307I STOP PATHOUT REQUEST FOR DEVICE 5022 COM
347 00000280 SUCCESSFULLY: SYSPLEX PARTITIONING OF LOCAL SYST
10:02:29.04 INTERNAL 00000280 IXC307I STOP PATHIN REQUEST FOR DEVICE 4011 COMP
351 00000280 SUCCESSFULLY: SYSPLEX PARTITIONING OF LOCAL SYST
10:05:08.01 SYSLOG 00000000 IEEE042I SYSTEM LOG DATA SET INITIALIZED
00:01:01.54 SYSLOG 00000000 IEEE042I SYSTEM LOG DATA SET INITIALIZED
17:48:04.81 INTERNAL 00000290 D C,HC,L=Z
17:48:04.83 INTERNAL 00000090 CNZ4100I 17.48.04 CONSOLE DISPLAY 801
B01 00000090 CONSOLES MATCHING COMMAND: D C,HC
B01 00000090 MSG:CURR=0 LIM=5000 RPLY:CURR=3 LIM=20
B01 00000090 HARDCOPY LOG=(SYSLOG,OPERLOG) CMDLEVEL=CMDS
B01 00000090 ROUT=(1-10,12-13,15-128)
B01 00000090 LOG BUFFERS IN USE: 0 LOG BUFFER LIMIT: 15
10.04.44 *1242 ISTEXC200 - DYN COMMANDS MAY BE ENTERED
09.52.18 *1233 ISTEXC200 - DYN COMMANDS MAY BE ENTERED
09.37.17 *1224 ISTEXC200 - DYN COMMANDS MAY BE ENTERED
07.05.09 DFHSM70 *ICH409I 878-000 ABEND DURING RACHECK PROCESSING
07.05.09 DFHSM70 *ICH409I 878-000 ABEND DURING RACHECK PROCESSING
04.51.04 *IOS003A 1501,INTERVENTION REQUIRED, READY THE LOADER
09.57.01 IOSHMCTL *IOSHM0803E HyperSwap Disabled
09.53.33 JES3 *IAT1005 SPOOL PARTITION PARTB IS FULL AND OVERFLOWED INTO
17.52.10 *HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF)
732 IXCH0242E One or more couple data sets have a single point of
17.37.08 *HZS0003E CHECK(IBMXCF,XCF_CDS_SPOF):
F1=Help F3=Exit F5=Rfind F6=Book F7=Up F8=Down F9=Swap
F10=Left F11=Right F12=Cancel
Programmable API Enhancements

- The new SDSALLOC and SDSFREE commands will allocate and free the data sets shown on Syslog browser.
  - Previously, the only way to get SDSB allocation for Syslog data sets was to access SYSLOG as an ordinary job.
- RECFM and LRECL for SDSB data sets are now surfaced to procedural language, REXX and Java APIs.
Email CAI Plug-in Enhancements

• Improved Transport Choices:
  • Previously, email could be delivered only via z/OS SMTP (or CSSMTP in z/OS 1.12 and higher).
  • Email can now also be delivered via direct sockets or a popular freeware utility called XMITIP.
  • You choose the email delivery mechanism via the Transport action bar item.

• Improved Address Book:
  • Pressing the Prompt key (F4) with the cursor positioned to an email address field on the dialog now invokes the address book.
  • Contacts can be manually added to or deleted from the address book.
  • If you activate the ISPF Workstation Agent (WSA), you can import a contact list from Microsoft Outlook, Mozilla Thunderbird or other popular email programs that run on your workstation.
Using Email CAI Plug-in

<table>
<thead>
<tr>
<th>Status</th>
<th>Command</th>
<th>File</th>
<th>Contacts</th>
<th>Transport</th>
<th>View</th>
<th>Options</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs Resources Devices Tools Filter View Options Help</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.370S</td>
<td>4X 276W</td>
<td>5H 0T</td>
<td>16,912,660 Records</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

E-Mail Parameters

**E-Mail Information:**

From: edjaffe@phoenixsoftware.com
To: 
Cc: 
Subject: Doc uploaded using z/OSMF

**Cover Letter:**
The problem determination data has been sent to the Phoenix Software website using the z/OSMF Incident Log. Cool! 8-

More: +

F1=Help F3=Exit F4=Lookup F7=Up F8=Down
F9=Swap F12=Cancel

<table>
<thead>
<tr>
<th>Job Number</th>
<th>Job Name</th>
<th>Status</th>
<th>Start Date</th>
<th>Start Time</th>
<th>End Date</th>
<th>End Time</th>
<th>Total Time</th>
<th>CPU Time</th>
<th>Work Time</th>
<th>Work Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>172</td>
<td>HPUTDDD</td>
<td>O</td>
<td>01/01/2023</td>
<td>00:00:00</td>
<td>11/02/2023</td>
<td>00:00:00</td>
<td>10 days</td>
<td>20 hours</td>
<td>30 minutes</td>
<td>12000000</td>
</tr>
</tbody>
</table>
Using Email CAI Address Book Import

Enter location and type of .CSV contacts file:

Host File:
Name...

Workstation File:
Name... c:\junk\contacts.csv

Choose one of the following file formats:
2  1. Outlook  2. Thunderbird

Options:
/ Overlay existing entries

Press ENTER to import or END to exit.
Using Email CAI Address Book Import

Enter location and type of .CSV contacts file:

Host File:
  Name ...

Choose one:
  1. Outlook  2. Thunderbird

Options:
/ Overlay existing entries

Press ENTER to import or END to exit.
F1=Help  F3=Exit  F10=Actions  F12=Cancel
Using Email CAI Address Book Import

File Contacts

Address Book Entries

Row 1,672 to 1,683 of 1,960

<table>
<thead>
<tr>
<th>Last</th>
<th>First</th>
<th>E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>Paul</td>
<td><a href="mailto:paulscott@phoenixsoftware.com">paulscott@phoenixsoftware.com</a></td>
</tr>
<tr>
<td>Scott</td>
<td>Paul</td>
<td><a href="mailto:paulscott@PhoenixSoftware.com">paulscott@PhoenixSoftware.com</a></td>
</tr>
<tr>
<td>Scott</td>
<td>Paul</td>
<td><a href="mailto:paulscott@PHOENIXSOFTWARE.COM">paulscott@PHOENIXSOFTWARE.COM</a></td>
</tr>
<tr>
<td>Scott</td>
<td>Paul</td>
<td><a href="mailto:PaulScott@phoenixsoftware.com">PaulScott@phoenixsoftware.com</a></td>
</tr>
<tr>
<td>Scott</td>
<td>Paul A.</td>
<td><a href="mailto:pscott@skycoast.us">pscott@skycoast.us</a></td>
</tr>
<tr>
<td>Scott</td>
<td>Paul A.</td>
<td><a href="mailto:PaulScott@PhoenixSoftware.com">PaulScott@PhoenixSoftware.com</a></td>
</tr>
<tr>
<td>Scott</td>
<td>Rob</td>
<td><a href="mailto:rob.scott@RocketSoftware.com">rob.scott@RocketSoftware.com</a></td>
</tr>
<tr>
<td>Scott</td>
<td>Rob</td>
<td><a href="mailto:rob.scott@ROCKETSOFTWARE.COM">rob.scott@ROCKETSOFTWARE.COM</a></td>
</tr>
<tr>
<td>Scott</td>
<td>Rob</td>
<td><a href="mailto:RSscott@rocketsoftware.com">RSscott@rocketsoftware.com</a></td>
</tr>
<tr>
<td>Scrima</td>
<td>Don</td>
<td><a href="mailto:dscrima@gmail.com">dscrima@gmail.com</a></td>
</tr>
<tr>
<td>Seay</td>
<td>Paul</td>
<td><a href="mailto:seay_pd@hns.com">seay_pd@hns.com</a></td>
</tr>
<tr>
<td>Seefeldt</td>
<td>Jerry</td>
<td><a href="mailto:jm@newera.com">jm@newera.com</a></td>
</tr>
</tbody>
</table>

F1=Help    F3=Exit    F10=Actions    F12=Cancel

INMX0001 I 0 message and 147 data records sent as 106 records to PHXHQ.SMTMP
INMX0011 Transmission occurred on 02/03/2011 at 17:27:37.

***
Dude, the job to send the requested trace to the
TSM support folks has finished. It is attached...
- Ed's evil twin! :D
Selective “Push” of Installation Defaults

- A new infrastructure was implemented to facilitate resetting all or part of end users' cross-session profile data. This allows administrators to "push" changes for selective profile fields out to users without requiring them to delete their profiles.

- New EJESPRS macro, used in EJESUX03, provides a standardized method of managing changes to profile data by using a serial number mechanism—numeric data “hardened” into the user's cross-session profile—to avoid unnecessary or disruptive updates.

- All existing popular modifications to EJESUX03, delivered in configuration member EJES$X03, were converted to use the new infrastructure.
Other V5R1 Enhancements of Note

• Require z/Architecture with the long-displacement facility.
• Support JES2 SPOOL Migration.
• Support JES3 Dynamic SPOOL Add.
• ISFCALLS enhancements from z/OS 1.10 through z/OS 1.13.
• More than 64 logical CPs, zIIPs and zAAPs per image.
• New ACTIVITY drill-down from job-oriented displays.
• JES2 restart after step completion, spin-ANY data set, and JOBRC.
• New Auto-Reply support on System Requests display.
• Enhanced LOG relative time navigation: (add minutes & seconds).
• Pattern Utility unconditional matching or “bracketing”.
• Major performance enhancement for accessing JES2 sysout from spin-off jobs (e.g., APPC/MVS or z/OS UNIX). Requires checkpoint mode Z11. (Similar to JES3 processing that existed since OS/390 1.3.)
• Auditing of SWB Modify requests: (new EJES112 message).
• Function key rework: (F4=Prompt, F17=RFINDP and others).
• Service download via HTTP: (requires cURL from z/OS UNIX).
V5R2 Highlights
Network Connections Display

- Supported for both JES2 and JES3.
- Shows information about networking connections to an adjacent node, including BSC NJE lines, NJE over SNA, and TCP/IP socket connections, as well as associated receivers and transmitters.
- To access, use the new **NETCONN** command or select **Network Connections** from the **Devices** pull-down menu under ISPF.
Network Servers Display

- Supported for both JES2 and JES3.
- Shows information about network servers, including NETSERV devices and BDT instances.
- To access, use the new **NETSERV** command or select **Network Servers** from the **Devices** pull-down menu under ISPF.

<table>
<thead>
<tr>
<th>NETSERV</th>
<th>PHXHQ</th>
<th>Network Servers Status</th>
<th>Row 1 of 2</th>
<th>Command ===›_</th>
<th>Scroll ===› CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cmd 1</td>
<td>1</td>
<td>NZSERV1 INACTIVE</td>
<td>192</td>
<td>YES NO NO</td>
<td></td>
</tr>
<tr>
<td>Row 2</td>
<td>2</td>
<td>HQSRV1 ACTIVE</td>
<td>0050 J0329969</td>
<td>NO NO NO</td>
<td></td>
</tr>
</tbody>
</table>

*** Bottom of Data ***
Sysout Classes Display for JES2

- This display is an analog to the already-existing JES3 display of the same name.
- Helps you manage sysout classes in the JESplex.
- To access, use the **SYSCLLS** command or select ** Sysout Classes** from the **Devices** pull-down menu under ISPF.

<table>
<thead>
<tr>
<th>Cmd</th>
<th>C Class-Type</th>
<th>Normal Disp</th>
<th>Abnorml Disp</th>
<th>Trunc</th>
<th>Tkcel</th>
<th>Sysname</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>PRINT</td>
<td>WRITE</td>
<td>WRITE</td>
<td>YES</td>
<td>YES</td>
<td>MVS70</td>
</tr>
<tr>
<td>B</td>
<td>PUNCH</td>
<td>WRITE</td>
<td>WRITE</td>
<td>YES</td>
<td>YES</td>
<td>MVS70</td>
</tr>
<tr>
<td>C</td>
<td>PRINT</td>
<td>WRITE</td>
<td>WRITE</td>
<td>YES</td>
<td>YES</td>
<td>MVS70</td>
</tr>
<tr>
<td>D</td>
<td>PRINT</td>
<td>WRITE</td>
<td>WRITE</td>
<td>YES</td>
<td>YES</td>
<td>MVS70</td>
</tr>
<tr>
<td>E</td>
<td>PRINT</td>
<td>WRITE</td>
<td>WRITE</td>
<td>YES</td>
<td>YES</td>
<td>MVS70</td>
</tr>
<tr>
<td>F</td>
<td>PRINT</td>
<td>WRITE</td>
<td>WRITE</td>
<td>YES</td>
<td>YES</td>
<td>MVS70</td>
</tr>
<tr>
<td>G</td>
<td>PRINT</td>
<td>WRITE</td>
<td>WRITE</td>
<td>YES</td>
<td>YES</td>
<td>MVS70</td>
</tr>
<tr>
<td>H</td>
<td>PRINT</td>
<td>HOLD</td>
<td>HOLD</td>
<td>YES</td>
<td>YES</td>
<td>MVS70</td>
</tr>
</tbody>
</table>
### “Smart” Help Pop-ups for Status and MaxComp Columns

#### Status: 3,229S 4X 606W 7H 1T 25,976,367 Records

<table>
<thead>
<tr>
<th>Command</th>
<th>JobName</th>
<th>JID</th>
<th>Status</th>
<th>Process</th>
<th>CJP</th>
<th>Pos</th>
<th>MaxComp</th>
<th>Records</th>
<th>Pages</th>
<th>H-OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPYHFS</td>
<td>J0254403</td>
<td>W-OUTPUT</td>
<td>OUTSER A 2</td>
<td>AB S722 999,142</td>
<td>0</td>
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<tr>
<td>RCVMAINT</td>
<td>J0254474</td>
<td>W-OUTPUT</td>
<td>OUTSER V</td>
<td>ABEND S722</td>
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<td></td>
</tr>
<tr>
<td>AMBLIST</td>
<td>J0254600</td>
<td>W-OUTPUT</td>
<td>OUTSER Q</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>EJESXPR</td>
<td>J0254689</td>
<td>W-OUTPUT</td>
<td>OUTSER A</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>EJESX3G</td>
<td>J0254962</td>
<td>W-OUTPUT</td>
<td>OUTSER A</td>
<td></td>
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<tr>
<td>EJESX3U</td>
<td>J0254963</td>
<td>W-OUTPUT</td>
<td>OUTSER R 4</td>
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</tr>
</tbody>
</table>

#### Status: 2,712S 463X 2,100W 307H 41T 11,662,109 Records

<table>
<thead>
<tr>
<th>Command</th>
<th>JobName</th>
<th>JobID</th>
<th>Status</th>
<th>Queue</th>
<th>AMbr</th>
<th>CJP</th>
<th>Pos</th>
<th>WPos</th>
<th>MaxComp</th>
<th>Records</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>LISTCATB8</td>
<td>J0038165</td>
<td>W-SCHENV</td>
<td>EXEC</td>
<td>A 9 1 1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LISTCATB8</td>
<td>J0038166</td>
<td>W-SCHENV</td>
<td></td>
<td>2 2</td>
<td>3</td>
<td>3</td>
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<td>LISTCATB8</td>
<td>J0038167</td>
<td>W-SCHENV</td>
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<tr>
<td>LISTCATB8</td>
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<td>W-SCHENV</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>LISTCATB8</td>
<td>J0038169</td>
<td>W-SCHENV</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LISTCATB8</td>
<td>J0038170</td>
<td>W-SCHENV</td>
<td>EXEC</td>
<td>A 9 6 6</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Status: 2,712S 463X 2,100W 307H 41T 11,662,109 Records

<table>
<thead>
<tr>
<th>Command</th>
<th>JobName</th>
<th>JobID</th>
<th>Status</th>
<th>Queue</th>
<th>AMbr</th>
<th>CJP</th>
<th>Pos</th>
<th>WPos</th>
<th>MaxComp</th>
<th>Records</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFZCIM</td>
<td>S0118526</td>
<td>QUEUED</td>
<td>PRINT</td>
<td>S 1 2K</td>
<td>AB SEC6 149</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SYSLOG</td>
<td>S0118514</td>
<td>QUEUED</td>
<td>PRINT</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>JES3</td>
<td>S0119129</td>
<td>QUEUED</td>
<td>PRINT</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DROURK3</td>
<td>T0119371</td>
<td>QUEUED</td>
<td>PRINT</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DROURK3</td>
<td>T0119386</td>
<td>QUEUED</td>
<td>PRINT</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>DROURK3</td>
<td>T0119399</td>
<td>QUEUED</td>
<td>PRINT</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EJES$LDL</td>
<td>J0119400</td>
<td>QUEUED</td>
<td>PRINT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EJES$LDL</td>
<td>J0119405</td>
<td>QUEUED</td>
<td>PRINT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- The job terminated because the output limits were exceeded.
- Scheduling environment not in proper state.
- Error that occurred in a z/OS UNIX Systems Services callable service.
- The reason code indicates why.
Mutual Drill-Down Between Activity and Process Status Displays

- The following line command was added to Activity:

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS</td>
<td>Invoke Process Status display for selected address space.</td>
</tr>
</tbody>
</table>

- The following line command was added to Process Status:

<table>
<thead>
<tr>
<th>Command</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC</td>
<td>Invoke Activity display for selected z/OS UNIX process.</td>
</tr>
</tbody>
</table>

PSTATUS PHXHQ2(S70) Command ==> 

<table>
<thead>
<tr>
<th>Cmd</th>
<th>JobName</th>
<th>JobID</th>
<th>Status</th>
<th>Owner</th>
<th>ASID</th>
<th>State</th>
<th>CPU%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BPXOINIT</td>
<td>STC</td>
<td>Running</td>
<td>OMVS</td>
<td>0047</td>
<td>MR</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>RESOLVER</td>
<td>STC</td>
<td>Running</td>
<td>TCP/IP</td>
<td>0027</td>
<td>1R</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TCP/IP</td>
<td>0027</td>
<td>1R</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SYSOPER</td>
<td>0028</td>
<td>1R</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OMVS</td>
<td>0000</td>
<td>1L</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TCP/IP</td>
<td>0026</td>
<td>MR</td>
<td>.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SYSOPER</td>
<td>003E</td>
<td>1R</td>
<td>1.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SSHDAEM</td>
<td>0030</td>
<td>1FI</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SYSOPER</td>
<td>0019</td>
<td>1F</td>
<td>.00</td>
</tr>
</tbody>
</table>

Line Commands

- AC Activity
- D Display Process
- Ka MVS Cancel
- KDa MVS Cancel/Dump
- UD Dump (SIGDUMP)
New Tabular Columns for Sysout Displays

- CrDate, CrTime, Age, and Bytes columns added wherever possible on job-, group- and data set-oriented displays.
- Step and Program columns added to data set-oriented displays.

<table>
<thead>
<tr>
<th>Cmd</th>
<th>DDName</th>
<th>Step</th>
<th>Program</th>
<th>Bytes</th>
<th>CrDate</th>
<th>CrTime</th>
<th>Age</th>
<th>Dest</th>
</tr>
</thead>
<tbody>
<tr>
<td>JESSGGLG</td>
<td>85,764</td>
<td>2012/05/12</td>
<td>22:21:42.52</td>
<td>59-11:25:48.03</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JESJCL</td>
<td>4,084</td>
<td>2012/05/12</td>
<td>22:21:42.52</td>
<td>59-11:25:48.03</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JESYMSG</td>
<td>171,528</td>
<td>2012/05/12</td>
<td>22:21:42.52</td>
<td>59-11:25:48.03</td>
<td>T</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMPOUT 1</td>
<td>GIMSMP</td>
<td>4,084</td>
<td>2012/05/12</td>
<td>22:21:42.52</td>
<td>59-11:25:48.03</td>
<td>T</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMPRPT 1</td>
<td>GIMSMP</td>
<td>4,084</td>
<td>2012/05/12</td>
<td>22:21:42.52</td>
<td>59-11:25:48.03</td>
<td>T</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMPOUT 2</td>
<td>GIMSMP</td>
<td>4,084</td>
<td>2012/05/12</td>
<td>22:21:42.52</td>
<td>59-11:25:48.03</td>
<td>T</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMPRPT 2</td>
<td>GIMSMP</td>
<td>4,084</td>
<td>2012/05/12</td>
<td>22:21:42.52</td>
<td>59-11:25:48.03</td>
<td>T</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
L Command ReplacesFAIL on Device Displays

- FSS display
- Printer/Punch display
- Network servers and connections displays

<table>
<thead>
<tr>
<th>Cmd</th>
<th>FSS</th>
<th>Type</th>
<th>Status</th>
<th>JobID</th>
<th>SysName</th>
<th>ASID</th>
<th>Strt</th>
<th>Term</th>
<th>ProcName</th>
<th>NewProc</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CIFS1</td>
<td>CI</td>
<td>ACTIVE</td>
<td>S0333823</td>
<td>MVS60</td>
<td>004E</td>
<td>YES</td>
<td>YES</td>
<td>JES3CI</td>
<td></td>
</tr>
<tr>
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<td>CIFS2</td>
<td>CI</td>
<td>ACTIVE</td>
<td>S0333831</td>
<td>MVS70</td>
<td>0132</td>
<td>YES</td>
<td>YES</td>
<td>JES3CI</td>
<td></td>
</tr>
</tbody>
</table>

**Line Commands**
- AC Activity
- D Display
- K MVS Cancel
- L Fail
- PR Printer/Punch

***** Bottom of Data *******************************
Enclaves Display

• Accumulated enclave zAAP and zIIP time is now normalized.
• This change impacts customers with sub-capacity System z models.
• Normalized values show the amount of CPU that would have been accumulated if the same work had run on a standard CP.
• This allows you to make valid (“apples to apples”) comparisons of accumulated time on CP, zAAP, and zIIP.

```
<table>
<thead>
<tr>
<th>ENCLAVE</th>
<th>PHXHQ(MVS70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cmd</td>
<td>Token</td>
</tr>
<tr>
<td>00000002C000000004</td>
<td>07:52.29 07:48.77 00:03.52</td>
</tr>
<tr>
<td>0000000440000031D</td>
<td>00:09.15 00:09.08 00:00.07</td>
</tr>
<tr>
<td>0000000300000031E</td>
<td>00:08.52 00:08.40 00:00.12</td>
</tr>
<tr>
<td>0000000280000031B</td>
<td>00:06.77 00:06.69 00:00.08</td>
</tr>
<tr>
<td>000000034000000CF3</td>
<td>00:00.31 00:00.31 00:00.00</td>
</tr>
</tbody>
</table>
```
User Log (ULOG) Browser
Console Message Format

• EMCS message format was previously not customizable.
• In V5R2, message format can be specified in two ways:
  • **MFORM** command sets the message format in advance of implicit or explicit console activation
  • **MFORM** operand on the **CONSOLE ACTIVATE** command specifies the message format during console activation
• **MFORM** allows the user to add time, system, or job ID to the console messages by specifying values similar to those specified on the **K S,MFORM=** MCS console command.
• The message format setting is saved in the cross-session profile.
MFORM Command

The T, S and J parameters may be separated by blanks, commas or not separated at all and may appear in any order. **MFORM S** is the default:

```
IEE112I 13.37.57 PENDING REQUESTS 179
RM=3    IM=0    CEM=0    EM=0    RU=0    IR=0    AMRF
ID:R/K  T SYSNAME MESSAGE TEXT
  3806 R MVS60   *3806 ISTEXC200 - DYN COMMANDS MAY BE ENTERED
  3797 R MVS70   *3797 ISTEXC200 - DYN COMMANDS MAY BE ENTERED
  3788 R MVSA0   *3788 ISTEXC200 - DYN COMMANDS MAY BE ENTERED
```
User Log (ULOG) Browser Migration ID Removal

- **MIG|NOMIG** operand was removed from the **CONSOLE ACTIVATE** command.
- Migration ID value was removed from the ULOG Browser title line
- The **MCSXMIG** installation option was removed.

```
Jobs Resources Devices Tools Filter View Options Help

ULOG Console(EDJX2 ) Line 1 of 6
Command ===>
Scroll ===>
CSR

Current Find Text:
4---------5---------6---------7---------8---------9---------10---------11---------
EJES500 Console EDJX2 was successfully activated
$CT(128760),P
$HASPA890 JOB(DROURK3)
$HASPA890 JOB(DROURK3) STATUS=(AWAITING PURGE),CLASS=TSU,
$HASPA890 PRIORITY=1,SYSAFF=(ANY),HOLD=(NONE),
$HASPA890 PURGE=NO,CANCEL=YES

******************************************************************************************
```

Complete your sessions evaluation online at SHARE.org/SFEval
Long Command Processor Enhancements

• Dynamic Sizing
  • The number of commands shown is now variable, depending upon the depth of the 3270 device. (Was previously eight per scroll.)
  • All 32 stored commands visible on modern, larger displays.
• Row Numbering (independent of RowNum setting)
• Row Locking via SELECT command.
  • Locked row not removed when new command added to a full list.
  • Unlocked rows appear as normal protected data (usually blue); Locked rows appear as colorized protected data (usually green).
• Row Clearing via SELECT and CLEAR commands.
Long Command Processor Enhancements

<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>
</table>

Long Command Processor

Enter Long Command Below:

```plaintext
===⇒ _
```

Place the cursor on a command and press ENTER to retrieve it: More: +

1  ⇒ /d xcf,couple,type=cfrm
2  ⇒ /slip set,id=eej1,j=c1condor,c=80a,a=svcd,end
3  ⇒ /d asm
4  ⇒ /d net,majnodes
5  ⇒
6  ⇒
7  ⇒
8  ⇒
9  ⇒
10 ⇒
11 ⇒
12 ⇒
13 ⇒
14 ⇒

F1=Help    F3=Exit    F10=Actions    F12=Cancel
Forms ID On Print Extract Parameters

- Previous releases allowed only a 1-4 character **Forms ID** value due to the restriction that MVS JCL and Dynamic Allocation allow only a 1-4 character SYSOUT forms value. Now, up to 8 chars are accepted.
- If you specify a value >4 chars long, (E)JES automatically requests creation of a Dynamic Output Statement—as if an asterisk (*) was placed into the **Output ref.** field. Your **Forms ID** value is automatically propagated to the **FORMS** input field on the panel where Dynamic Output parameters are specified.
- This **FORMS** value does not *permanently* overlay an existing value.
- At allocation time, a long value is supplied via Dynamic Output only. No value is presented to Dynamic Allocation as SYSOUT forms.
- A long **Forms ID** value is not allowed when **Output ref.** specifies a JCL or Dynamic Output descriptor name since (E)JES can propagate only to output descriptors it actually creates.
Parameterized Installation Options

• This allows you to specify options via parmlib member rather than **EJESOPT** macro and SMP/E USERMOD.
  • The **SVC** and **XWASIZE** options must still be specified through the **EJESOPT** macro. All other options may be specified via the parmlib member.
  • These two options are merged from the macro-based specifications. All other parameterized options completely replace their macro counterparts.

• **WHEN** clauses allow one member to specify options for different environments.

• System symbol substitution is performed.

• Parameterized installation options are activated using the **EJESPOPT** authorized TSO command.
Parameterized Installation Options

/***************************************************************/
/**
 * (E)JES OPTIONS
 */
/**************************************************************/

OPTIONS
*/ */
/* Locale formatting: */
*/
  DATEFMT(YYYYMMDD)   /* Default is: YYYYDDD */
  DATESEP(SLASH DOT)  /* Default is: SLASH DOT */
  LANG(ENU)           /* Default is: ENU */
  NUMCHAR(',' '.' )   /* Default is: ',' '.' */
/* Security: */
*/
  SAFTYPE(RACF/ACF2/TOPS) /* Default is: no SAF support */
  SAFRCLS(
    SDSF    /* Default is: EJES JESSPOOL */
    JESSPOOL    /* Default is: EJES JESSPOOL */
    WRITER    /* Default is: EJES JESSPOOL */
    OPERCMDS    /* Default is: EJES JESSPOOL */
    JESSPOOL    /* Default is: EJES JESSPOOL */
    XFACILIT    /* Default is: EJES JESSPOOL */
  )
/*
  NOSAFTRACE        /* Default is: NOSAFTRACE */
  SAFNODE           /* Default is: SAFNODE */
  SAFJBID(JOB)      /* Default is: JOB */
  NODDSDSNAM        /* Default is: NODDSDSNAM */
  NOSAFTABC         /* Default is: NOSAFTABC */
  NOSAFPVTX         /* Default is: NOSAFPVTX */
  SUBUACC(ALTER)    /* Default is: ALTER */
  NOSUBXTND         /* Default is: NOSUBXTND */
*/
Parameterized Installation Options

/* SAFVLIM(                */
/*           JOBS            /* Default is: no SAF-based      */
/*           DATASETS        /*   view limiting occurs.       */
/*           DJCS            /*   .                           */
/*           PRPUNS          /*   .                           */
/*           NODES           /*   .                           */
/*           SPOOL           /*   .                           */
/*           FSS             /*   .                           */
/*           ENCLAVES        /*   .                           */
/*           )               /*   .                           */
/*                      */
/* Performance:                                               */
/*   DYNMRET(JOBS)           /* Default is: JOBS              */
/*   ISALSIZ(256)            /* Default is: 256               */
/*   JOBLMMU(100)            /* Default is: 100               */
/*   JOBLMSU(1000)           /* Default is: 1000              */
/*   SAFLMMU(100)            /* Default is: 100               */
/*   SAFLMSU(1000)           /* Default is: 1000              */
/*   POOLSIZ(4025)           /* Default is: 4025 (16MB)       */
/*   SPIOTHR (2048)          /* Default is: 2048               */
/*                      */
/* DASD Allocations:                                          */
/*   DSNSIZE(10 30 CYL)      /* Default is: 1 15 TRK          */
/*   DSNUNIT(SYSALLDA)       /* Default is: SYSALLDA          */
/*   DSNVOL(volume)          /* Default is: not used           */
/*   DSNMGCL(mgmtclas)       /* Default is: not used           */
/*   DNSTCL(storclas)        /* Default is: not used           */
/*   VIOUNIT(unitname)       /* Default is: VIO                */
/*                      */
/*                      */
... (and more...)}
Parameterized Installation Options

<table>
<thead>
<tr>
<th>EJESPOPT</th>
<th>QUERY</th>
<th>NOECHO</th>
<th>NOSUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHECK</td>
<td>ECHO</td>
<td>SUMMARY</td>
<td></td>
</tr>
<tr>
<td>UPDATE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWITCH</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**QUERY**
Displays the current and previous policy status on the system.

**CHECK**
Requests syntax checking only of the named member.

**UPDATE**
Requests syntax checking of the named member and, if successful, an update of current live policy on the system. The success or failure of this request is logged on the system log.

**SWITCH**
(E)JES maintains two options policies in memory: the one being accessed by users, known as the current policy, and the one that was current prior to the last UPDATE, known as the previous policy. When you specify SWITCH, (E)JES switches the current and previous policy memory pointers. The current policy becomes previous and the previous policy becomes current. This can be used to “back out” an erroneous policy update.

**[NO]ECHO**
Indicates whether policy statements should be echoed to the output stream. This parameter applies only to the CHECK and UPDATE requests.

**[NO]SUMMARY**
Indicates whether an options summary should be echoed to the output stream. This parameter does not apply to SWITCH requests.
Parameterized Installation Options

READY
ejesoopt update(psiejopt) summary

EJEST01I EJESREL(0520) HWNAME(STARBASE) LPARNAME(MVSA0) VMUSER()
EJEST01I SYSPLEX(PHXHQ) SYSNAME(MVSA0)
EJEST08I All specifications are valid
EJEST40I Options summary:
EJEST41I Options specified via EJESOPT macro:
EJEST41I SVC number is 252 (Standard SVC used) SVC
EJEST41I User Exit Work Area is 002048 bytes long XWASIZE
EJEST42I Locale formatting:
EJEST42I Gregorian date format is DD/MM/YYYY DATEFMT
EJEST42I Julian date format is YYYY.DDD DATESEP
EJEST42I Numeric magnitude separator character is ',' NUMCHAR
EJEST42I Numeric decimal separator character is '.' NUMCHAR
EJEST43I Security:
EJEST43I SAF security tailored for RACF SAFTYPE
EJEST43I SAF resource classes:
EJEST43I SDSF (E)JES-architected resources SAFRCLS
EJEST43I JESSPOOL IBM-architected job resources SAFRCLS
EJEST43I WRITER IBM-architected writer device resources SAFRCLS
EJEST43I OPERCMDS IBM-architected system command resources SAFRCLS
EJEST43I JESSPOOL IBM-architected job data set resources SAFRCLS
EJEST43I XFACILIT IBM-architected extended facility resources SAFRCLS
EJEST43I TSOAUTH IBM-architected TSO authorization resources builtin
EJEST43I SAF checking activity will not be traced SAFTRAC
EJEST43I SAF resources for jobs/datasets will include node name SAFNODE
EJEST43I SAF resources containing JES3 jobids will use JOB SAFJBID

(and more...)
Optional Disaster Recovery Mode Activation

• Once Disaster Recovery Mode begins, the installation is expected to request, download and install a new license with an embedded 7, 14 or 21-day grace period. This requirement was inconvenient for situations in which the DRM activation was accidental.

• The new DRM installation option specifies whether Disaster Recovery Mode is allowed to start if (E)JES is invoked in an unlicensed environment.

• With this option disabled, an invocation of (E)JES in an unlicensed environment will not trigger Disaster Recovery Mode. Rather, message EJES003 will be issued and the (E)JES session will immediately terminate.
Requesting a License Using z/OS Facilities – No Web Browser, No Email

- Under ISPF, invoke the new EJESDLIC REXX exec.
- Fill in the values as directed on the ISPF panel and press <Enter>. (The values are saved in your ISPF profile.)
- If the free-form response to your request appears correct, press <Enter> to submit job EJES$LDL.
- The EJESDLIC utility, executed by job EJES$LDL, looks for your license file every minute for up to one hour. After the file is downloaded, member EJES$LIC is automatically updated with the new license string. If the EJES$LDL job completes normally, you should simply be able to submit EJES$LIC to install the new license.
- EJESDLIC requires cURL—delivered by IBM at no additional charge as part of the z/OS UNIX Ported Tools Supplemental Toolkit.
Requesting a License Using z/OS Facilities – No Web Browser, No Email

License Code Request Utility

Command ==> _

More: +

Phoenix Credentials:
  Userid ===> edjaffe
  Password ===> iscool
  CPU Serial ===> 09632  (Serial and type of
  CPU Type ===> 2098  a licensed machine)

Contact Information:
  Your CustNum ===> 01234
  Your Name ===> Ed Jaffe
  Your Company ===> Phoenix Software International
  Your Phone ===> 310-338-0400X318
  Your Email ===> edjaffe@phoenixsoftware.com

License Request:
  Grace Period ===> 7  (7, 14 or 21)
  Reason ===> 1  (1=DR Test, 2=Real DR, 3=Machine Inoperable)

Parameters for Local Work Files:
  Your TSO/E Prefix ===> EDJX1
  Unit name ===> SYSALLDA
  F1=Help   F3=Exit   F12=Cancel
Change to License Acceptability

• Prior (E)JES releases would accept a license generated by an older release.

• V5R2 (E)JES will accept a license generated by an equal or higher release, but not a lower release.

• This change affects customers that might be accustomed to carrying old licenses forward to new releases.
  • The new approach requires you to use the new license that is already being sent to you (along with the 34-digit PFI unlock code) as part of the new install. This should be a very minor procedural change.

• \texttt{GENREL=} reported by the \texttt{LICSTAT} command displays the (E)JES release for which the license was generated.
Integer Scaling Suffixes

- Previously, scaled integer values were formatted with a suffix of T, M, or B to indicate thousands (10^3), millions (10^6), or billions (10^9) respectively. These non-standard suffixes were USA-centric, which caused confusion, and made potential future scaling to higher values (e.g., 10^{12}, 10^{15}, 10^{18}) problematic.

- In V5R2, scaled values are formatted with a suffix of K, M, or G to indicate kilo-(10^3), mega-(10^6), or giga-(10^9) respectively.

- This change might create a migration action if you have procedures that ‘screen scrape’ or otherwise attempt to translate scaled values into binary integers. API exploiters should not be affected because the unscaled integer values have been available from the beginning.
Larger Elapsed Time Values

• In prior releases, the maximum value for an elapsed time was 99-23:59:59.99. Elapsed time values of 100 days or more were formatted as asterisks (an indication of overflow).

• In this release, the maximum width of the days portion of an elapsed time value has been increased to four digits.

• The intelligent formatting rules for elapsed times values have been updated to do the “right” thing when the number of days is <= 100, >=100, or >=1000. There is no need to widen any date display fields.

• API exploiters will see the new, full-size elapsed time field for all such dates.
Faster Pattern Utility Matching

• Matching for the Pattern Utility has been enhanced to use the SRST hardware instruction.
• Empirical measurements show this technique is far faster on modern System z processors than alternatives such as the TRT instruction or “brute force” matching techniques using CLI/CLC.
• **Note:** The SRST approach has been used by the FIND command for quite some time.
Help Load Library Removal

• The SEJEHENU, AEJEHENU, SEJEHENP and AEJEHENP load libraries have been removed from the product.
• Help in non-ISPF environments is now handled by dynamically allocating the ISPF panel library and translating the appropriate help panel(s) as required.
• The new HELPDSN installation option was introduced to specify the name of the ISPF panel library where the help members reside.
TP Monitor System Search For Executable Modules

• In releases prior to V5R1, the `SYSTEM_FILE(LOAD)` specification was used to specify the data set names of the libraries containing application modules to be loaded. A STEPLIB concatenation was also required for the TP Monitor’s own system-level modules.

• In release V5R1, all libraries containing modules to be loaded were specified via the STEPLIB concatenation.

• In V5R2, the TP Monitor is now able to load (E)JES modules from LPA and LNKLST, as well as from STEPLIB. The TP Monitor load library continues to be listed on the STEPLIB concatenation.
V5R3 Preview
Support for z/OS 2.1 New Functions

• As this presentation is authored, it remains unknown how much new z/OS 2.1 function will be disclosed by IBM in its preview scheduled to coincide with SHARE in San Francisco.
  • Support for 4-billion spin data sets in JES2 (already in V5R2)
  • Support for JES3 dynamic spool removal.
  • Display 64-byte job correlator
  • 8-character job classes for JES2
• There are many other not-yet-disclosed z/OS 2.1 enhancements we are supporting in V5R3.
Previously Documentation Was Distributed in the Following Formats

- IBM BookManager books
  - Individual parts in SEJEPUBS and SEJEPSHF
- Adobe PDF documents
  - Individual parts in SEJEPDF
- HTML documents
  - A single part (zip file) in SEJEHTML
  - 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/unload the three parts to z/OS UNIX directories of your choosing.

**QUESTION:** Is this a better approach than installing ++JAR and ++HFS into z/OS UNIX directory created by ZEJ53U0?

<table>
<thead>
<tr>
<th>Format</th>
<th>File Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eclipse</td>
<td>com.psi.ejes_doc.5.3.0.jar</td>
</tr>
<tr>
<td>Adobe</td>
<td>ejes_pdf.5.3.0.zip</td>
</tr>
<tr>
<td>HTML</td>
<td>ejes_html.5.3.0.zip</td>
</tr>
</tbody>
</table>
Hold Display

The following column was added for JES2:

<table>
<thead>
<tr>
<th>Default Title</th>
<th>Description</th>
<th>Overtype</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Time since output was created</td>
<td>No</td>
</tr>
</tbody>
</table>

The following columns were added for JES3:

<table>
<thead>
<tr>
<th>Default Title</th>
<th>Description</th>
<th>Overtype</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bytes</td>
<td>Number of output bytes</td>
<td>No</td>
</tr>
<tr>
<td>CrDate</td>
<td>Date output was added to queue</td>
<td>No</td>
</tr>
<tr>
<td>CrTime</td>
<td>Time output was added to queue</td>
<td>No</td>
</tr>
<tr>
<td>Age</td>
<td>Time since output was created</td>
<td>No</td>
</tr>
</tbody>
</table>
Syntax

```
FILTER
   column_value
   column_op_value
   TRUE
   FALSE
   CT
   CTFALSE
   SUSPEND
   SUSP
   S
   RES
   OFF
```

column
- The name or title of a column on the display. Prefix the value with a plus symbol (+) to add a new metafilter. Otherwise, all metafilters will be replaced.

op
- Comparison operators such as =, <=, =>, <, >=, ==, EQ, NE, GT, LT, GE or LE

value
- Comparison value appropriate to the underlying data type.

AND
- Boolean operator for ANDing with next metafilter.

OR
- Boolean operator for ORing with next metafilter.

TRUE
- Display only rows that match the metafilters.
(E)JES Web User Interface

- (E)JES V5R3 delivers a web-based user interface that exploits its Java API and runs under Apache Tomcat for z/OS.
  - Apache Tomcat is an open source software implementation of the Java Servlet and JavaServer Pages technologies and is a trademark of the Apache Software Foundation.
- This interface, which we currently call (E)JES Web—subject to change, of course—will continue to be improved over time with the intent of eventually creating a de-facto interface choice for (E)JES users with little or no mainframe experience.
(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, Infragistics igGrid, HTTP and others.
<table>
<thead>
<tr>
<th>JobName</th>
<th>JobID</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUNITOR</td>
<td>JO801083</td>
<td>X-JES3</td>
</tr>
<tr>
<td>NJECOMS</td>
<td>JO801142</td>
<td>X-JES3</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO801274</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO801278</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO803284</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO803288</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>TECHOFF1</td>
<td>JO804284</td>
<td>H-OPER</td>
</tr>
<tr>
<td>TECHOFF2</td>
<td>JO804285</td>
<td>H-OPER</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO805993</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO805999</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO806080</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>TIVSMRT</td>
<td>JO806715</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>TIVSMRT</td>
<td>JO806673</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>TIVSMRT</td>
<td>JO806876</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO807847</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO807851</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>LOGSAV0</td>
<td>JO807852</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>SMOREC</td>
<td>JO808547</td>
<td>H-OPER</td>
</tr>
<tr>
<td>TIVSMRT</td>
<td>JO808922</td>
<td>W-OUTPUT</td>
</tr>
<tr>
<td>TECHOFF1</td>
<td>JO809395</td>
<td>H-OPER</td>
</tr>
</tbody>
</table>

Additional columns include:
- NumStep
- StepName
- JP
- MaxComp
- Records
- Lines
- Pages

Functional Subsystems include:
- JES3 Members
- Job Class Groups
- Job Classes
- Network Connections
- Network Servers
- Nodes
- Printers & Punched
- Spool Partitions
- Spool Volumes
- Sysout Classes

Records detail include:
- 37329721 LINES - 0 PAGES
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

PHOENIX

TSO Users

Batch Job (No Language)

CLIST Language

Programmable

Batch Job

Command Proc

ISPF

BATCH

PhoENIX Users

CICS Users

CICS

High Level Languages

EJESCICS

EJESAPI

EJESREXX

Java

Apache Tomcat Server

Windows PC Users

Console Operators

WWW Users
API Updates

• (E)JES Web is a major API exploiter.
• As requirements are recognized, they are implemented throughout the entire API stack:
  • EJESAPI and EJESAPI4 (HLASM, C/C++, etc.)
  • EJESREXX (REXX)
  • EJESJAVA (Java)
• This release adds (so far):
  • Tabular row attributes (active emphasis, metafilters colorization, etc.)
  • Line commands array
  • Additional security capabilities
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.
Miscellaneous Updates

• New function key to clear all input on pop-up windows.
• New CRETAIN=None 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.)
• New KEEPOPEN option for non-directed batch extract (i.e., to the EJESEXTR 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.
Miscellaneous Updates (continued…)

• Begin date on SMF record now uses SMF format
  • Previously, SMF format was used for the date in the SMF header but not for the begin date in the body of the record. The use of two different date formats was confusing.
  • Native (E)JES dates use yyyy to represent a four-digit year. SMF dates this century use 01yy and you’re supposed to add 1900 to get yyyy.
  • **Note:** Recent MXG releases “automagically” handle (E)JES SMF records both before and after this change. So, no update from MXG is needed (unless you are back-level).
Currently Experimenting with Chorus Software Manager from CA Technologies

- As currently envisioned, 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.
Target Zone Setup

This step lets you set up parameters for the new Target zone and all Target libraries that are related to it.

CSI VSAM Parameters

Name*: EJESTZIN
Create New CSI Data Set

Dataset Name Prefix: EDJXADM.CSMTEST

Catalog:

Cross-Region: 2

Cross-System: 3

Target Libraries Allocation Parameters

High-Level Qualifier*: EDJXADM.CSMTEST

DSN Type: LIBRARY

SMS Parameters

Storage Class: VOLSER:
Management Class:
Unit*: 3380

Data Class: Catalog: YES
CA Mainframe Software Manager™ - Task Details: - Mozilla Firefox

Logged in as: EDIXADM (Log Out)

Software Status | Software Catalog | SMP/E Environments | Deployments | Configurations | System Registry | Tasks | Settings

Search
Search For:
Search In:
Products

Actions
Update Catalog Tree
Show LMP Keys
Add Product
Install External Package
Add CA RS File
Update HOLDDATA

Filter
Show:
All

Available Products

- CA
  - PHOENIX

Search:

(E)JES V5R3 (Enhanced JES Systems Management)

50%

Executing SMP/E APPLY - Waiting for GIMSMP

Name: (E)JES V5R3 (Enhanced JES Systems Management)
Task ID: 27
User ID: EDIXADM
Status: Executing
Status Message: Executing SMP/E APPLY - Waiting for GIMSMP

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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 well-performing 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 resource-intensive interface available: the JES-provided SSI 80.
• Our internal benchmark testing against the most readily-available 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
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 readily-available 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.

<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>
<th></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>
<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>
<td>AFTER</td>
</tr>
</tbody>
</table>

**DIFFERENCE**

| JOEUSER  | 00:01.01 | 00:16.92  | 00:15.77  | 00:00.97 | 00:00.00  | 94%   |
Questions?