

(E)JES®

JES Spool Interface Shoot-Out

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Session 2342



SHARE in Seattle

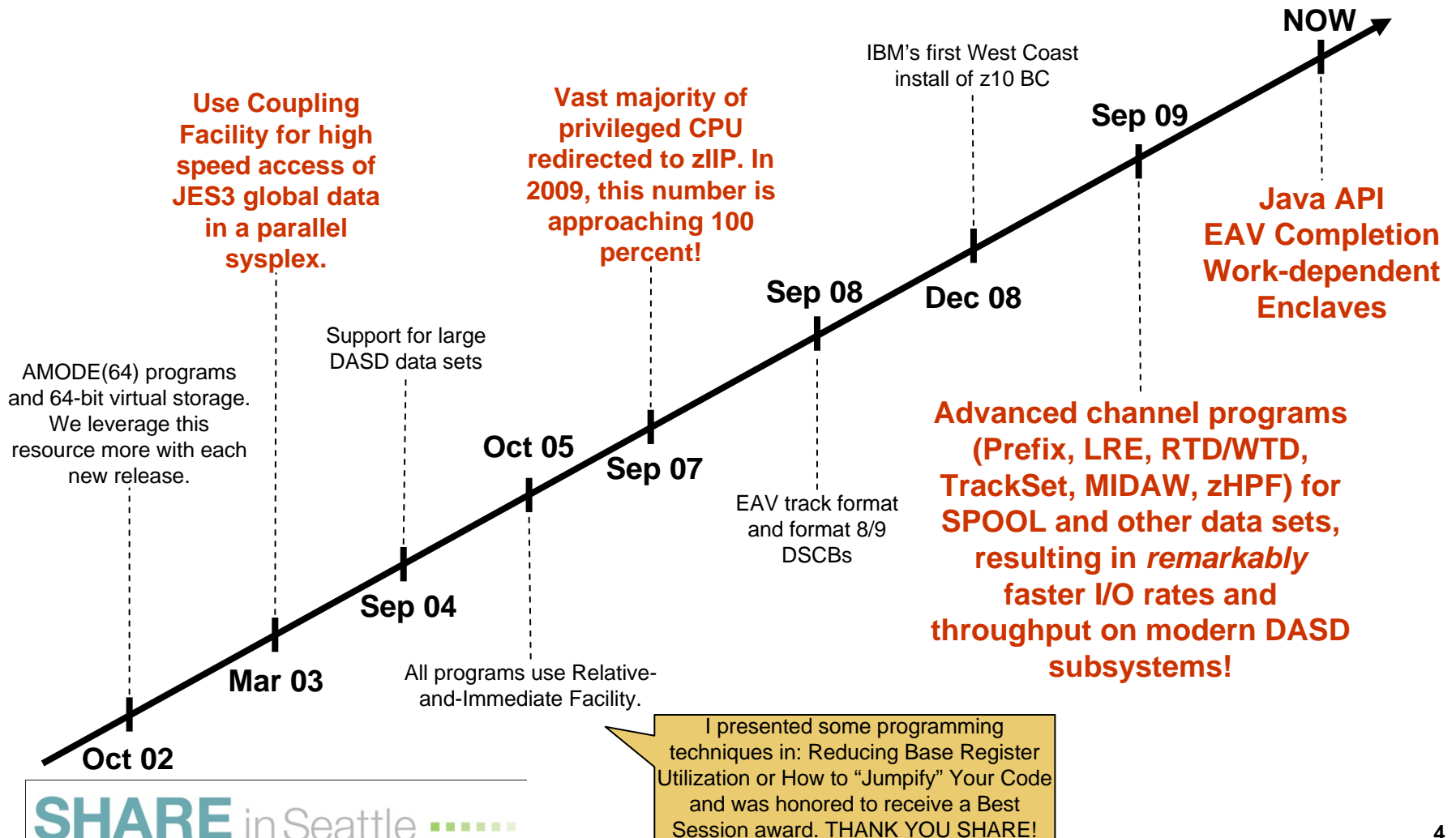
What Is (E)JES?

- (E)JES is a system management tool that provides information to monitor, manage, and control a z/OS JESplex.
- (E)JES consists of panels that provide immediate and current information about jobs, devices, queues, and other resources.
- From this series of panels, you can control the processing of jobs and the operation of system resources, browse any data on SPOOL (even JES control blocks), and issue system commands.
- Easily access and modify all attributes for jobs, started tasks, TSO users, APPC/MVS transaction jobs, or z/OS UNIX processes running anywhere in your JESplex.
- (E)JES can be used interactively via 3270 terminal or Windows PC workstation client, or programmatically using many popular languages.
- What does the **(E)** stand for?
 - **(E)**azy? **(E)**xtended? **(E)**nhanced? **(E)**xceptional? **(E)**d Jaffe?
 - We report; you decide!

We Focus On Leveraging The Latest Hardware/Software Technology. Why?

- We care about performance.
 - The latest technology usually means “better performing”.
- We care about reducing customer costs.
 - The latest technology usually helps reduce customer costs.
- We support the z/OS platform!
 - Leveraging the latest technology helps our platform compete against alternatives and remain viable.
- We are a small, “nimble” company.
 - We don’t answer to shareholders w/quarterly profit demands.
 - We stay in touch with our code; we don’t have “legacy” routines people are afraid to change.
- Technology is just plain cool! 8-)

Cool Technology We Leveraged Over The Past Several Years...



We Focus On Providing The Best Possible Functionality And User Experience. Why?

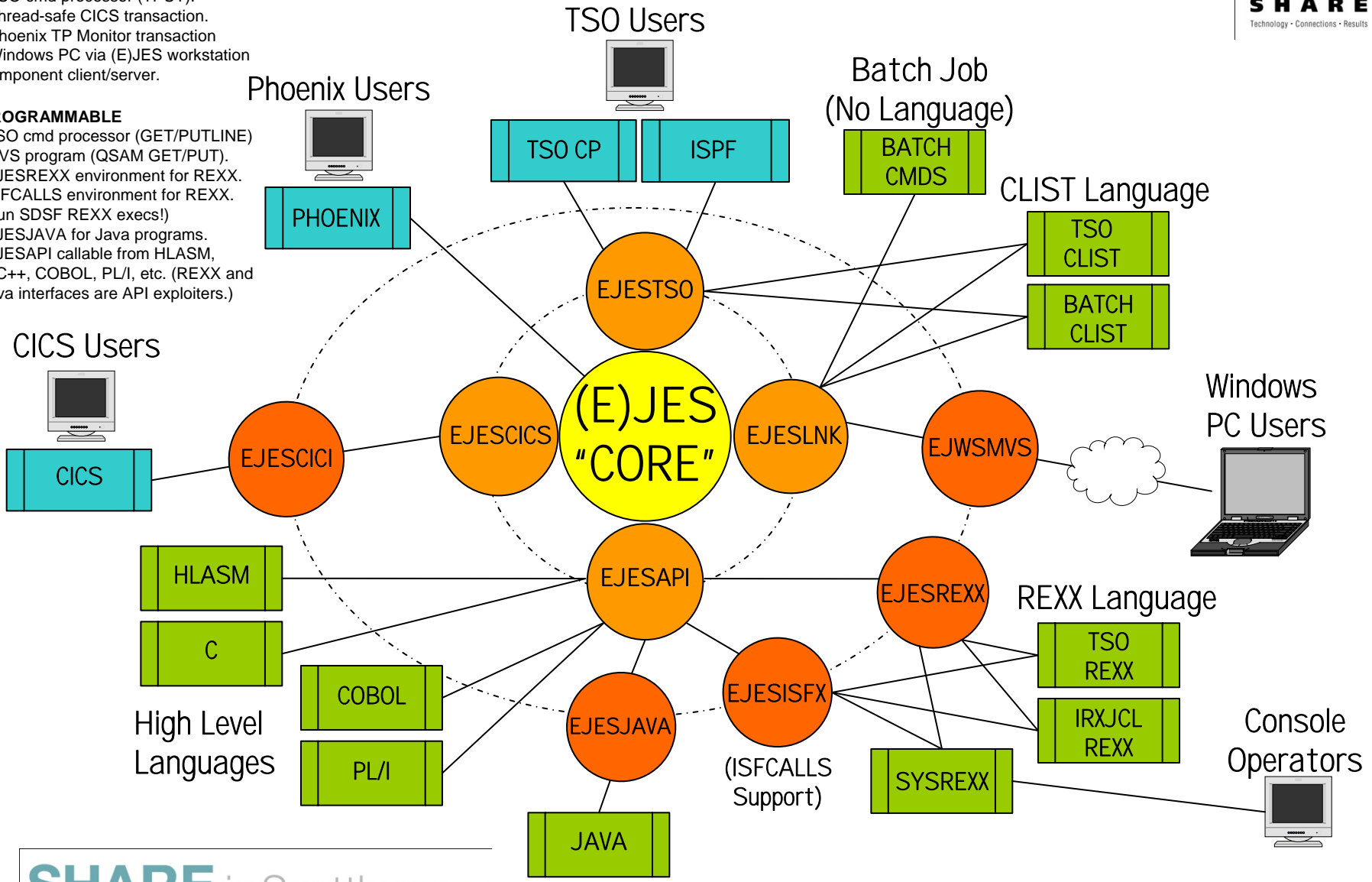


- We derive great personal satisfaction from customers using (E)JES every day to perform complex tasks that make them more productive.
- Lots of tiny details eventually add up to significant differences in the way users feel about product quality and functionality.
- A matter of “pride”. We are involved in the mainframe community. Our customers are our friends. Anything less than excellence would be an embarrassment! :-[

The (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.

- 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.)



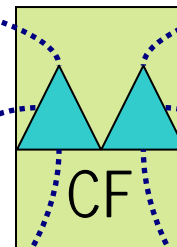
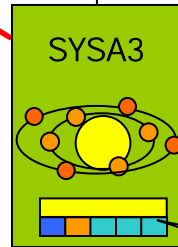
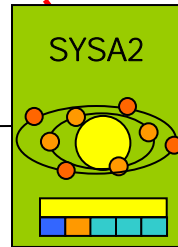
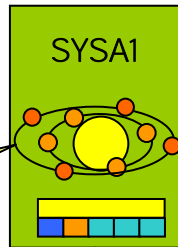
The (E)JES “Galaxy”

Parallel Sysplex AB

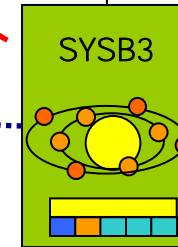
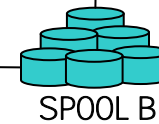
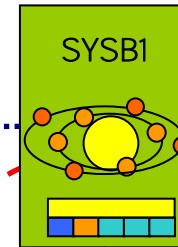
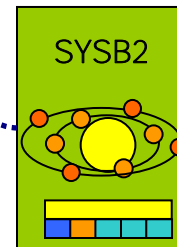
JESplex A

All displays provide Single System JESplex Image
XCF and XES (CF) are part of base z/OS
Fully-automatic configuration; No setup required.

JESplex B



JES3 only



Sophisticated request/response “coat tailing” algorithms used to minimize cross-system activity for XCF and XES. (Not unlike Nagle’s algorithm for TCP/IP—a means of improving efficiency by reducing the number of packets that need to be sent over the network.)

EJESCAS

JES3 JES2 XCF IOS XES

(E)JES “Solar System”

The (E)JES Entry Panel

```

Jobs Resources Devices Tools Filter View Options Help
2009/07/10 (2009.191) (E)JES Entry Panel MVS60 V4R7.0 14:19
Command ==>
Default Command ==>

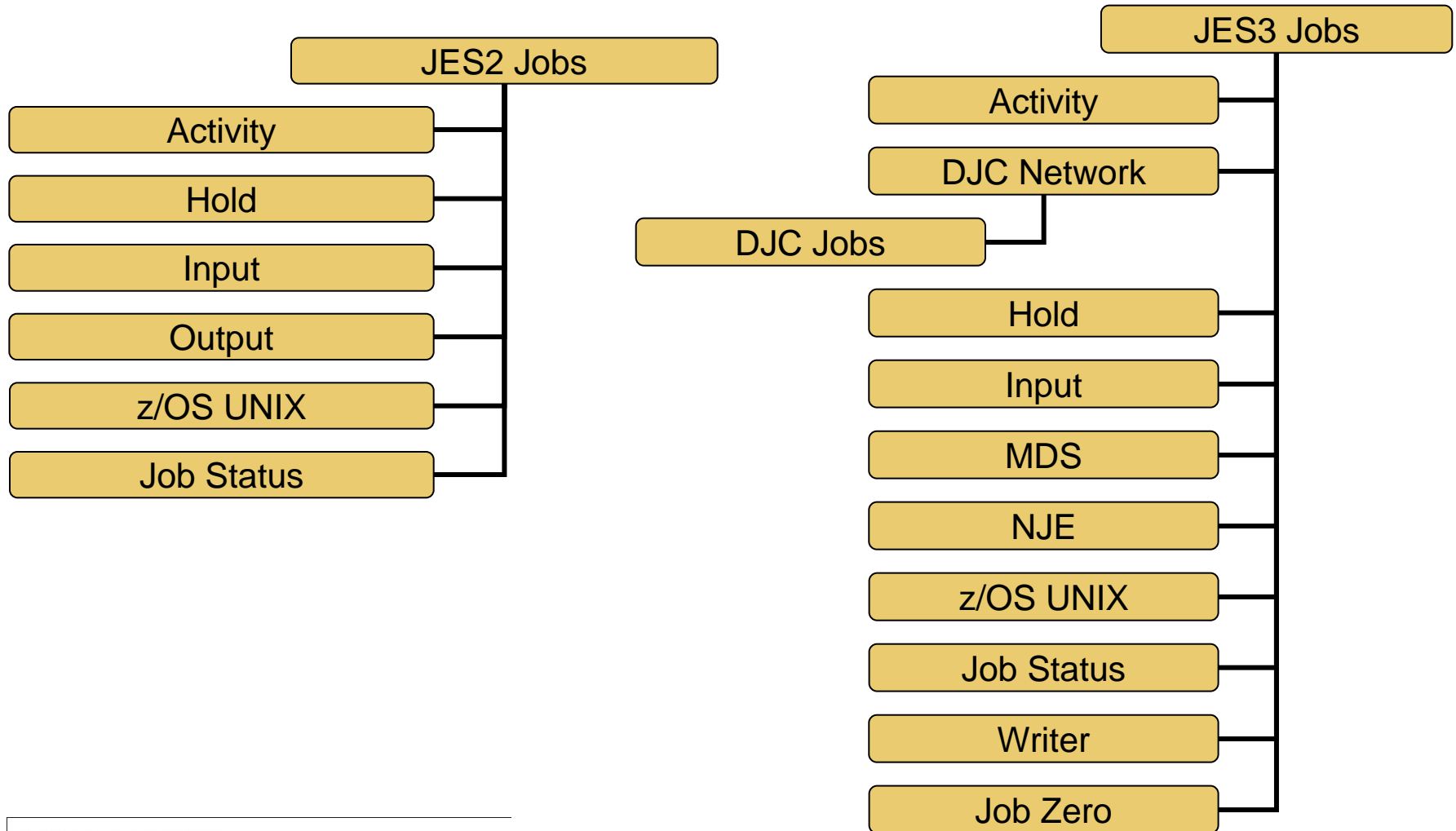
Job Names/Nums ==> ==> ==> ==>
User IDs ==> ==> ==> ==>
Owner IDs ==> EDJX* ==> ==> ==>
Origins ==> ==> ==> ==>
Destinations ==> ==> ==> ==>
Sysout Classes ==>
Level of Detail ==> MIN (MIN or MAX)
Default Sort ==> TIME (STD,NAME,NUM,PTY,TIME)
Default SortDir ==> D (Ascending or Descending
Dynamic Update ==> YES (YES or NO)
Display Jobs ==> YES (YES or NO)
Display STCs ==> YES (YES or NO)
Display TSUs ==> YES (YES or NO)
Display ATXs ==> YES (YES or NO)

Destination Mask
Use wildcard characters
for imprecise matching.
Use a "/" in position 1
to exclude.

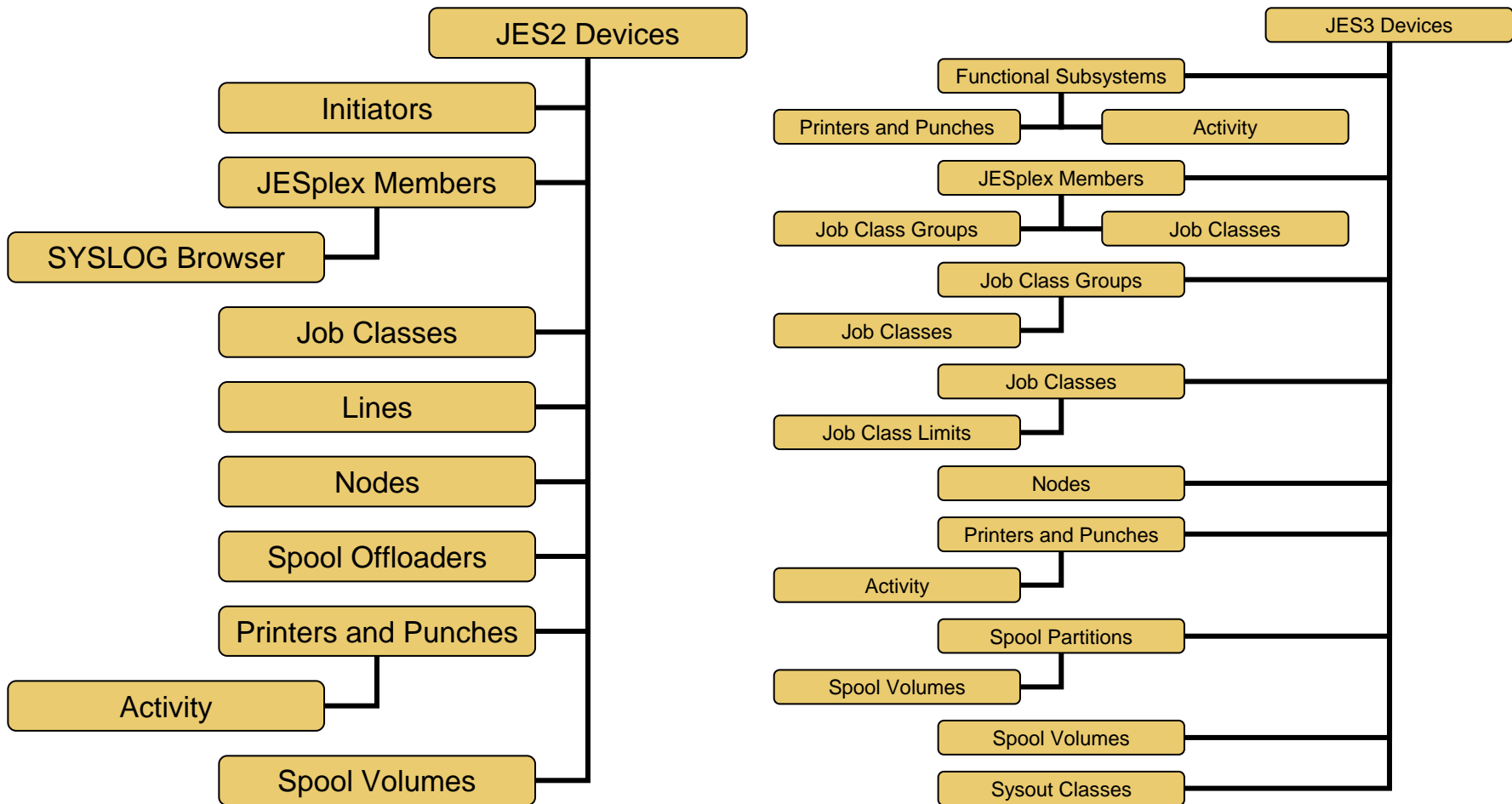
F1=Help F3=Exit F10=Actions F12=Cancel
MA e 14/065

```

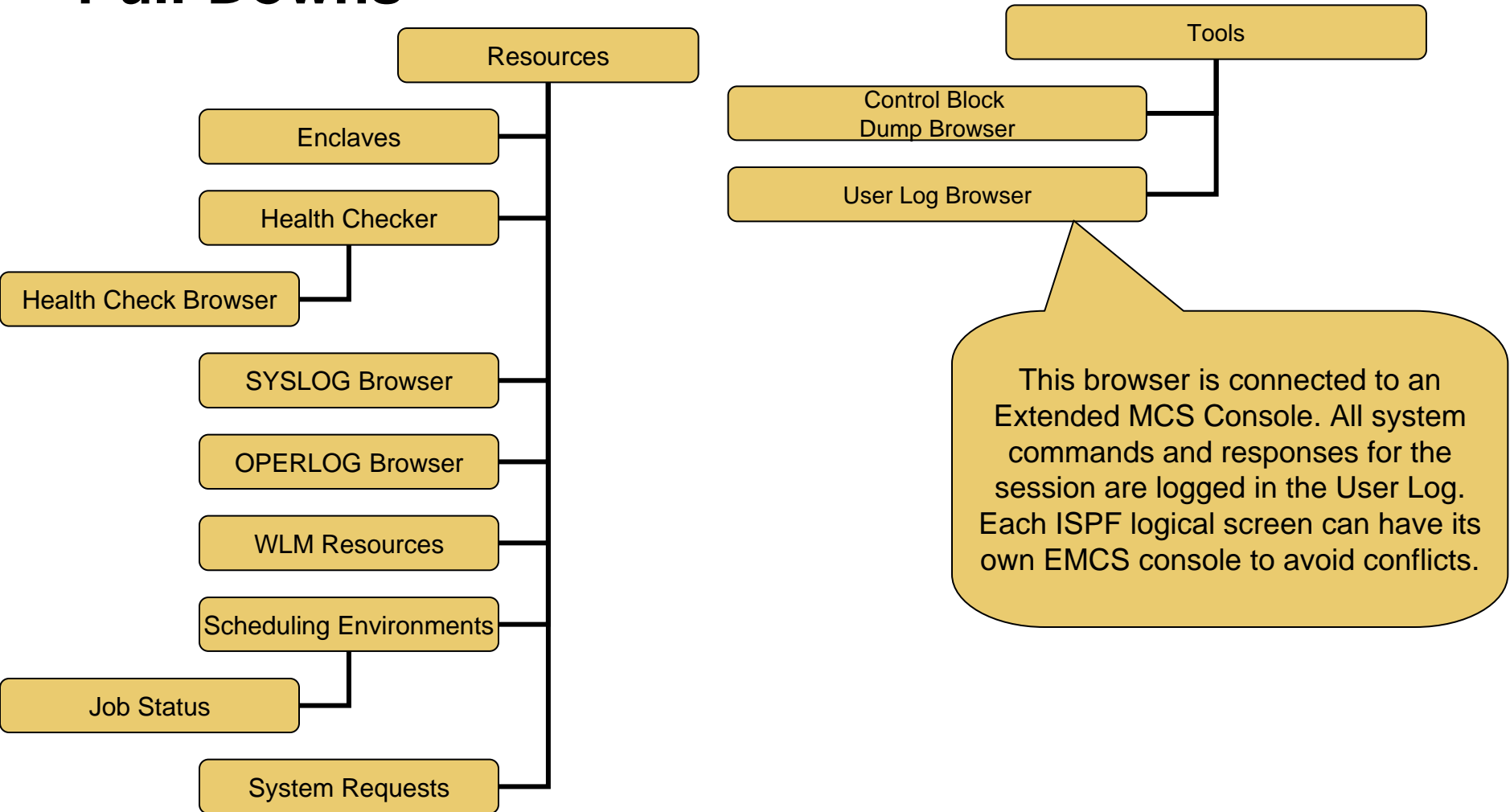
Panel Hierarchies – Jobs Pull-Downs



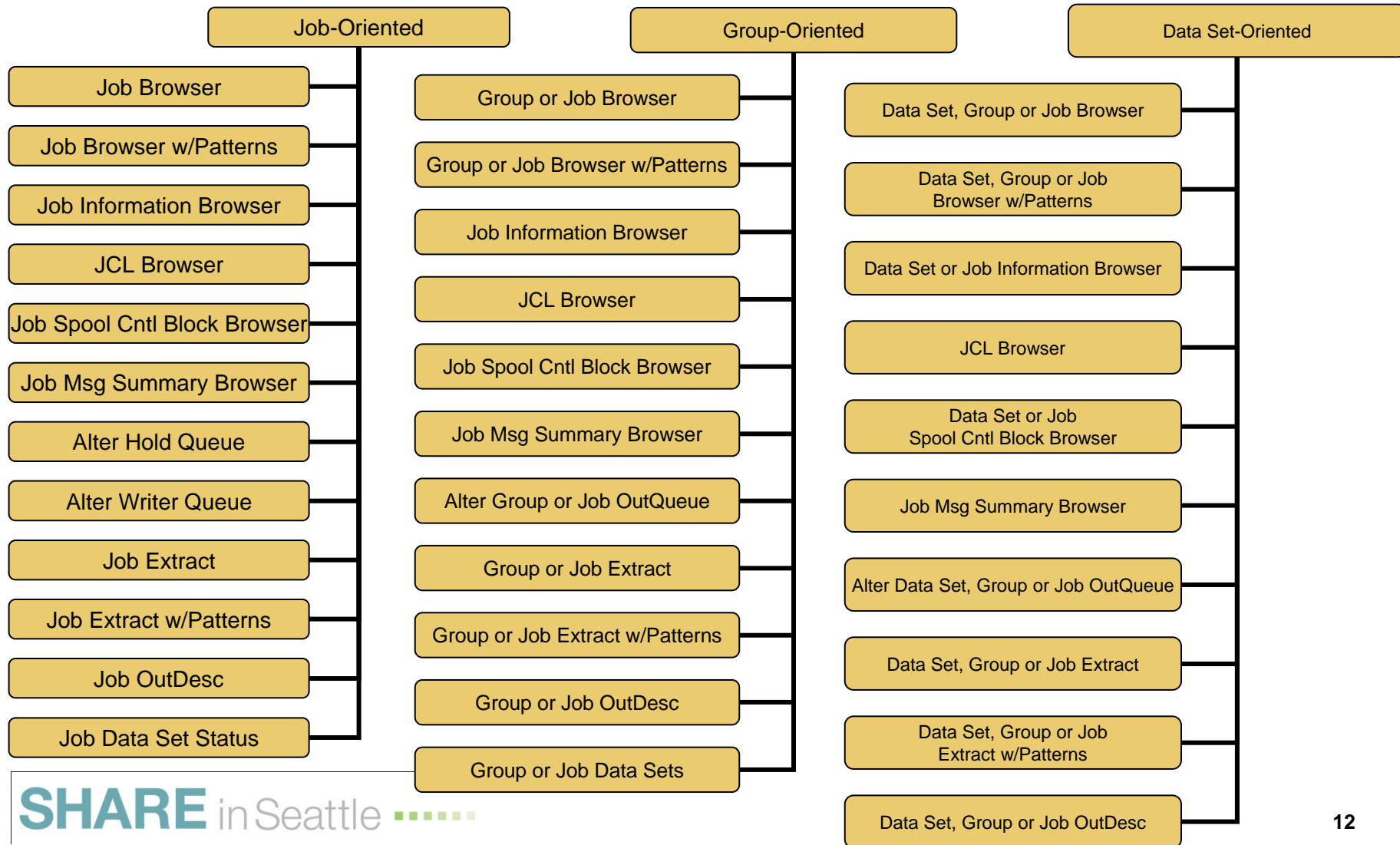
Panel Hierarchies – Devices Pull-Downs



Panel Hierarchies – Resources and Tools Pull-Downs



Job-, Group-, and Data Set-Oriented Display Panel Hierarchy



Pop-Ups Minimize The Need To Memorize Commands Or Return To The Entry Panel



- Primary Selection Criteria pop-up:

```

SCC
----- Primary Selection -----
Job Names . . . /AUTO*
Owner IDs . . . EDJX2
Origins . . .
Destinations . . .
Job Classes . . .
Sysout Classes . . .
Display Jobs . . YES (YES or NO)
Display STCs . . YES (YES or NO)
Display TSUs . . YES (YES or NO)
Display ATXs . . YES (YES or NO)

F1=Help      F12=Cancel
    
```

```

Row 1 of 311
Scroll ==> PAGE
Comp  Records  Pa
-----
0000      28
S522     446
S522     376
          0
          0
          0
          0
          0
          0
          0
          0
          0
          0
    
```

- Additional Selection Criteria pop-ups differ by function:

```

SCC
----- Additional Selection -----
Status . . .
Queue . . .
Active System . . .
Max Comp . . .
Job Prty . . . >7 ((<<|>>)nn)
Hold JOEs . . . ((<<|>>)nn)
Output JOEs . . . ((<<|>>)nn)
Records . . . ((<<|>>)nn)

F1=Help      F12=Cancel
    
```

```

Row 1 of 320
Scroll ==> CSR
JP  Pos  WPos  MaxComp  Records  Pa
-----
15
9
9
9  11
9  1
9  2
9  3
9  4
    
```

Metafilters Perform Complex Filtering With Masking, Boolean AND/OR

- Metafilters support allows up to 16 filters to be established.

```

Jobs Resources Devices Tools Filter View Options Help
Metafilters
Help
FILTER STATUS (MIN) Row 1 of 2
Command ==> Scroll ==> PAGE
Cmd Column Title Op Value Bool
MAXCOMP MaxComp = AB* OR
MAXCOMP MaxComp = JCL*
***** Bottom of Data *****
  
```

- Example shows jobs that abended or failed w/JCL error.

```

Jobs Resources Devices Tools Filter View Options Help
STATUS 2,422S 0X 159W 0H 0T 9,394,049 Records Row 22 of 159
Command ==> Scroll ==> CSR
Cmd JobName JobID Status Process StepNum StepName JP MaxComp Records
DFS STC48582 W-OUTPUT OUTSERV 1 15 AB $422 68,572
CICSA STC48438 W-OUTPUT OUTSERV 5 15 AB $222 7,062
DFHAPPLY JOB48335 W-OUTPUT OUTSERV 1 2 AB SEC6 71,330
DFHSMPSU JOB48284 W-OUTPUT OUTSERV 12 2 JCLERR 358
DB8GMSTR STC48199 W-OUTPUT OUTSERV 0 15 JCLERR 15
  
```

Various Filter Modes Improve Heuristics by Allowing Filtered Data Viewed in Context



- TRUE mode displays only matches.
- FALSE mode display only non-matches.
- CTRUE (color TRUE) mode colorizes matches.
- CFALSE (color FALSE) mode colorizes non-matches.
- Example below is CTRUE mode for abends & JCL errors.

```

Jobs Resources Devices Tools Filter View Options Help
STATUS 2,426S 122X 2,272W 33H 4T 30,904,926 Records Row 1247 of 2431
Command ==> Scroll ==> CSR
Cmd JobName JobID Status Process StepNum StepName JP MaxComp Records
DB8GMSTR STC46654 W-OUTPUT OUTSERV 0 15 JCLERR 15
DFS STC46649 W-OUTPUT OUTSERV 1 15 CC 0000 70
MSTRUPDT JOB46617 W-OUTPUT OUTSERV 1 4 CC 0000 84
RCVMANT JOB46602 W-OUTPUT OUTSERV 12 1 CC 0008 138,989
GTFTRACE JOB46595 W-OUTPUT OUTSERV 1 4 AB S222 271,000
FINDLOOP JOB46593 W-OUTPUT OUTSERV 2 2 CC 0000 107
GTFTRACE JOB46591 W-OUTPUT OUTSERV 1 4 AB S222 322,704
FINDLOOP JOB46590 W-OUTPUT OUTSERV 2 2 CC 0000 107
    
```

Point-And-Shoot Pop-up Column Help Trains Users On z/OS, JES and (E)JES

- Position cursor to any column, press F1.

```

Jobs Resources Devices Tools Filter View Options Help
HOLD      620S   15J   0T   3,176,481 Records (0 Sched)
Command ==>
Cmd JobName JobID Status MaxComp C Pri Dest ODisp Records
-----
DBONDHPF J0063291 QUEUED CC 0000 H 128 LOCAL HOLD 2,703
           QUEUED           H           105
           QUEUED           H           12
DBONDHPF J0063283 QUEUED CC 0000 H 144 LOCAL HOLD 2,674
           QUEUED           H 144 LOCAL HOLD 105
           QUEUED           H 144 LOCAL HOLD 12
DBONDHPF J0063277 QUEUED CC 0000 H 128 LOCAL HOLD 2,696
  
```

Row 1 of 22
Scroll ==> PAGE

Priority (0-255) of the output. Higher numbers imply higher priority.

- Position cursor to any unprotected field, press F1.

```

Jobs Resources Devices Tools Filter View Options Help
HOLD      620S   15J   0T   3,176,481 Records (0 Sched)
Command ==>
Cmd JobName JobID Status MaxComp C Pri Dest ODisp Records
-----
DBONDHPF J0063291 QUEUED CC 0000 H 128 LOCAL HOLD 2,703
           QUEUED           H           OLD 105
           QUEUED           H           OLD 12
DBONDHPF J0063283 QUEUED CC 0000 H 144 LOCAL HOLD 2,674
           QUEUED           H           OLD 105
           QUEUED           H 144 LOCAL HOLD 12
DBONDHPF J0063277 QUEUED CC 0000 H 128 LOCAL HOLD 2,696
  
```

Row 1 of 22
Scroll ==> PAGE

A number from 0 to 255.

Point-And-Shoot Tri-Modal Sorting Is Both Intuitive and Easy to Use

- Double-click/point-and-shoot column header for ascending column sort.
 - Arrows indicate sort direction.
- Double-click/point-and-shoot a second time for descending column sort.
- Double-click/point-and-shoot a third time to return to original sort order.

```
0 Sched)                               Row 1 of 22
                                       Scroll ==> PAGE
ODisp  Records  Pages  GrpName
-----  -
HOLD    0      0  2
HOLD    1      0  2
HOLD   12      0  1
HOLD   12      0  1
HOLD   12      0  1
HOLD  105      0  2
```

```
0 Sched)                               Row 1 of 22
                                       Scroll ==> PAGE
ODisp  Records  Pages  GrpName
-----  -
HOLD  555,224   0  2
HOLD  555,167   0  2
HOLD  499,965   0  3
HOLD  499,704   0  3
HOLD  498,244   0  3
HOLD  497,682   0  3
```

```
0 Sched)                               Row 1 of 22
                                       Scroll ==> PAGE
ODisp  Records  Pages  GrpName
-----  -
HOLD    2,703   0  3
HOLD    105     0  2
HOLD    12      0  1
HOLD   2,674   0  3
HOLD    105     0  2
HOLD    12      0  1
```

Intelligent Column Formatting Shifts The Most Important Information Into View

- What happens when you shrink columns more and more? And, more??

```
9W 0H 57T 15,300,818 Records
```

Records	QDate	QTime	Own
1,234,154	2009/05/20	04:53:57.56	EJE
1,180,091	2009/05/06	05:18:05.07	EJE
832,174	2009/05/08	04:39:18.36	PHO
694,448	2009/05/08	04:39:18.36	EJE

```
9W 0H 57T 15,300,818 Records
```

Records	QDate	QTime	Owner
1,234T	09/05/20	04:53:57	EJES
1,180T	09/05/06	05:18:05	EJES
832,174	09/05/08	04:39:18	PHOENIX
694,448	09/05/08	04:39:18	EJES

```
9W 0H 57T 15,300,818 Records
```

Records	QDate	QTime	Owner	Pag
1,234T	9/05/20	04:53:5	EJES	
1,180T	9/05/06	05:18:0	EJES	
832,174	9/05/08	04:39:1	PHOENIX	
694,448	9/05/08	04:39:1	EJES	

```
9W 0H 57T 15,300,818 Records
```

Recor	QDate	QTime	Owner	Pages
1M	05/20	04:53	EJES	0
1M	05/06	05:18	EJES	0
832T	05/08	04:39	PHOENIX	0
694T	05/08	04:39	EJES	0

```
zIIP 0 Row 1 of 297
Scroll ==> CSR
```

Real	CPU-Time	Elapsed	ASID	Pos
1,900KB	00:01.55	00:16:50.10	00BF	L0
1,884KB	00:01.61	00:16:57.63	0049	L0
1,872KB	00:01.69	00:16:57.97	00C0	L0
1,896KB	00:01.57	00:17:08.65	00C2	L0

```
zIIP 0 Row 1 of 297
Scroll ==> CSR
```

Real	CPU-Tim	Elapsed	ASID	Pos	DP	Pa
1,904KB	00:02.1	21:40.06	00BF	L0	FF	
1,888KB	00:02.2	21:47.60	0049	L0	FF	
1,896KB	00:02.3	21:47.94	00C0	L0	FF	
1,908KB	00:02.1	21:58.62	00C2	L0	FF	

```
6 zIIP 0 Row 1 of 297
Scroll ==> CSR
```

Real	CPU-T	Elapsed	ASID	Pos	DP	Paging	E
2MB	00:02	26:39.4	00BF	L0	FF		
2MB	00:02	26:47.0	0049	L0	FF		
2MB	00:02	26:47.3	00C0	L0	FF		
2MB	00:02	26:58.0	00C2	L0	FF		

Advanced Horizontal Scrolling Features

- Establish your own horizontal scroll point.
 - Denoted by slash in column underline.
 - Fields left of scroll point stay fixed.
- LCOLUMN command horizontally scrolls any column into view.
- “SNAP” to scroll point option ensures no column is ever “chopped” at the scroll point.

```

Jobs Resources Devices Tools Filter View Options Help
OUTPUT 627S 145J 57T 12,123,553 Records (0 Sched) Row 126 of 225
Command ==> right 1_ Scroll ==> CSR
Cmd JobName JobID Status MaxComp C Pri Dest ODisp Records
-----
EJESVJ2 S0061951 QUEUED AB S222 S 96 LOCAL WRITE 58,504
C3CONDOR S0061950 QUEUED AB S222 D 96 LOCAL WRITE 207,902
           QUEUED S 144 LOCAL WRITE 1,371
C3CONDOR S0061928 QUEUED AB S222 D 96 LOCAL WRITE 38,236
  
```

```

Jobs Resources Devices Tools Filter View Options Help
OUTPUT 627S 145J 57T 12,123,553 Records (0 Sched) Row 126 of 225
Command ==> Scroll ==> CSR
Cmd JobName JobID MaxComp C Pri Dest ODisp Records Pages
-----
EJESVJ2 S0061951 AB S222 S 96 LOCAL WRITE 58,504
C3CONDOR S0061950 AB S222 D 96 LOCAL WRITE 207,902
           S 144 LOCAL WRITE 1,371
C3CONDOR S0061928 AB S222 D 96 LOCAL WRITE 38,236
  
```

Column Arrangement and Column Hiding Give Users Ultimate Flexibility

- Any column can be first.
 - Especially useful for **SELECT** primary command, whose mask operates on the first column of the display.
- Columns can be hidden (set to zero width).
 - Set width to zero during column arrangement.
 - Use **HIDE** command to quickly hide multiple named columns.
 - Use **SHOW** command to quickly show multiple named columns and hide the others.

```

Jobs Resources Devices Tools Filter View Options Help
-
OCC
-
Filter Help
ARRANGE OUTPUT (MIN) Row 1 of 37
Command ==> Scroll ==> CSR
Cmd Column Title Width
-----
JNAME JobName 8
JID JobID 8
/ / 0
STATUS Status 7
MAXCOMP MaxComp 8
  
```

```

Row 1 of 536
ll ==> CSR
sp Records
----->
TE 192
TE 36
TE 28
TE 92
TE 197
TE 24
TE 1
  
```

Native Browser Provides Unique Features; Substitute ISPF BROWSE/VIEW Any Time.



- Maintain understanding of data set boundaries.
 - Navigate by data set DD name or number.
 - BOX mode viewing limits scroll and find to “current” data set.
- Find match highlighting without “pesky” line numbers.
- RFINDP—repeat find at page level instead of hit-by-hit.
- BOTTOM scroll mode always shows most recent data.

```
Jobs Resources Devices Tools Filter View Options Help
EDGERASE S0063571 < .JES2 .JESMSGLG> Line 1 of 32
Command ==> view Scroll ==> CSR
Current Find Text: EDG Dataset 1 of 3
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+----->
1
0
05.29.09 S0063571 ---- WEDNESDAY, 01 JUL 2009 ----
05.29.09 S0063571 IEF695I START EDGERASE WITH JOBNAME EDGERASE IS ASSIGNED TO
05.29.09 S0063571 $HASP373 EDGERASE STARTED
05.29.09 S0063571 IEF403I EDGERASE - STARTED - TIME=05.29.09
EDGERASE S0063571 ----- CHARS 'EDG' found
Command ==> Scroll ==> CSR
***** ***** Top of Data *****
000001 1 JES2 JOB LOG -- SYSTEM SA0 -
000002 0
000003 05.29.09 S0063571 ---- WEDNESDAY, 01 JUL 2009 ----
000004 05.29.09 S0063571 IEF695I START EDGERASE WITH JOBNAME EDGERASE IS ASSI
000005 05.29.09 S0063571 $HASP373 EDGERASE STARTED
000006 05.29.09 S0063571 IEF403I EDGERASE - STARTED - TIME=05.29.09
```

Pattern Utility Filters Browser Content

- Complex masking, column limiting, case control.
- Multiple patterns can be applied.
- Pattern sets can be stored in pattern library.
 - Not proprietary: PDS[E]. RECFM=U prevents ISPF editing.
 - User comment stored with directory.

```

Jobs Resources Devices Tools Filter View Options Help
-----
Help
-----
PATMLIST                                     Row 1 of 5
Command ==>                               Scroll ==> CSR
Cmd Member      CrDate      CrTime      User      Comment
-----
  ABC           2009/06/24  17:16:08  EDJX2     This sample looks for 'ABC'
  CC004         2006/06/10  13:02:52  EDJX2     MaxCC=0004
  JES3          2007/02/03  07:23:24  EDJX2     Looking for IAT messages
  SMPI          2009/07/02  22:44:41  EDJX1     SMP/E Informational Messages
  XXXX         2006/07/14  13:11:32  EDJX2     Just some junk for a demo
***** Bottom of Data *****
-----
Jobs Resources Devices Tools Filter View Options Help
-----
SMPOREC J0527805      <RCVORDER.RMVS      .SMPOUT >
Command ==>
Current Find Text:
-----
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+----->
GIM424011 THE FOLLOWING PARAMETERS WERE SPECIFIED ON THE EXEC STATEMENT FOR
GIM205011 SET PROCESSING IS COMPLETE. THE HIGHEST RETURN CODE WAS 00.
GIM687001 ORDER ORD00047 HAS BEEN SENT TO THE SERVER AT
GIM691441 ORDER ORD00047 IS READY FOR DOWNLOAD.
GIM664001 THE TRANSFER IS COMPLETE FOR FILE

```

Message Summary Browser Simplifies Job Message and Return Code Analysis

- Like other browsers, updated by pressing <Enter>.
 - New lines added with each update, if needed.
- Installation-defined message set.

```

Jobs Resources Devices Tools Filter View Options Help
RCVMANT J0513780      Start: 2009/05/23  End: 2009/05/23      Line 1 of 16
Command ==>
Current Find Text:
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+----->
00:01:00 ---- IAT6853 THE CURRENT DATE IS SATURDAY,  23 MAY 2009 ----
00:01:13  IAT2000 JOB RCVMANT (J0513780) SELECTED MVS60      SRVCLASS=MTTW
00:01:13  IEF403I RCVMANT - STARTED
01:13:26  IEF404I RCVMANT - ENDED
IEF142I RCVMANT RCVORDER RMVS - STEP WAS EXECUTED - COND CODE 0000
IEF142I RCVMANT RCVORDER RSMGR - STEP WAS EXECUTED - COND CODE 0004
IEF142I RCVMANT RCVORDER RJVA500 - STEP WAS EXECUTED - COND CODE 0004
IEF142I RCVMANT RCVORDER RIXM190 - STEP WAS EXECUTED - COND CODE 0004
IEF142I RCVMANT RCVORDER RWAS610 - STEP WAS EXECUTED - COND CODE 0004
IEF142I RCVMANT RCVORDER RWPS601 - STEP WAS EXECUTED - COND CODE 0004
IEF142I RCVMANT SMPE AMVS - STEP WAS EXECUTED - COND CODE 0008
IEF272I RCVMANT SMPE ASMGR - STEP WAS NOT EXECUTED.
IEF272I RCVMANT SMPE AJVA500 - STEP WAS NOT EXECUTED.
IEF272I RCVMANT SMPE AIXM190 - STEP WAS NOT EXECUTED.
IEF272I RCVMANT SMPE AWAS610 - STEP WAS NOT EXECUTED.
IEF272I RCVMANT SMPE AWPS601 - STEP WAS NOT EXECUTED.
***** Bottom of Data *****

```

Spool Control Block Browsers Aid In Debugging JES, User Exits, Products



```

Jobs Resources Devices Tools Filter View Options Help
EJESCAS S0063613 Spool Control Blocks Line 1 of 272
Command ==> Scroll ==> CSR
Current Find Text:
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+-----8
*****
* J C T *
*****
SPOOL ADDRESS: 03.124F06
FIXED SECTION:
0000 0068 D1C3E340 C5D1C5E2 C3C1E240 0000F87D *JCT EJESCAS ..8'*
0010 0078 C46CC7D6 00000000 05780080 00000000 *D%GO.....i.0...*
0020 0088 00000000 03124F06 00000000 03124F04 *.....|.....|.*
0030 0098 00000000 03124F03 00000088 FFFFFFFF *.....|.....h...*
    
```

```

Jobs Resources Devices Tools Filter View Options Help
EJESCAS S0063613 Spool Control Blocks Line 3 of 67
Command ==> Scroll ==> CSR
Current Find Text:
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+-----8
*****
* S P O O L B L O C K *
*****
SPOOL ADDRESS: 03.124F0A
0000 0000 C8C4C240 C5D1C5E2 C3C1E240 0000F87D *HDB EJESCAS ..8'*
0010 0010 C46CC7D6 00000004 03124F0B 00000000 *D%GO.....|. ....*
0020 0020 060C0D03 0000124F 0411C011 4040E2E3 *.....|. { . ST*
0030 0030 D4E340D5 D64B40D4 C5E2E2C1 C7C553C0 *MT NO. MESSAGEë{*
0040 0040 53404040 40404040 4040F240 C9C5C6C3 *ë 2 IEFC*
    
```

Extract Scrollable Information to DASD or Sysout Data Sets



- Extract tabular display contents as well as report objects.
- Optionally apply patterns (as shown before with Browser).
- Attributes (RECFM, LRECL, BLKSIZE) adjusted as necessary for target data set, including fully-reversible carriage control translation between ASA and machine.
- Create DASD data sets if they don't exist.
 - Data set attributes can be derived from extracted object(s).
- Output descriptors can be created for extract to SYSOUT.
- Optional header pages can be inserted where appropriate.
- Optionally copy job name and job ID for JES header page.

Sysout Output Descriptor Specifications (Scrollable To Show Dozens of Fields)



```

Jobs Resources Devices Tools Filter View Options Help
RCVMAINT JOB50972          Extract Parameters          PRINT
Command ==>
CLASS      ==>  A          WRITER ==>
PRMODE    ==>          PRTY ==>          (0-255 or blank)
FORMDEF   ==>          OUTBIN ==>          (1-65535 or blank)
PAGEDEF   ==>          CHARS ==>          ==>          ==>
FCB       ==>          FLASH ==>          CNT ==>          (0-255 or blank)
FORMS     ==>          MODIFY ==>          TRC ==>          (0-3 or blank)
UCS       ==>          DEST ==>          IP:hp8100.phx

NAME      ==>  Ed Jaffe
TITLE     ==>
ROOM      ==>
DEPT      ==>  Research & Development
BUILDING  ==>  Phoenix Software International
ADDRESS   ==>  Headquarters
ADDRESS   ==>  831 Parkview Drive North
ADDRESS   ==>  El Segundo, CA 90245
ADDRESS   ==>

BURST     ==>  -          (YES, NO, or blank)  NOTIFY ==>
DPAGELBL ==>          (YES, NO, or blank)  NOTIFY ==>
SYSAREA   ==>          (YES, NO, or blank)  NOTIFY ==>
TRC       ==>          (YES, NO, or blank)  NOTIFY ==>
PIMSG     ==>          (YES, NO, or blank) LIM ==>          (0-999 or blank)

CKPTLINE  ==>          (0-32767 or blank)  CKPTPAGE ==>          (1-32767 or blank)
CKPTSEC   ==>          (1-32767 or blank)  COMPACT  ==>

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

```



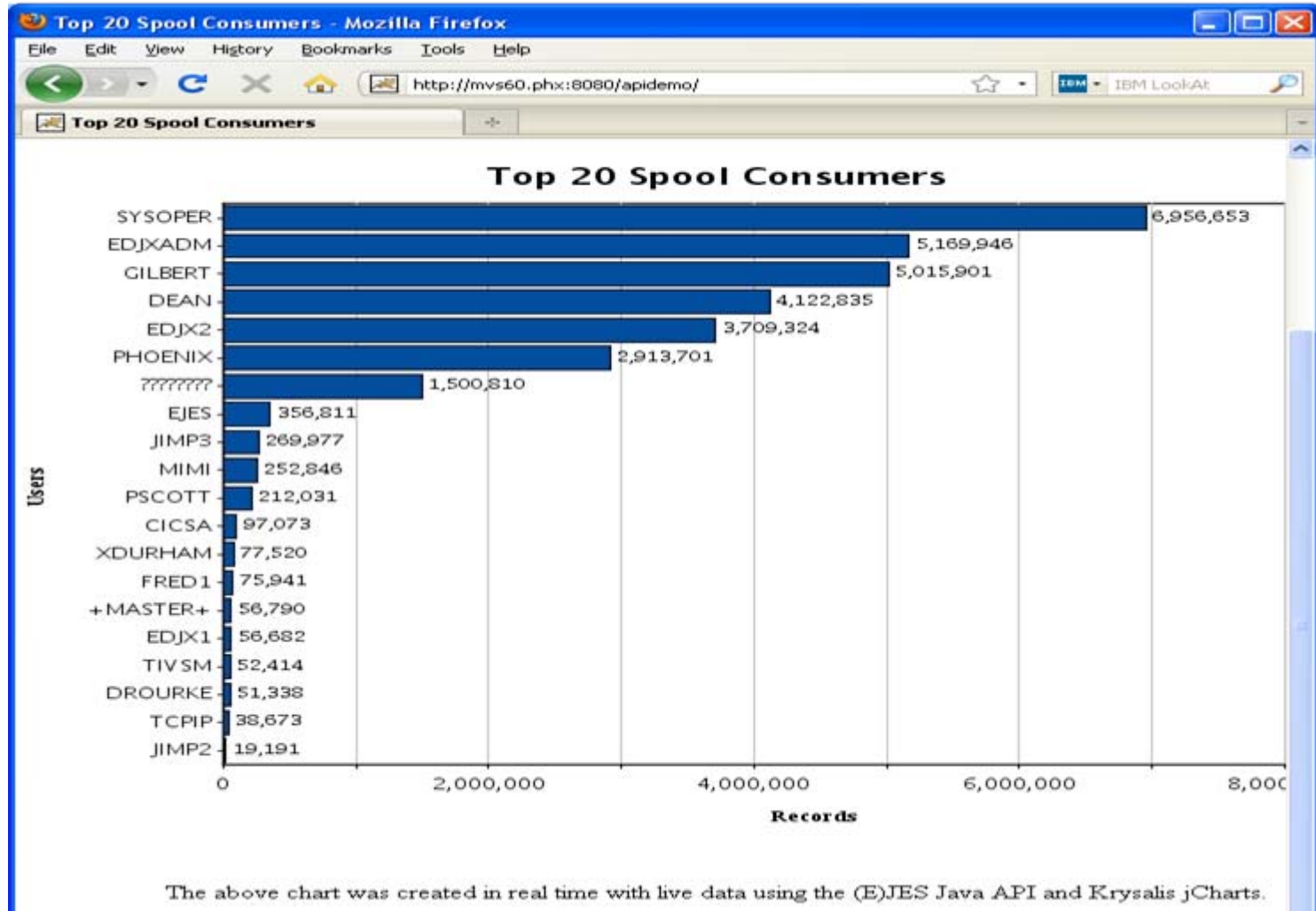
REXX to List Which of a User's Jobs Contain The Search String

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      EDJX2.CLIST(SRCHJOBS) - 01.03          Columns 00001 00072
Command ==>                                     Scroll ==> CSR
000006   parse arg userid string
000007   if LENGTH(userid)<=1 then userid=USERID()
000008   if LENGTH(string)=0 then do;say "String not provided";exit 99;end
000009   jobix=0
000010   delstack
000011   queue "SRESET;OWNER" userid";ST 0JOB"
000012   queue "SHOWCOLS JOBNAME JOBID;UPDATE"
000013   queue ""
000014   rc = ejesrexx("execapi")
000015   if rc>0 then do i=1 to EJES_Msg.0;say EJES_Msg.i;end
000016   else do
000017     say "Searching" EJES_Lines "jobs owned by" userid "... "
000018     address ejes "execapi 0 'SELECT * B'"
000019     if rc>0 then do i=1 to EJES_Msg.0;say EJES_Msg.i;end
000020     else,
000021       do while EJES_Funtype = "BROWSER"
000022         queue "FIND" string
000023         queue ""
000024         address ejes "execapi"
000025         if rc>0 then delstack
000026         else do
000027           jobix = jobix + 1
000028           jobname.jobix = EJES_JobName
000029           jobid.jobix = EJES_JobId
000030         end
000031         address ejes "execapi 0 END"
000032       end
000033   end
000034   rc = ejesrexx('termapi')
000035   if jobix=0 then say "String not found in jobs owned by" userid
000036   else do
000037     say "String found in" jobix "jobs owned by" userid ":"
000038     say "Jobname JobId"
000039     say "-----"
000040     do i=1 to jobix
000041       say LEFT(jobname.i,8," ") LEFT(jobid.i,8," ")
000042     end
000043   end
F1=Help      F3=Exit      F5=Rfind      F6=Rchange      F12=Cancel
```

Java to Create CSV File for Excel Import Showing Top 20 Spool Consumers

```
***** Top of Data *****
import java.util.*;
import com.phoenixsoftware.ejes.*;
public class ApiDemoV {
    static final int MAX_TOP = 20;
    public static void main( String[] args ) {
        Map<String,Long> map = new HashMap<String,Long>();
        Map<String,EjesApi.Column> cmap = new HashMap<String,EjesApi.Column>();
        /* Request enumeration of STATUS display */
        EjesApi api = new EjesApi( "sres;st", 100 );
        if ( api.returnCode == 0 ) {
            String [] columnList = { "OWNER", "RECORDS" };
            while ( api.returnCode < 4 ) {
                EjesApi.Column[][] tabular = api.enumerateTabular( columnList );
                /* Calculate sum of all records per user */
                for ( EjesApi.Column[] row : tabular ) {
                    for ( EjesApi.Column col : row ) {
                        cmap.put( col.columnName, col );
                        String key = cmap.get("OWNER").columnText;
                        Long value = cmap.get("RECORDS").columnValue;
                        Long r = map.get( key );
                        map.put( key, r == null ? value : r + value );
                    }
                }
                api.runCommand( "" );
            }
            /* Create sortable string List */
            List<String> list = new ArrayList<String>(100);
            Iterator<Map.Entry<String,Long>> m = map.entrySet().iterator();
            while ( m.hasNext() ) {
                Map.Entry<String,Long> entry = m.next();
                Formatter f = new Formatter();
                f.format( "%,25d %-10s", entry.getValue(), entry.getKey() );
                list.add( f.toString() );
            }
            Collections.sort( list, Collections.reverseOrder() );
            /* Output .CSV file */
            System.out.printf( "\\"Owner\\",\\"Records\\\"\n" );
            ListIterator<String> i = list.listIterator();
            for ( int n = 0 ; n < MAX_TOP && i.hasNext() ; n++ ) {
                String s = i.next();
                System.out.printf( "\\"%s\\", s.substring(26).trim() );
                System.out.printf( "\\"%s\\", s.substring( 0, 25 ).trim() );
            }
            api.free();
        }
    }
}
***** Bottom of Data *****
```

Java on z/OS Apache Tomcat to Display (Using jCharts) Top 20 Spool Consumers



Customer Application Infrastructure

- The Customer Application Infrastructure (CAI) is an integrated framework for TSO/ISPF that allows REXX-based customer and end user plug-in applications to be authored to customize and/or extend the capabilities of (E)JES for local environments.

```

Jobs Resources Devices Tools Filter View Options Help
-----
S
C
C
-
File
-----
Customer Applications      Row 1 to 6 of 6
Command ==> _             Scroll ==> PAGE
-----
I - Insert new entry      Overtyp e existing
D - Delete existing entry entries to update
S - Select existing entry them.
-----
Cmd-Key  Exec-Name  Comment
.. F_    EJES#RF_   TCP/IP FTP PUT a Report Object_____
.. M_    EJES#RM_   TCP/IP SMTP (e-mail) a Report Object__
.. X_    EJES#RX_   TSO XMIT a Report Object_____
.. R_    EJES#RR_   TSO Receive a Spool Data Set_____
.. S_    EJES#RS_   Resubmit Job Without Editing_____
.. DX    IPCMDUMP   Extract and process SYSDUMP with IPCS
***** Bottom of data *****
F1=Help   F3=Exit   F10=Actions  F12=Cancel
-----
JES3      S0063394  QUEUED    PRINT      1 206      AB S2FB     100
SYSLOG    S0063382  QUEUED    PRINT      1 207      CC 0000     312
-----
of 725
> CSR
s Pa
- ->
378
93
32
32
446
374
55
,018
55
100
,397
0
53
56
53
100
312

```


CAI SMTP (Email) Example—Message Successfully Received By Mail Client

Subject: CAMSSIE Failed with SOC4
From: edjaffe@phoenixsoftware.com
Date: 2:11 PM
To: edjaffe@phoenixsoftware.com

Hey, Dude! Your program died with abendOC4. I've attached the job output to this email. Good luck!
- Ed's Evil Twin!

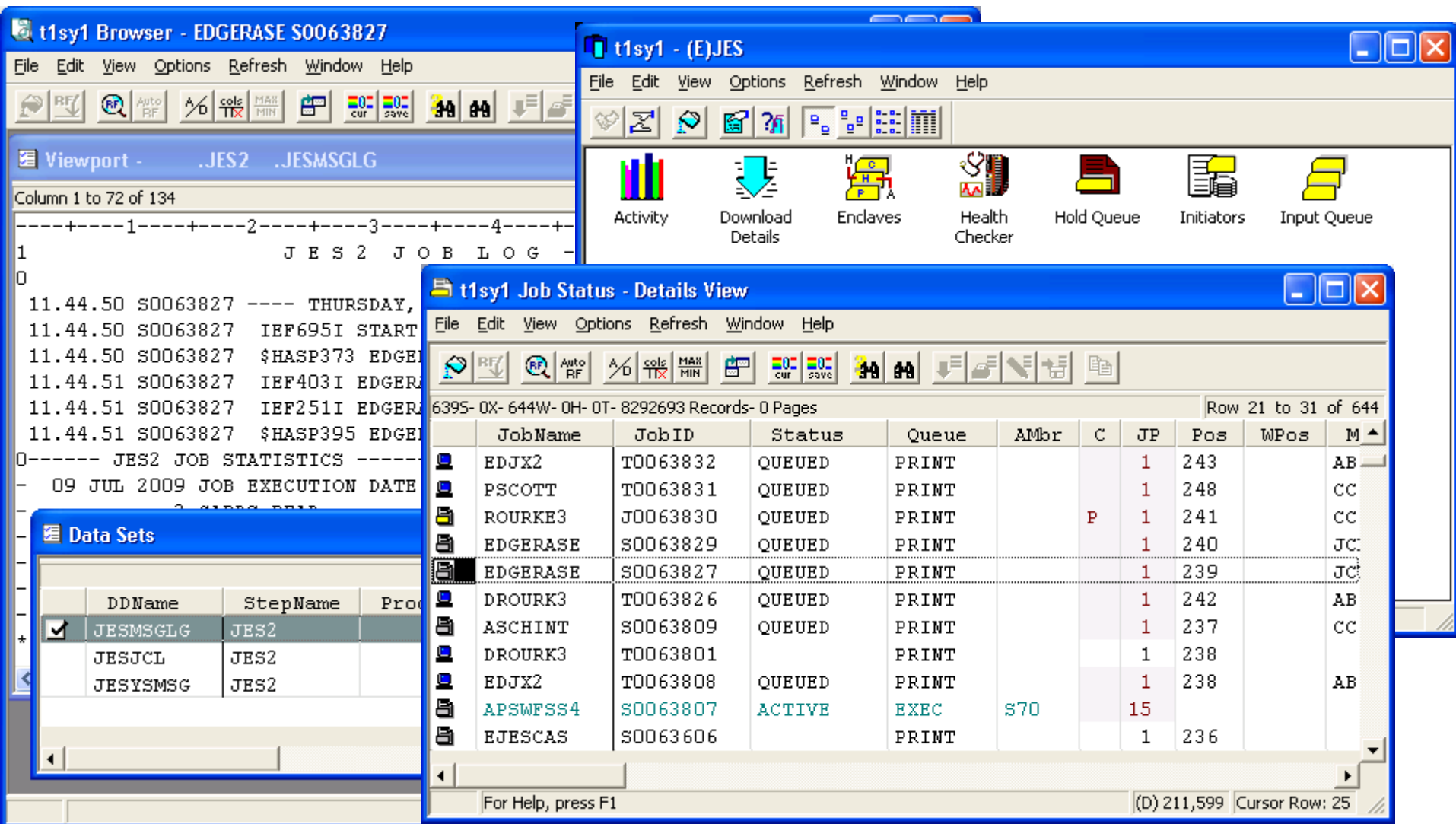
```
1          J E S 2  J O B  L O G  --  S Y S T E M  S A O  --  N O D E  P H X H Q 2
0
00.02.05 J0062472 ---- SUNDAY,    31 MAY 2009 ----
00.02.05 J0062472 IRRO10I  USERID FRED1   IS ASSIGNED TO THIS JOB.
00.02.05 J0062472 IEF677I  WARNING MESSAGE(S) FOR JOB CAMSSIE  ISSUED
00.02.05 J0062472 ICH70001I FRED1    LAST ACCESS AT 00:01:02 ON SUNDAY, MAY 31, 2009
00.02.05 J0062472 $HASP373 CAMSSIE  STARTED - WLM INIT - SRVCLASS BATCH - SYS S60
00.02.05 J0062472 IEF403I  CAMSSIE -  STARTED - TIME=00.02.05
00.02.07 J0062472 -
                                --TIMINGS (MINS.)--
                                ----PAGING COUNTS----
00.02.07 J0062472 -JOBNAME  STEPNAME  PROCSTEP   RC   EXCP  CONN   TCB   SRB   CLOCK  SERV  PG  PAGE  SWAP  VIO  SWAPS
00.02.07 J0062472 -CAMSSIE  ASM              00   462   94    .01   .00   .0    1457  0   0    0    0    6    0
00.02.07 J0062472 -CAMSSIE  LKED             00    60    9    .00   .00   .0    185   0   0    0    0    7    0
00.02.07 J0062472 +BSAM OPEN IN PROGRESS
00.02.07 J0062472 +DCB OPEN EXIT ENTERED
00.02.54 J0062472 IEA995I  SYMPTOM DUMP OUTPUT  748
748          SYSTEM COMPLETION CODE=OC4  REASON CODE=00000010
```



CAMSSIE..J0062472..txt

Unread: 0 Total: 454

Workstation Component (Windows Only)



The screenshot displays the t1sy1 Workstation Component interface, which is a Windows-based application for managing JES2 jobs. It consists of several overlapping windows:

- t1sy1 Browser - EDGERASE S0063827:** Shows a viewport with job log data. The log shows the start of job EDGERASE S0063827 at 11:44:50 on Thursday, July 9, 2009.
- t1sy1 - (E)JES:** The main workstation window with a toolbar containing icons for Activity, Download Details, Enclaves, Health Checker, Hold Queue, Initiators, and Input Queue.
- t1sy1 Job Status - Details View:** A detailed view of job status showing a table of jobs. The table includes columns for JobName, JobID, Status, Queue, AMbr, C, JP, Pos, WPos, and M. The selected job is EDGERASE S0063827, which is QUEUED in the PRINT queue.
- Data Sets:** A window showing a list of data sets for the selected job. The selected data set is JESMSGLG, which is associated with step JES2.

Job Status - Details View Table:

JobName	JobID	Status	Queue	AMbr	C	JP	Pos	WPos	M
EDJX2	T0063832	QUEUED	PRINT			1	243		AB
PSCOTT	T0063831	QUEUED	PRINT			1	248		CC
ROURKE3	J0063830	QUEUED	PRINT		P	1	241		CC
EDGERASE	S0063829	QUEUED	PRINT			1	240		JC
EDGERASE	S0063827	QUEUED	PRINT			1	239		JC
DROURK3	T0063826	QUEUED	PRINT			1	242		AB
ASCHINT	S0063809	QUEUED	PRINT			1	237		CC
DROURK3	T0063801	QUEUED	PRINT			1	238		
EDJX2	T0063808	QUEUED	PRINT			1	238		AB
APSWFSS4	S0063807	ACTIVE	EXEC	S70		15			
EJESCAS	S0063606	QUEUED	PRINT			1	236		

14 ½ minutes is barely enough time to scratch the surface. Hopefully, my brief overview has provided you with an idea of what to expect from (E)JES.

Drop by booth 109 at the SHARE Technology Exchange and talk to some friendly folks from our office. (OK. Yes. They are salespeople.)

To learn technical details about our zHPF implementation, come to **Session 2253: zHPF Channel Programming—The Bits and Bytes**, 8 AM Thursday in Room 607 where I am co-presenting with David Bond from FileArc.