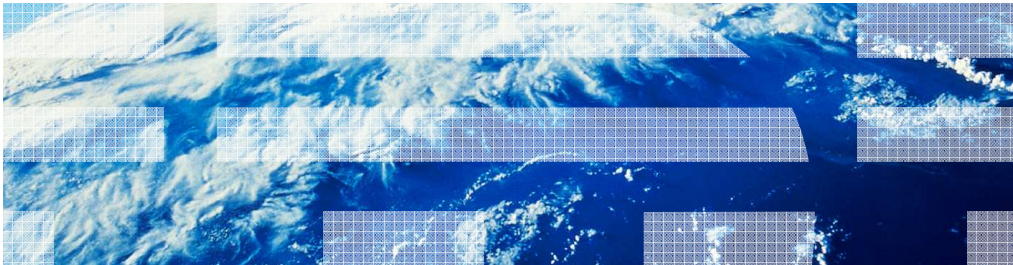


z/OS V1R13

SDSF: Support for JES3 in z/OS V1R13



Session objectives

- To describe the functionality added to both JES2 and JES3 to make SDSF fully functional under JES3
- To describe additional functionality related to other JES line items.

Overview

- Problem Statement / Need Addressed
 - Not all panels were supported under JES3
 - Panels depend on JES2 control blocks, making them inaccessible to JES3, as well as difficult to maintain
- Solution
 - **PU** (Punch), **RD** (Reader), **LI** (Line), **INIT** (initiator), and **NO** (Node) panels updated to use SSI to obtain data, and enabled for JES3
 - **SO** panel updated to use SSI 83 (still JES2 only)
 - New **J0** (Job Zero) panel added for JES3
 - New **NS** (Network Server) and **NC** (Network Connection) panels
 - Additional columns on device panels in both JES2 and JES3
- Benefit / Value
 - Panels now work under JES3
 - Implementation no longer depends on JES control blocks
 - JESplex scope is now implicit in these panels

PR (printer) display

- JES3 support for local printers was shipped in z/OS 1.12
- In z/OS 1.13, JES3 now returns RJP Printers in addition to local printers
- **PR** Command in JES3 environment now allows LCL|RMT parameter to obtain local or RJP printers only
 - Default is to obtain both
- Additional RJE/RJP-related columns added in both JES2 and JES3 environments

PU (punch) and RDR (reader) displays

- SSI 83 now used to obtain device data
 - SYSPLEX view does not require SDSF Server
- **PU** and **RDR** commands in JES3 environment now allow **LCL|RMT** parameter to obtain local or RJP punches/readers only
 - Default is to obtain both
 - Numeric device range not allowed in JES3
- Additional RJE/RJP-related columns added in both JES2 and JES3 environments
- Fixed field (device name) expanded to 10 bytes
 - **Panel.PUN.DevnameAlwaysShort** and **Panel.RDR.DevnameAlwaysShort** custom properties to revert to prior behavior

SO (spool offload) display

- SSI 83 now used to obtain device data
 - SYSPLEX view does not require SDSF Server
- Additional columns added for recently added JES2 parameters

LI (line) display

- SSI 83 now used to obtain device data
 - SYSPLEX view does not require SDSF server
- Enabled for JES3, only applies to BSC or CTC NJE/RJP lines
 - No line construct in JES3 for SNA or TCP/IP connections
- **LI** Command in JES3 environment allows **SHORT** parameter to suppress NJE transmitters and receivers
 - Default is to display lines and associated NJE transmitters/receivers
 - Numeric device range not allowed in JES3
- Additional RJE/RJP-related columns added in both JES2 and JES3 environments



LI (line) display – JES3 example

```
Session Z - POKVMTL4(24x80) - [24 x 80] - USER
File Edit View Communication Actions Window Help
Display Filter View Print Options Search Help
-----
SDSF LINE DISPLAY SY1 LINE 1-12 (28)
COMMAND INPUT ==> li_ SCROLL ==> CSR
PREFIX=* DEST=(ALL) OWNER=* SYSNAME=*
ACTION=//-Block,=-Repeat,+Extend,C-Cancel,D-Display,DE-DisplayErrors,
ACTION=DL-DisplayLong,DS-DisplayStatus,E-Restart,I-Interrupt,L-Fail,
ACTION=LD-FailDump,S-Start,SL-StartLog,SNL-StartNoLog,SNR-StartNoRcv,
ACTION=SR-StartRcv,SRJP-StartRJP,V-VaryOn,VF-VaryOff
NP  DEVICE      Status  Unit  Node  Type JobName  JobID  Owner  Proc-
LINE1  INACTIVE  0C06  NJE
LINE1.JR1  INACTIVE
LINE1.JT1  INACTIVE
LINE1.OR1  INACTIVE
LINE1.OT1  INACTIVE
LINE2  INACTIVE  0907  NJE
LINE2.JR1  INACTIVE
LINE2.JT1  INACTIVE
LINE2.OR1  INACTIVE
LINE2.OT1  INACTIVE
LINE26  ON,INA  RJP
LINE28  ON,INA  RJP
F1=HELP F2=SPLIT NE F3=END F4=RETURN F5=IFIND F6=BOOK
F7=UP F8=DOWN F9=SWAP NEX F10=LEFT F11=RIGHT F12=RETRIEVE
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```


NO (node) display

- SSI 82 now used to obtain node data
 - SYSPLEX view does not require SDSF server
- Enabled for JES3
 - Fixed column is NODENAME as node numbers do not apply.



NO (node) display – JES3 example

```
Session Z - POKVMTL4(24x80) - [24 x 80] - USER
File Edit View Communication Actions Window Help
Display Filter View Print Options Search Help
-----
SDSF NODE DISPLAY SY1      SYSA1N      LINE 1-14 (14)
COMMAND INPUT ==>          SCROLL ==> CSR
PREFIX=*  DEST=LOCAL  OWNER=*  SYSNAME=*
ACTION=//-Block,=-Repeat,+Extend,A-Release,D-Display,DL-DisplayLines,
ACTION=EL-ResetLines,H-Hold,SN-Start
NP  NODENAME Status      Path      PType Hold LineName VerifyP SendP
APPLJES2 UNCONNECTED SYSA5N    NONE    NONE NOTSET NOTSE
KGNVMC   UNCONNECTED SYSA2N    NONE    NONE NOTSET NOTSE
PK705VMA UNCONNECTED SYSA2N    NONE    NONE NOTSET NOTSE
PLPSC    UNCONNECTED SYSA2N    NONE    NONE NOTSET NOTSE
POK      CONNECTED/ALIAS SYSA1N    NONE    NONE NOTSET NOTSE
POKVMTL4 UNCONNECTED SYSA2N    NONE    NONE NOTSET NOTSE
SYSA1N   OWNNODE      SYSA1N    NONE    NONE NOTSET OWNNO
SYSA2N   UNCONNECTED SYSA2N    BSC     NONE LINE3 NOTSET NOTSE
SYSA2TCP UNCONNECTED SYSA2TCP  TCPIP   NONE    NONE NOTSET NOTSE
SYSA3N   UNCONNECTED SYSA2N    NONE    NONE NOTSET NOTSE
SYSA4N   UNCONNECTED SYSA2N    NONE    NONE NOTSET NOTSE
SYSA5N   UNCONNECTED SYSA5N    SNA     NONE    NONE NOTSET NOTSE
SYSA6N   UNCONNECTED SYSA5N    NONE    NONE NOTSET NOTSE
SYSA8N   UNCONNECTED SYSA2N    NONE    NONE NOTSET NOTSE
F1=HELP  F2=SPLIT NE  F3=END    F4=RETURN  F5=IFIND  F6=BOOK
F7=UP    F8=DOWN    F9=SWAP  NEX F10=LEFT  F11=RIGHT F12=RETRIEVE
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```

NS (network server) display

- New display for both JES2 and JES3
- JES2 - displays NETSRV and LOGON devices
- JES3 – displays NETSERV devices
- SSI 83 used to obtain data
 - SYSPLEX view does not require SDSF server



NS panel sample – JES2 example

```
Session Z - POKVMTL4(24x80) - [24 x 80] - USER
File Edit View Communication Actions Window Help
Display Filter View Print Options Search Help
-----
SDSF NS DISPLAY SY1 LINE 1-5 (5)
COMMAND INPUT ==> ns_ SCROLL ==> CSR
PREFIX=* DEST=LOCAL OWNER=* SYSNAME=*
ACTION=//Block,=-Repeat,+Extend,D-Display,DA-DisplayAppl,DL-DisplayLong,
ACTION=DS-DisplaySocket,E-Restart,K-SysCancel,KD-SysCancelDump,P-Stop,S-Start,
ACTION=Z-SysForce
NP  DEVICE      Status  Appl      Socket  Stack  Restart  Rest-Int Tr C
NETSRV1      DRAINED
NETSRV2      DRAINED
NETSRV3      DRAINED
LOGON1       DRAINED  SYSA1N
LOGON1       DRAINED  JES2
F1=HELP      F2=SPLIT NE F3=END      F4=RETURN   F5=IFIND    F6=B00K
F7=UP        F8=DOWN     F9=SWAP NEX F10=LEFT    F11=RIGHT   F12=RETRIEVE
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```

NC (network connection) display

- New display for both JES2 and JES3
- JES2 - displays SOCKET, APPL, and active BSC NJE Line devices, plus associated NJE transmitters and receivers
- JES3 – displays SOCKET and active BSC NJE Line devices, plus associated NJE transmitters and receivers
 - No support for BDT connections
- NC SHORT – displays devices without associated transmitters and receivers
- SSI 83 used to obtain data
 - SYSPLEX view does not require SDSF server



NC panel - JES2 example

```
Session Z - POKVMTL4(24x80) - [24 x 80] - USER
File Edit View Communication Actions Window Help
Display Filter View Print Options Search Help
-----
SDSF NC DISPLAY SY1 LINE 1-4 (4)
COMMAND INPUT ==> nc short_ SCROLL ==> CSR
PREFIX=* DEST=LOCAL OWNER=* SYSNAME=*
ACTION=//-Block,--Repeat,+Extend,D-Display,DL-DisplayLine,E-Restart,P-Stop,
ACTION=S-Start,SN-StartNetComm
NP  DEVICE      Status  Type ANode  JobName  JobID  JType  Owner  Pr
   JESB      INACTIVE SNA  SYSA2N
   S2        INACTIVE TCP  SYSA2N
   S3        INACTIVE TCP  SYSA3N
   JESB      INACTIVE SNA  SYSA2N

F1=HELP      F2=SPLIT NE  F3=END      F4=RETURN   F5=IFIND   F6=BOOK
F7=UP        F8=DOWN     F9=SWAP NEX F10=LEFT    F11=RIGHT   F12=RETRIEVE

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```



NC panel – JES3 example (1 of 2)

```
Session Z - POKVMTL4(24x80) - [24 x 80] - USER
File Edit View Communication Actions Window Help
Display Filter View Print Options Search Help
-----
SDSF NC DISPLAY SY1                               LINE 1-8 (8)
COMMAND INPUT ==> nc short_                       SCROLL ==> CSR
PREFIX=* DEST=LOCAL OWNER=* SYSNAME=*
ACTION=//-Block,/--Repeat,+--Extend,C-Cancel,D-Display,SN-StartNetComm
NP  DEVICE      Status  Type ANode   JobName  JobID   JType   Owner   Pr
LINE1          INACTIVE BSC
LINE2          INACTIVE BSC
LINE3          INACTIVE BSC  SYSA2N
LINE4          INACTIVE BSC
LINE5          INACTIVE BSC
S1             INACTIVE TCP  SYSA2TCP
S2             INACTIVE TCP  SYSA2TCP
S3             INACTIVE TCP  SYSA2TCP

F1=HELP      F2=SPLIT NE  F3=END      F4=RETURN   F5=IFIND   F6=BOOK
F7=UP        F8=DOWN     F9=SWAP NEX F10=LEFT    F11=RIGHT  F12=RETRIEVE

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```



NC panel – JES3 example (2 of 2)

```
Session Z - POKVMTL4(24x80) - [24 x 80] - USER
File Edit View Communication Actions Window Help
Display Filter View Print Options Search Help
-----
SDSF NC DISPLAY SY1                               LINE 1-15 (40)
COMMAND INPUT ==> nc_                               SCROLL ==> CSR
PREFIX=* DEST=LOCAL OWNER=* SYSNAME=*
ACTION=//-Block,=-Repeat,+Extend,C-Cancel,D-Display,SN-StartNetComm
NP  DEVICE      Status  Type ANode  JobName  JobID  JType  Owner  Pr
LINE1
LINE1.JR1      INACTIVE
LINE1.JT1      INACTIVE
LINE1.OR1      INACTIVE
LINE1.OT1      INACTIVE
LINE2
LINE2.JR1      INACTIVE
LINE2.JT1      INACTIVE
LINE2.OR1      INACTIVE
LINE2.OT1      INACTIVE
LINE3
LINE3          INACTIVE BSC  SYSA2N
LINE3.JR1      INACTIVE
LINE3.JT1      INACTIVE
LINE3.OR1      INACTIVE
LINE3.OT1      INACTIVE
F1=HELP      F2=SPLIT NE  F3=END      F4=RETURN    F5=IFIND    F6=BOOK
F7=UP        F8=DOWN     F9=SWAP NEX F10=LEFT    F11=RIGHT   F12=RETRIEVE
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```


INIT (initiator) display

- Previously updated to use SSI 82 in z/OS 1.12
- Enabled for JES3 in z/OS 1.13
- JES3 display shows rows corresponding to:
 - Groups (defined by GROUP parameter)
 - Classes (classes within each group)
 - Initiators (initiators)
 - ResType column indicates what is represented by the row
- Both JES3-managed and WLM-managed initiators are displayed
 - **INIT JES** can be issued to see only JES-managed inits/classes/groups
 - **INIT WLM** can be issued to see only WLM-managed inits/classes/groups



INIT (initiator) display – JES3 example

```
Session Z - POKVMTL4(24x80) - [24 x 80] - USER
File Edit View Communication Actions Window Help
Display Filter View Print Options Search Help
-----
SDSF INITIATOR DISPLAY (ALL) LINE 15-28 (261)
COMMAND INPUT ==> SCROLL ==> CSR
PREFIX=* DEST=LOCAL OWNER=* SYSNAME=*
ACTION=//-Block,--Repeat,+--Extend,D-Display,DL-DisplayLong,P-Stop,S-Start
NP ID Status Group ResType JobName Stepname JobID C
JES3TEST ON JES3TEST GROUP
A ON JES3TEST CLASS A
A ACTIVE JES3TEST INIT MANYSPIN GO JOB00031 A
ANY ON JES3TEST CLASS ANY
B ON JES3TEST CLASS B
FAILCAN ON JES3TEST CLASS FAILCAN
FAILHOLD ON JES3TEST CLASS FAILHOLD
FAILPRT ON JES3TEST CLASS FAILPRT
FAILRES ON JES3TEST CLASS FAILRES
FORCESY1 ON JES3TEST CLASS FORCESY1
FORCESY2 NOT ELIGIBLE JES3TEST CLASS FORCESY2
GLOBAL ON JES3TEST CLASS GLOBAL
HOT ON JES3TEST CLASS HOT
LOCAL NOT ELIGIBLE JES3TEST CLASS LOCAL

F1=HELP F2=SPLIT NE F3=END F4=RETURN F5=IFIND F6=BOOK
F7=UP F8=DOWN F9=SWAP NEX F10=LEFT F11=RIGHT F12=RETRIEVE
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```

J0 (job zero) display

- New display for JES3
- Displays SYSOUT data associated with JES3 job 0
 - Output can be browsed, modified, printed, deleted, etc.

```

Session Z - POKVMTL4(24x80) - [24 x 80] - USER
File Edit View Communication Actions Window Help
Display Filter View Print Options Search Help
-----
SDSF JOB 0 DISPLAY                LINES 12                LINE 1-1 (1)
COMMAND INPUT ==>                SCROLL ==> CSR
PREFIX=* DEST=(ALL) OWNER=* SYSNAME=*
ACTION=//-Block,--Repeat,+-Extend,?-JDS,C-Cancel,D-Display,H-Hold,O-Release,
ACTION=P-Purge,Q-OutDesc,S-Browse,SB-ISPFBrowse,SE-ISPFEdit,X-Print,
ACTION=XC-PrintClose,XD-PrintDS,XDC-PrintDSClose,XF-PrintFile,
ACTION=XFC-PrintFileClose,XS-PrintSysout,XSC-PrintSysoutClose
NP   DSPNAME  DSID Owner   C CC PrMode  Burst Forms  FCB  UCS  Wtr   Fla
  1  DISPLAY   1  JES2    A  1  LINE    C    1PRT   6    PN   NON
-----
F1=HELP      F2=SPLIT NE  F3=END      F4=RETURN    F5=IFIND    F6=BOOK
F7=UP        F8=DOWN     F9=SWAP NEX F10=LEFT     F11=RIGHT   F12=RETRIEVE
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```

Miscellaneous changes to panels

- 11 new columns on JES2 SP panel
 - Related to JES2 spool migration line item
- JOBRC column on JC display
 - Corresponds to new JES2 parameter
- Max-RC (O, H, I, ST) columns now can display:
 - CONV ERR if the converter failed
 - SYS FAIL if the job ended due to an IPL
- ES and ESH actions on DA, I, and ST panels
 - Correspond to new JES2 \$EJ,STEP and \$EJ,STEP,HOLD commands
- W action on JDS panel
 - Corresponds to new \$TJ,SPIN,DDNAME= parameter
 - New W (spinnable) column indicates whether the DD can be spun
 - Available when JDS is entered from DA, ST, or I panel

Other miscellaneous changes

- Spool dataset allocations can now use XTIoT
 - Number of concurrent allocations no longer restricted by TIOT
 - Partially addressed by allocation “window” added by PK96840
 - PK96840 did not address “SA” action in REXX
 - PK96840 did not address virtual storage utilization
 - Specify in DEVSUPxx member:
 - **NON_VSAM_XTIOT=YES**
 - If specified, SDSF will automatically allocate using XTIoT



Interactions and dependencies

- None

Migration and coexistence considerations

- Ensure you have all JES2 toleration APARs for z/OS 1.11 or z/OS 1.12 data gathering code to be up to date.
- See JES2 presentations for complete list.



Installation

- None

Session summary

- Lots of new panels in JES3
- New NS and NC panels in JES2
- New columns, actions and overtypes on many additional panels

Appendix - References

- SDSF Operator and Customization, SA22-7670-15
- SDSF REXXHELP command
 - Contains SDSF/REXX usage, syntax, and examples
- SDSF SEARCH command
 - Searches SDSF help system for word or phrase



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