

# What's new in SDSF z/OS 1.13? Session 9706

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## SDSF z/OS 1.13

- Eliminate requirement for MQ Series to obtain sysplex data
- OPERLOG color
- OPERLOG Rexx support
- EAV (large data set) support
- JES2/JES3 equivalence
  - H, O, INIT panels
  - Device panels
  - New networking panels (NS, NC)
- Point-and-shoot / Cursor sort
- Miscellaneous changes

# Installation

- z/OS V1R13 SDSF packaging is similar to R12:
  - SDSF base FMID **HQX7780**
    - Contains common code and JES3 support
  - SDSF JES2 feature FMID **JJE778S**
    - Contains JES2 support
    - JES2 installations must install both HQX7780 and JJE778S
    - By default no assemblies are done at SMP/E APPLY time

## Migration & Coexistence Considerations

- Sharing SDSF 1.13 Server Params with lower releases of SDSF
  - For this function, if you are sharing ISFPRMxx with SDSF 1.11 and/or 1.12 systems you must install the toleration PTFs associated with APARs **PM03128** and **PM33350** :
    - For SDSF 1.11, **UK90030** and **UK90032** (HQX7760)
    - For SDSF 1.12, **UK90031** and **UK90033** (HQX7770)
- Displaying devices from a JES2 1.13 system on lower releases
  - JES2 compatibility APAR(s) in down-level data gathering code, when in a mixed MAS with z/OS 1.11 or z/OS 1.12
    - **OA35942** and all prerequisites

# WebSphere MQ Elimination

- **Problem Statement / Need Addressed**
  - SDSF should not require WebSphere MQ for sysplex support
- **Solution**
  - Replace WebSphere MQ with XCF based solution for CK, PS, ENC, and RM panels
- **Benefit / Value**
  - Simplified configuration and no dependency on MQSeries

## SDSF Sysplex Displays

- SDSF provides sysplex view of panels:
  - **CK** (health checks)
  - **PS** (processes)
  - **ENC** (enclaves)
  - **RM** (JES2 resources)
- Data gathered on each system using the SDSF server
- Consolidated on client for display
  - User can see data from all systems

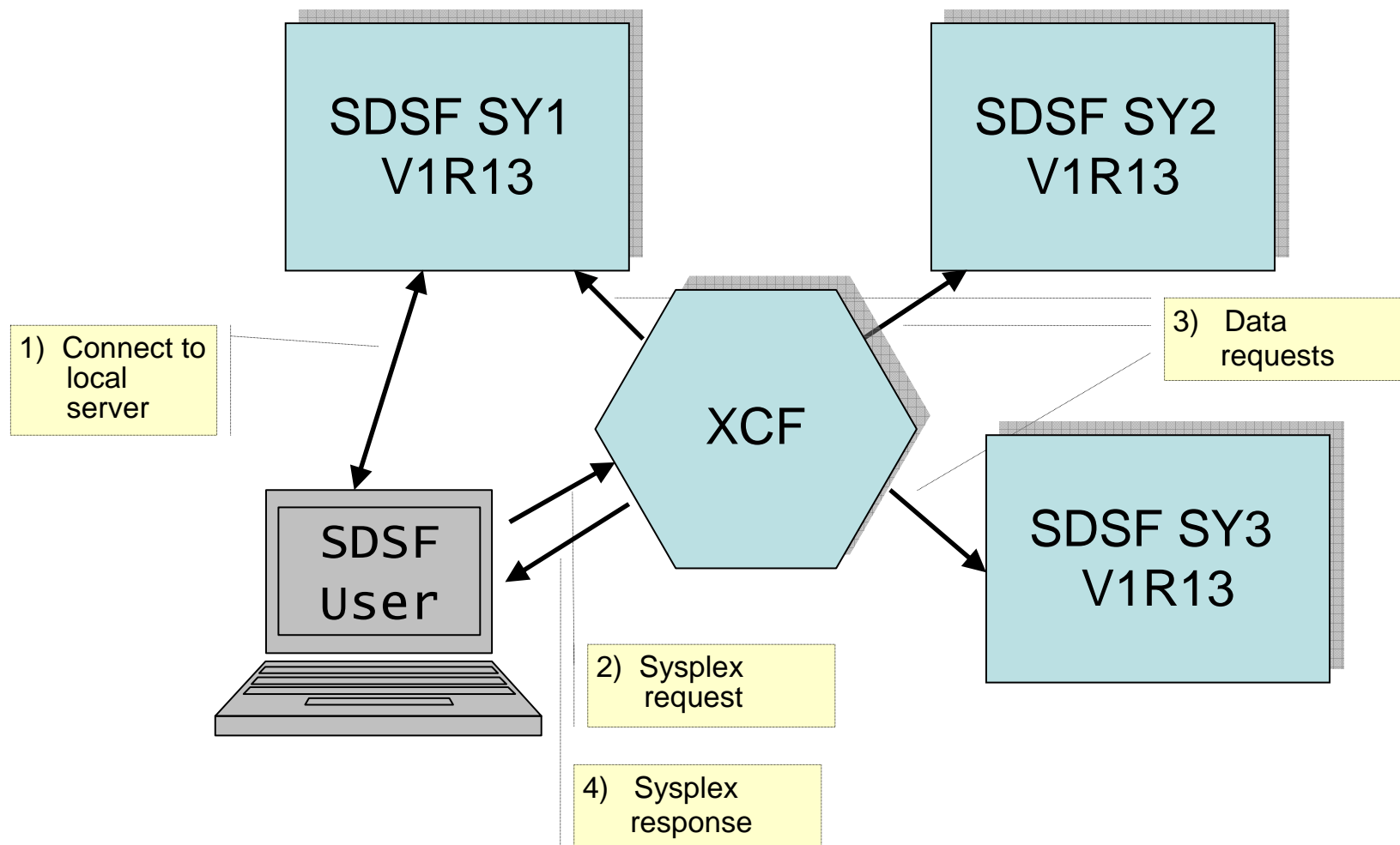
## WebSphere MQ Elimination

- Prior to V1R13, WebSphere MQ was used to send requests to SDSF servers on other members and receive responses
- With V1R13, XCF will be used
  - All target systems must be at least V1R13 level
  - SDSF server must be started on each system
- In mixed environment (V1R13 and downlevels)
  - Use **SET CMODE** command or **ISFPRMxx** custom property to control behavior:
    - Revert to MQ -or-
    - Use XCF and ignore downlevel systems



# SDSF Communication with XCF

Local server



# Sysplex-wide Panel Displays

```

SDSF HEALTH CHECKER DISPLAY (ALL) LINE 1-35 (41)
COMMAND INPUT ==> SCROLL ==> CSR
PREFIX=* DEST=(ALL) OWNER=* SORT=Interval/A SYSNAME=*
NP NAME CheckOwner SysName NextSch-Int
VSM_CSA_THRESHOLD IBMVSM SY1 0:00:13
VSM_CSA_THRESHOLD IBMVSM SY3 0:01:28
VSM_CSA_THRESHOLD IBMVSM SY4 0:03:59
CNZ_TASK_TABLE IBMCNZ SY1 0:05:06
RSM_HVSHARE IBMRSM SY1 0:05:06
RSM_MAXCADS IBMRSM SY1 0:05:06
VSM_SQA_THRESHOLD IBMVSM SY1 0:05:06
CNZ_TASK_TABLE IBMCNZ SY3 0:11:28
RSM_HVSHARE IBMRSM SY3 0:11:28
RSM_MAXCADS IBMRSM SY3 0:11:28
VSM_SQA_THRESHOLD IBMVSM SY3 0:11:28
CNZ_TASK_TABLE IBMCNZ SY4 0:13:59
    
```

All systems shown

# Configuration

- Use of XCF is configured by default
  - Use **CONNECT** and **PROPERTY** statements in ISFPRMxx to customize
- All members in the sysplex are included
  - Must be at V1R13 level or higher
- Use **SYSNAME** command to specify system name pattern
  - **SYSNAME \*** to display data from all systems
  - **SYSNAME** with no arguments to display only local system

# ISFPRMxx Configuration

- **CONNECT** statement
  - New **XCFSRVNM** keyword
    - Used to derive XCF application server name
    - Application server name links SDSF servers with clients

**XCFSRVNM( SAME | NONE | *name* )**

**SAME** – use SDSF server name as last qualifier (default)

**NONE** – disable use of XCF

***name*** – use name as last qualifier – server name will be of the form  
**ISFSRVR.*name***

# SET CMODE Command and Custom Property



- New **SET CMODE** command to control fallback to MQ
  - **SET CMODE (blank) | Z12 | Z13**
    - Blank (default for the release) (Z13)
    - **Z12** – MQ should be used if not all targets are V1R13 level
    - **Z13** – XCF should be used (downlevel targets will be ignored)
- New **Comm.Release.Mode** custom property in ISFPRMxx
  - Used to assign default CMODE
  - **SET CMODE** command overrides this property

## WHO Command Response

- **WHO** command response changed
  - **COMM**= keyword added to show XCF status

```
USERID=D96CLW1, PROC=SDSF31EJ, TERMINAL=Z046LC11,  
GRPINDEX=1, GRPNAME=ISFSPROG,  
MVS=z/OS 01.13.00, JES=z/OS1.13, SDSF=HQX7780,  
ISPF=6.3, RMF/DA=NOTACC, SERVER=YES,  
SERVERNAME=SDSF, JESNAME=JES2, MEMBER=SY1,  
JESTYPE=JES2, SYSNAME=SY1,  
SYSPLEX=PLEX1, COMM=NOTAVAIL, COMM=ENABLED
```

## Commands

- **f sdsf,d** enhanced to show XCF configuration status

```
SY1 S0000002 ISF312I SDSF Display
Server status: Active          Default: Yes
Communications: Inactive
Parms: ISFPRMM0 / SYS2.PARMLIB
XCF Communications: Configured
```

- **f sdsf,d,c** to show XCF processing status

```
SY1 S0000002 ISF315I SDSF XCF Communications
Application server name: ISFSRVR SDSF
Tasks Active: 000 Idle: 010
Sends: 0000000000 Receives: 0000000010
```

# SDSF/Rexx Operlog Enhancements

- **Problem Statement / Need Addressed**
  - Access Operlog through SDSF/REXX
  - Improve Operlog panel usability through color and highlighting
- **Solution**
  - Enhance SDSF/REXX ISFLOG command
  - Enhance SDSF Operlog panel and SET SCREEN command
- **Benefit / Value**
  - Use SDSF/REXX to access Operlog similar to Syslog
  - Control color and highlighting on Operlog panel



# SDSF/Rexx Operlog Enhancements

- Changed syntax of ISFLOG command:
  - **ISFLOG READ TYPE(SYSLOG | OPERLOG)**
- Use special variables to specify a date and time range to read
  - Same variables as used when reading Syslog:
    - *isflogstartdate, isflogstarttime*
    - *isflogstopdate, isflogstoptime*
  - Default is 00:00:00.00 through 23:59:59.59 of current day
- Data returned in isfline stem variable
  - isfline.0 has count of variables that follow
    -

# SDSF/Rexx Operlog Example

```
/* REXX */  
/* Read last day of operlog */  
  
rc=isfcalls("on")  
isfdate="mmdyyyyy /" /* Date format for special variables */  
  
currday=date("C")  
yesterday=currday-1  
  
isflogstartdate=date("U",yesterday,"C")  
isflogstarttime=time("N")  
isflogstopdate=date("U")  
isflogstoptime=time("N")  
  
isflinelim=1000
```

Annotations:

- rc=isfcalls("on") — Add host command environment
- currday=date("C") — Prepare to set set start date
- isflogstopdate=date("U") and isflogstoptime=time("N") — Set date/time range
- isflinelim=1000 — Set maximum number of lines

# SDSF/Rexx Operlog Example

```
Address SDSF "ISFLOG READ TYPE(OPERLOG)"
```

Read the OPERLOG

```
do ix=1 to isfmsg2.0  
  say isfmsg2.ix  
end
```

Display SDSF messages, if any

```
do ix=1 to isfline.0  
  say isfline.ix  
end
```

Display lines read from OPERLOG

```
rc=isfcalls("off")
```

## SDSF/Rexx Operlog Example

- Sample messages (from isfmsg2 stem variable)

ISF754I Command 'SET DATE MMDDYYYY /' generated from associated variable ISFDATE.

ISF757I Variable ISFLINELIM being processed with value '1000'.

ISF757I Variable ISFLOGSTARTTIME being processed with value '15:05:35'.

ISF757I Variable ISFLOGSTARTDATE being processed with value '01/24/11'.

ISF757I Variable ISFLOGSTOPTIME being processed with value '15:05:35'.

ISF757I Variable ISFLOGSTOPDATE being processed with value '01/25/11'.

ISF770W Request limit 1000 from variable ISFLINELIM reached, processing stopped.

ISF767I Request completed.

# SDSF/Rexx Operlog Example

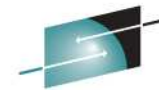
- Sample responses (from isfline stem variable)

```

M C000000 SY1      2011025 13:30:05.58      00000200  IXL015I STRUCTURE AL
D                                     633 00000200  STRUCTURE SYSZWLM_WO
D                                     633 00000200  CONNECTIVITY=DEFAULT
D                                     633 00000200   CFNAME      ALLOCATI
D                                     633 00000200  -----  -----
D                                     633 00000200   LF01      INVALID
D                                     633 00000200                        INITSIZ
D                                     633 00000200   LF02      NO CONNE
E                                     633 00000200  SIGLISTS  NO CONNE
NC0000000 SY2      2011025 13:26:45.44 INTERNAL 00000290  CONTROL M,UEXIT=Y IE
NR0000000 SY2      2011025 13:26:45.67 INTERNAL 00000090  IEA590I WTO USER EXI
N 0000000 SY2      2011025 13:26:00.42      00000290  IEA371I SYS1.PARMLIB
  
```

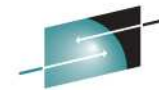
# Operlog Colorization

- Operlog panel enhanced
  - Messages displayed in original color, highlighting, and intensity as first issued
    - **LOG** command to display Operlog (when Operlog active)
    - ISPF only
  - User override based on descriptor code
    - For example, user can change descriptor 2 messages to red
    - Use **SET SCREEN** to change default colors or to turn function off



# Operlog Display

```
  _Display  _Filter  _View  _Print  _Options  _Search  _Help
-----
SDSF OPERLOG  DATE 05/05/2011      0 WTORS      COLUMNS 02- 81
COMMAND INPUT ==> SET SCREEN_      SCROLL ==> CSR
E                               748 00000090  CSVH0957E Problem(s) w
M 4040000 SY2      2011125 15:07:42.48 S0000014 00000090 *HZS0003E CHECK(IBMRAF
D                               749 00000090  IRRH204E The RACF_SENS
E                               749 00000090  more potential errors
NC0000000 SY2      2011125 15:19:54.25 INSTREAM 00000290  LOGON
N 0200000 SY2      2011125 15:20:04.31 T0000035 00000000  $HASP100 ROWBEAR ON T
N 4000000 SY2      2011125 15:20:04.36 T0000035 00000000  $HASP373 ROWBEAR STAR
N 0000000 SY2      2011125 15:20:04.41 T0000035 00000000  IEF125I ROWBEAR - LOGG
N 0020000 SY2      2011125 15:20:25.41 T0000035 00000000  ISF020E SDSF LEVEL ERR
S                               z/OS1.13 BUT JES2 IS A
M 4000000 SY2      2011125 15:20:25.45      00000000  IEA045I AN SVC DUMP HA
D                               755 00000000  FOR ASID (0026)
D                               755 00000000  ERROR ID = SEQ00037 CP
E                               755 00000000  QUIESCE = YES
M 4000000 SY2      2011125 15:20:26.14 T0000035 00000000  IEA794I SVC DUMP HAS C
D                               756 00000000  DUMPID=002 REQUESTED B
D                               756 00000000  DUMP TITLE=ABEND=U0081
E                               756 00000000  S,ISSUER=IS
```



# SET SCREEN Popup

```

  Display  Filter  View  Print  Options  Search  Help
-----
SDSF OPERLOG  DATE 05/05/2
COMMAND INPUT ==> SET SCR

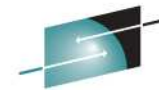
  4040000 SY2      2011125

C0000000 SY2      2011125
 0200000 SY2      2011125
 4000000 SY2      2011125
 0000000 SY2      2011125
 0020000 SY2      2011125 15:20:25.41 T0000035 00000000 ISF020E SDSF LEVEL ERR
S                                     z/OS1.13 BUT JES2 IS A
M 4000000 SY2      2011125 15:20:25.45          00000000 IEA045I AN SVC DUMP HA
D                                     755 00000000 FOR ASID (0026)
D                                     755 00000000 ERROR ID = SEQ00037 CP
E                                     755 00000000 QUIESCE = YES
M 4000000 SY2      2011125 15:20:26.14 T0000035 00000000 IEA794I SVC DUMP HAS C
D                                     756 00000000 DUMPID=002 REQUESTED B
D                                     756 00000000 DUMP TITLE=ABEND=U0081
E                                     756 00000000 S,ISSUER=IS

  F1=HELP      F2=SPLIT      F3=END      F4=RETURN      F5=IFIND      F6=B00K
  F7=UP        F8=DOWN      F9=SWAP     F10=LEFT      F11=RIGHT     F12=RETRIEVE

```





# Operlog Color Popup

```
Displ |
-----|
SDSF OP |          Set Screen Characteristics: OPERLOG Panel
COMMAND |
More:   |          +
404000 | Use color and highlighting  1  1. Yes  2. No
404000 |
404000 | Type values to override the original color and highlighting.
404000 | Press F5/17 to see changes.
C000000 |
020000 | Descriptor code          Color    Highlight Intensity
400000 | 1 - System failure
000000 | 2 - Immediate action required
002000 | 3 - Eventual action required
400000 | 4 - System status
400000 | 5 - Immediate command response  RED    USCORE  HIGH
400000 | 6 - Job status
400000 | 7 - Task-related
400000 | 8 - Out of line
400000 | 9 - Operator's request
400000 | 10 - Not defined
400000 | 11 - Critical eventual action
F1=HEL | F1=Help    F2=Split    F3=Cancel    F5=Refresh    F6=Default
F7=UP  | F7=Backward F8=Forward    F9=Swap      F10=Color     F11=Cuaattr
```

# SDSF EAV Support

- **Problem Statement / Need Addressed**
  - SDSF print support for output datasets residing on extended addressing volumes (EAV)
- **Solution**
  - New options on PRINT D popup, REXX special variables, Java print settings
- **Benefit / Value**
  - SDSF can print to large data sets

# Print Data Set Panel

```

SDSF Open Print Data Set

COMMAND INPUT ==>                                SCROLL ==> HALF

Data set name   ==> 'SUIMGVG.HIGHRISK.LOGON.LIST'
Member to use   ==>
Disposition     ==> NEW          (OLD, NEW, SHR, MOD)

Management class ==>              (Blank for default management class)
Storage class    ==>              (Blank for default storage class)
  Volume serial  ==>              (Blank for authorized default volume)
  Device type    ==>              (Generic unit or device address)
Data class       ==>              (Blank for default data class)
  Space units    ==> BLKS         (BLKS, TRKS, CYLS, BY, KB, or MB)
  Primary quantity ==> 500       (In above units)
  Secondary quantity ==> 500    (In above units)
  Directory blocks ==>          (Zero for sequential data set)
  Record format   ==> VBA        (LIBRARY, blank, ... See Help for more)
  Record length   ==> 240
  Block size      ==> 3120
Data set name type ==>          (LIBRARY, blank, ... See Help for more)
Extended attributes ==>        (NO, OPT, or blank)
  
```



## Rexx and Java

- Rexx special variables
  - Used with ISFACT
    - isfprtdsntype
    - isfprtextaddr
  - Dropped by isfreset()
- Java settings
  - ISFPrintDatasetSettings class methods
    - addISFPrtDSNType
    - addISFPrtExtAttr
    - removeISFPrtDSNType
    - removeISFPrtExtAttr

# JES2/JES3 Equivalence

- **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**

- Goal is to make all existing functionality that makes sense in JES3 available in JES3 environment
  - 7 existing panels enabled for JES3
  - 3 new panels created to fill functional gaps
  - Additional columns on device panels in both JES2 and JES3

- **Benefit / Value**

- Panels now work under JES3
- JESplex scope is now implicit in these panels

## JES2/JES3 Equivalence: Panels Updated

- Changes to existing panels:
  - **O** (Output) and **H** (Held Output) panels enabled for JES3
  - **PR** (Printer) updated to support JES3 RJP printers
  - **PU** (Punch), **RD** (Reader), **LI** (Line), **INIT** (initiator), and **NO** (Node) panels updated to use SSI to obtain data, and enabled for JES3
  - **SO** (Spool Offload) panel updated to use SSI (JES2 only)
  - Additional columns added to most of these panels in both JES2 and JES3 environments
- New panels:
  - New **NS** (Network Server) and **NC** (Network Connection) panels added for both JES2 and JES3
  - New **J0** (Job Zero) panel added for JES3

# SDSF Primary Option Menu – JES3

```

Display  Filter  View  Print  Options  Search  Help
-----
HQX7780  ----- SDSF PRIMARY OPTION MENU -----
COMMAND INPUT ==>                                     SCROLL ==> CSR

DA      Active users
I       Input queue
O       Output queue
H       Held output queue
ST      Status of jobs
J0      Job zero

LOG     System log
SR     System requests
JP     Members in the JESplex
JC     Job classes
SE     Scheduling environments
RES    WLM resources
ENC    Enclaves
PS     Processes

END    Exit SDSF

INIT   Initiators
PR     Printers
PUN    Punches
RDR    Readers
LINE   Lines
NODE   Nodes
SP     Spool volumes
NS     Network servers
NC     Network connections

CK     Health checker

ULOG   User session log
  
```

## O and H panel changes

- Output is returned via SSI 80 (as with JES2)
- No overtypes allowed on panel
  - Use ? action to access JDS display for overtypes
- Actions allowed
  - ? – access JDS panel
  - Q – access output descriptors
  - S,SE,SB – browse data
  - SJ – edit JCL
  - X,XC,XD,XDC,XF,XFC,XS,XSC – Print



# Output Display – JES3

Display Filter View Print Options Search Help

-----  
 SDSF OUTPUT ALL CLASSES ALL FORMS LINES 1,043 LINE 1-14 (14)  
 COMMAND INPUT ==> SCROLL ==> CSR

ACTION=// -Block,=-Repeat,+ -Extend,?-JDS,Q-OutDesc,S-Browse,SB-ISPFBrowse,  
 ACTION=SE-ISPFEdit,SJ-JCLEdit,X-Print,XC-PrintClose,XD-PrintDS,  
 ACTION=XDC-PrintDSClose,XF-PrintFile,XFC-PrintFileClose,XS-PrintSysout,  
 ACTION=XSC-PrintSysoutClose

| NP | JOBNAME  | JobID    | Owner    | Prty | C | Forms | Dest     | Tot-Rec | T |
|----|----------|----------|----------|------|---|-------|----------|---------|---|
|    | BPXAS    | JOB00018 | OMVSKERN | 15   | A | 1PRT  | ANYLOCAL | 54      |   |
|    | BPXAS    | JOB00019 | OMVSKERN | 15   | A | 1PRT  | ANYLOCAL | 54      |   |
|    | BPXAS    | JOB00020 | OMVSKERN | 15   | A | 1PRT  | ANYLOCAL | 53      |   |
|    | DIP      | JOB00014 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 42      |   |
|    | FTPD     | JOB00022 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 121     |   |
|    | INETD    | JOB00021 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 50      |   |
|    | IRRDP190 | JOB00012 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 45      |   |
|    | IRRDP190 | JOB00012 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 3       |   |
|    | OMVSINIT | JOB00013 | OMVSKERN | 15   | A | 1PRT  | ANYLOCAL | 31      |   |
|    | READTCP  | JOB00006 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 52      |   |
|    | SDSF     | JOB00007 | SDSF     | 15   | A | 1PRT  | ANYLOCAL | 373     |   |
|    | SYMUPD12 | JOB00005 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 75      |   |
|    | SYMUPD12 | JOB00015 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 75      |   |
|    | TCAS     | JOB00010 | SYSTASK  | 15   | A | 1PRT  | ANYLOCAL | 15      |   |

# PR (Print), PU (Punch), and RDR (Reader) Displays



- SSI 83 now used to obtain device data
  - SYSPLEX view does not require SDSF Server
- **PR**, **PU**, and **RDR** commands in JES3 environment allow **LCL|RMT** parameter to obtain local or RJP devices 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 in ISFPRMxx to revert to prior behavior

## 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
  - Displays devices defined by
    - **DEVICE DTYPE=NJELINE**
    - **RJPLINE**
  - 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 columns added in both JES2 and JES3 environments

# LI (Line) Display – JES3

```

Display  Filter  View  Print  Options  Search  Help
-----
SDSF LINE DISPLAY  SY1                                LINE 1-8 (8)
COMMAND INPUT ==>  li                                SCROLL ==>  PAGE
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  Type Node   JobName  JobID   Owner   Proc-Lin
   LINE1        INACTIVE 0C06  NJE
   LINE2        INACTIVE 0907  NJE
   LINE26       ON,INA           RJP
   LINE28       ON,INA           RJP
   LINE3        ACTIVE   0C40  NJE
   LINE3.JR1    INACTIVE
   LINE3.JT1    INACTIVE
   LINE3.OR1    INACTIVE
   LINE3.OT1    INACTIVE
   LINE4        INACTIVE 0C41  NJE
   LINE5        INACTIVE 0C42  NJE

```

## 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.
  - Positional parameters for node number range not allowed for JES3.
- Additional columns added for both JES2 and JES3

# NO (Node) Display – JES3

```

Display Filter View Print Options Search Help
-----
SDSF NODE DISPLAY SY1      SYSA1N                      LINE 1-14 (14)
COMMAND INPUT ==>  no                      SCROLL ==>  CSR
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      NONE      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
  
```

## 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** to see only JES-managed inits/classes/groups
  - **INIT WLM** to see only WLM-managed inits/classes/groups
  - **INIT ALL** to see all inits/classes/groups

# INIT (Initiator) Display – JES3

Display Filter View Print Options Search Help

```

SDSF INITIATOR DISPLAY SY1 LINE 15-31 (260)
COMMAND INPUT ==> SCROLL ==> CSR
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
LOG NOT ELIGIBLE JES3TEST CLASS LOG
MARYK ON JES3TEST CLASS MARYK
MYCLASS ON JES3TEST CLASS MYCLASS
  
```



## 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** command allows up to 4 numerical device ranges for JES2
  - Displays both NETSRV and LOGON devices corresponding to range

# NS (Network Server) Display – JES2

```

Display Filter View Print Options Search Help
-----
SDSF INITIATOR DISPLAY SY1                               LINE 1-5 (5)
COMMAND INPUT ==>                                       SCROLL ==> CSR
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
   NETSRV1     DRAINED          S1        NO        NO
   NETSRV2     DRAINED          S2        NO        NO
   NETSRV3     DRAINED          S3        NO        NO
   LOGON1      DRAINED  SYSA1N    NO        NO
   LOGON2      DRAINED  SYSA2N    NO        NO
  
```

## 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 (both JES2 and JES3)
- SSI 83 used to obtain data
  - SYSPLEX view does not require SDSF server

# NS (Network Server) Display – JES2

```

Display  Filter  View  Print  Options  Search  Help
-----
SDSF NC DISPLAY SY1                               LINE 21-35 (65)
COMMAND INPUT ==> nc short                        SCROLL ==> CSR
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
   JESA         INACTIVE SNA   WSC
   JESC         INACTIVE SNA   WSC
   JES2N2       INACTIVE SNA   WSC
   JES2N3       INACTIVE SNA   SANJOSE
   LU400A       INACTIVE SNA   AS400
   LINE20       ACTIVE   BSC   WSC
   SJ0          ACTIVE   TCP   SANJOSE
   SJ01         INACTIVE TCP   SANJOSE
   SJ010        INACTIVE TCP   SANJOSE
   SJ011        INACTIVE TCP   SANJOSE
   SJ012        INACTIVE TCP   SANJOSE
   SJ013        INACTIVE TCP   SANJOSE
   SJ014        INACTIVE TCP   SANJOSE
   SJ015        INACTIVE TCP   SANJOSE
   SJ016        INACTIVE TCP   SANJOSE
   SJ017        INACTIVE TCP   SANJOSE

```

# NS (Network Server) Display – JES2

Display Filter View Print Options Search Help

```

SDSF NC DISPLAY SY1                               LINE 21-35 (105)
COMMAND INPUT ==> nc                               SCROLL ==> CSR
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
   JESA         INACTIVE SNA   WSC
   JESC         INACTIVE SNA   WSC
   JES2N2       INACTIVE SNA   WSC
   JES2N3       INACTIVE SNA   SANJOSE
   LU400A       INACTIVE SNA   AS400
   LINE20       ACTIVE   BSC   WSC
   L20.JR1      INACTIVE
   L20.JT1      INACTIVE
   L20.SR1      INACTIVE
   L20.ST1      INACTIVE
   SJ0         ACTIVE   TCP   SANJOSE
   L101.JR1     INACTIVE
   L101.JT1     INACTIVE
   L101.SR1     INACTIVE
   L101.ST1     INACTIVE
   SJ01        INACTIVE TCP   SANJOSE
  
```

# NS (Network Server) Display – JES2

```

Display Filter View Print Options Search Help
-----
SDSF NC DISPLAY SY1                               LINE 1-13 (13)
COMMAND INPUT ==> nc                               SCROLL ==> CSR
ACTION=// -Block,=-Repeat,+ -Extend,C-Cancel,D-Display,SN-StartNetComm
NP  DEVICE      Status  Type ANode  JobName  JobID  JType  Owner
   @0000001     ACTIVE  TCP  SYSA2N
   @0000001.JR1 INACTIVE
   @0000001.JT1 INACTIVE
   @0000001.OR1 INACTIVE
   @0000001.OT1 INACTIVE
   LINE1        INACTIVE BSC
   LINE2        INACTIVE BSC
   LINE3        INACTIVE BSC
   LINE4        INACTIVE BSC
   LINE5        INACTIVE BSC
   S1           INACTIVE TCP
   S2           INACTIVE TCP
   S3           INACTIVE TCP
  
```

# J0 (Job Zero) Display

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

```

Display Filter View Print Options Search Help
-----
SDSF JOB 0 DISPLAY                LINES 12                LINE 1-1 (1)
COMMAND INPUT ==>                SCROLL ==> CSR
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
   DISPLAY   1 JES2   A  1 LINE    C    1PRT   6   PN
  
```

## Point-and-Shoot / Cursor Sort

- Point-and-shoot fields on primary panel and column headings for interactive users
  - On primary panel, takes user to selected panel (ISPF only)
  - On tabular column header, invokes sort on that column
    - If the column is not currently being sorted on the sort is set to Ascending on that column (**SORT column A**)
    - If the column is already being sorted on Ascending it is set to Descending on that column (**SORT column D**)
    - If the column is already being sorted on Descending it will be set OFF (**SORT OFF**)
    - Replaces any existing user sort criteria as it is a shortcut to using the SORT command.



## Cursor Sort Commands

- **SET CSORT** command to enable or disable cursor sorting
  - **SET CSORT ?** Displays the current setting of cursor sort (ON or OFF)
  - **SET CSORT ON** will enable cursor sort
  - **SET CSORT OFF** will disable cursor sort

## Other miscellaneous changes to panels

- 11 new columns on JES2 **SP** panel
  - Related to JES2 spool migration
- **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, I, or ST panel

## Other miscellaneous changes

- Spool dataset allocations can now use XTIOOT
  - Number of concurrent allocations no longer restricted by TIOOT
    - 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\_XTIOOT=YES**
    - If specified, SDSF will automatically allocate using XTIOOT

## Summary

- Eliminate requirement for MQ Series to obtain sysplex data
- OPERLOG color
- OPERLOG Rexx support
- EAV (large data set) support
- JES2/JES3 equivalence
- Cursor sort
- Miscellaneous changes