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 Parms 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** (HQQ7760)
    • For SDSF 1.12, **UK90031** and **UK90033** (HQQ7770)

• 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

1) Connect to local server

2) Sysplex request

3) Data requests

4) Sysplex response

SDSF SY1 V1R13

XCF

SDSF SY2 V1R13

SDSF SY3 V1R13

SDSF User
### SDSF HEALTH CHECKER DISPLAY (ALL)

**COMMAND INPUT ==>**

**PREFIX=*/** DEST=(ALL)** OWNER=*/** SORT=Interval/A** SYSNAME=*\n
<table>
<thead>
<tr>
<th>NP</th>
<th>NAME</th>
<th>CheckOwner</th>
<th>SysName</th>
<th>NextSch-Int</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VSM_CSA_THRESHOLD</td>
<td>IBMVSM</td>
<td>SY1</td>
<td>0:00:13</td>
</tr>
<tr>
<td></td>
<td>VSM_CSA_THRESHOLD</td>
<td>IBMVSM</td>
<td>SY3</td>
<td>0:01:28</td>
</tr>
<tr>
<td></td>
<td>VSM_CSA_THRESHOLD</td>
<td>IBMVSM</td>
<td>SY4</td>
<td>0:03:59</td>
</tr>
<tr>
<td></td>
<td>CNZ_TASK_TABLE</td>
<td>IBMCNZ</td>
<td>SY1</td>
<td>0:05:06</td>
</tr>
<tr>
<td></td>
<td>RSM_HVSHARE</td>
<td>IBMRSM</td>
<td>SY1</td>
<td>0:05:06</td>
</tr>
<tr>
<td></td>
<td>RSM_MAXCADS</td>
<td>IBMRSM</td>
<td>SY1</td>
<td>0:05:06</td>
</tr>
<tr>
<td></td>
<td>VSM_SQA_THRESHOLD</td>
<td>IBMVSM</td>
<td>SY1</td>
<td>0:05:06</td>
</tr>
<tr>
<td></td>
<td>CNZ_TASK_TABLE</td>
<td>IBMCNZ</td>
<td>SY3</td>
<td>0:11:28</td>
</tr>
<tr>
<td></td>
<td>RSM_HVSHARE</td>
<td>IBMRSM</td>
<td>SY3</td>
<td>0:11:28</td>
</tr>
<tr>
<td></td>
<td>RSM_MAXCADS</td>
<td>IBMRSM</td>
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<td></td>
<td>VSM_SQA_THRESHOLD</td>
<td>IBMVSM</td>
<td>SY3</td>
<td>0:11:28</td>
</tr>
<tr>
<td></td>
<td>CNZ_TASK_TABLE</td>
<td>IBMCNZ</td>
<td>SY4</td>
<td>0:13:59</td>
</tr>
</tbody>
</table>

*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=ISFSROG,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
/* REXX */ /* Read last day of operlog */
rc=isfcalls(“on”)
isfdate="mmddyyyy /" /* Date format for special variables */
currday=date(“C”)
yesterday=crrrday-1

isflogstartdate=date("U",yesterday,"C")
isflogstarttime=time("N")
isflogstopdate=date("U")
isflogstoptime=time("N")

isflinelim=1000 /* Set maximum number of lines */
```

- **Add host command environment**
- **Prepare to set set start date**
- **Set date/time range**
- **Set maximum number of lines**
SDSF/Rexx Operlog Example

Address SDSF "ISFLOG READ TYPE(OPERLOG)"

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

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

rc=isfcalls("off")

Read the OPERLOG

Display SDSF messages, if any

Display lines read from OPERLOG
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)**

<table>
<thead>
<tr>
<th>M</th>
<th>C000000 SY1</th>
<th>2011025 13:30:05.58</th>
<th>00000200</th>
<th>IXL015I STRUCTURE AL</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>633 0000200</td>
<td>STRUCTURE SYSZWL_WO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>633 0000200</td>
<td>CONNECTIVITY=DEFAULT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>633 0000200</td>
<td>CFNAME ALLOCATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>633 0000200</td>
<td>LF01 INVALID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>633 0000200</td>
<td>SIGLISTS NO CONNE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E</th>
<th>NC000000 SY2</th>
<th>2011025 13:26:45.44</th>
<th>INTERNAL 00000290</th>
<th>CONTROL M,UEXIT=Y IE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR000000 SY2</td>
<td>2011025 13:26:45.67</td>
<td>INTERNAL 00000090</td>
<td>IEA590I WTO USER EXI</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>0000000 SY2</td>
<td>2011025 13:26:00.42</td>
<td>00000290</td>
<td>IEA371I SYS1.PARMLIB</td>
</tr>
</tbody>
</table>
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) with...
M 40400000 SY2  2011125 15:07:42.48 S0000014 000000090 *HZS0003E CHECK(IBMRA...n
D  749 00000090 IRRH204E The RACF_SENS...n
E  749 00000090 more potential errors

NC0000000 SY2  2011125 15:19:54.25 INSTREAM 00000290 LOGON
N 0200000 SY2  2011125 15:20:04.31 T00000035 00000000 $HASP100 ROWBEAR ON T...n
N 40000000 SY2  2011125 15:20:04.36 T00000035 00000000 $HASP373 ROWBEAR STAR...n
N 00200000 SY2  2011125 15:20:04.41 T00000035 00000000 IEF125I ROWBEAR - LOGG...n
N 00200000 SY2  2011125 15:20:25.41 T00000035 00000000 ISF020E SDSF LEVEL ERR...n
S  z/OS1.13 BUT JES2 IS A...
M 40000000 SY2  2011125 15:20:25.45 00000000 IEA045I AN SVC DUMP HAS A...
D  755 00000000 FOR ASID (0026)
D  755 00000000 ERROR ID = SEQ00037 CP...
E  755 00000000 QUIESCE = YES
M 40000000 SY2  2011125 15:20:26.14 T00000035 00000000 IEA794I SVC DUMP HAS A...
D  756 00000000 DUMPID=002 REQUESTED B...
D  756 00000000 DUMP TITLE=ABEND=U0081...
E  756 00000000 S,ISSUER=IS...```
## SET SCREEN Popup

<table>
<thead>
<tr>
<th>Command</th>
<th>Input</th>
<th>Date</th>
<th>Time</th>
<th>HOURS</th>
<th>MINS</th>
<th>LEN</th>
<th>Description</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDSF</td>
<td>OPERLOG</td>
<td>05/05/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Set Screen Characteristics</td>
<td></td>
</tr>
<tr>
<td>COMMAND</td>
<td>INPUT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Select the elements that you want to customize.</td>
<td></td>
</tr>
<tr>
<td>4040000</td>
<td>SY2</td>
<td>2011125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1. Basic settings and tabular panels</td>
<td>F1=Help</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2. OPERLOG panel</td>
<td>F2=Split</td>
</tr>
<tr>
<td>C0000000</td>
<td>SY2</td>
<td>2011125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F3=Cancel</td>
</tr>
<tr>
<td>0200000</td>
<td>SY2</td>
<td>2011125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F4=Cancel</td>
</tr>
<tr>
<td>4000000</td>
<td>SY2</td>
<td>2011125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0000000</td>
<td>SY2</td>
<td>2011125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0020000</td>
<td>SY2</td>
<td>2011125</td>
<td></td>
<td>15:20</td>
<td>25:41</td>
<td>T00000035</td>
<td>ISF020E SDSF LEVEL ERR ShS</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4000000</td>
<td>2011125</td>
<td></td>
<td>15:20</td>
<td>25:45</td>
<td>00000000</td>
<td>IEA045I AN SVC DUMP HAS C</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FOR ASID (0026)</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td>755</td>
<td>0000000</td>
<td></td>
<td></td>
<td>ERROR ID = SEQ00037 CP</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
<td>755</td>
<td>0000000</td>
<td></td>
<td></td>
<td>QUIESCE = YES</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4000000</td>
<td>2011125</td>
<td></td>
<td>15:20</td>
<td>26:14</td>
<td>T00000035</td>
<td>IEA794I SVC DUMP HAS C</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td>756</td>
<td>0000000</td>
<td></td>
<td></td>
<td>DUMPID=002 REQUESTED B</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td>756</td>
<td>0000000</td>
<td></td>
<td></td>
<td>DUMP TITLE=ABEND=U0081</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
<td>756</td>
<td>0000000</td>
<td></td>
<td></td>
<td>S.ISSUE=IS</td>
<td></td>
</tr>
<tr>
<td>F1=HELP</td>
<td>F2=SPLIT</td>
<td>F3=END</td>
<td>F4=RETURN</td>
<td>F5=IFIND</td>
<td>F6=BOOK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F7=UP</td>
<td>F8=DOWN</td>
<td>F9=SWAP</td>
<td>F10=LEFT</td>
<td>F11=RIGHT</td>
<td>F12=RETRIEVE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Operlog Color Popup

<table>
<thead>
<tr>
<th>Descriptor code</th>
<th>Color</th>
<th>Highlight</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>System failure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Immediate action required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Eventual action required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>System status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Immediate command response</td>
<td>RED</td>
<td>USCORE</td>
</tr>
<tr>
<td>6</td>
<td>Job status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Task-related</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Out of line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Operator's request</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Not defined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Critical eventual action</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F1=Help    F2=Split    F3=Cancel    F5=Refresh    F6=Default
F7=Backward F8=Forward F9=Swap    F10=Color    F11=Cuaattr

Use color and highlighting

1. Yes 2. No

Type values to override the original color and highlighting.
Press F5/17 to see changes.
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**

<table>
<thead>
<tr>
<th>Command Input</th>
<th>Scroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDSF Open Print Data Set</td>
<td>HALF</td>
</tr>
</tbody>
</table>

**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

**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

Command input: ==> CSR

Display  Filter  View  Print  Options  Search  Help

HQX7780  ----------------- SDSF PRIMARY OPTION MENU  --------------------------

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

<table>
<thead>
<tr>
<th>NP</th>
<th>JOBNAME</th>
<th>JobID</th>
<th>Owner</th>
<th>Prty</th>
<th>C</th>
<th>Forms</th>
<th>Dest</th>
<th>Tot-Rec</th>
<th>T</th>
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<tbody>
<tr>
<td></td>
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<td>JOB00018</td>
<td>OMVSKERN</td>
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<td>1PRT</td>
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<td>OMVSINIT</td>
<td>JOB00013</td>
<td>OMVSKERN</td>
<td>15</td>
<td>A</td>
<td>1PRT</td>
<td>ANYLOCAL</td>
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<td>JOB00005</td>
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<td>1PRT</td>
<td>ANYLOCAL</td>
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<td>ANYLOCAL</td>
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<td>JOB00010</td>
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<td>A</td>
<td>1PRT</td>
<td>ANYLOCAL</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>
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 apples 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

<table>
<thead>
<tr>
<th>NP</th>
<th>DEVICE</th>
<th>Status</th>
<th>Unit</th>
<th>Type</th>
<th>Node</th>
<th>JobName</th>
<th>JobID</th>
<th>Owner</th>
<th>Proc-Lin</th>
</tr>
</thead>
<tbody>
<tr>
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<td>INACTIVE</td>
<td>0C06</td>
<td>NJE</td>
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<td>INACTIVE</td>
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<td>NJE</td>
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<td></td>
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<td>ON,INA</td>
<td>RJP</td>
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</tr>
<tr>
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<td>ON,INA</td>
<td>RJP</td>
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<td></td>
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<td>NJE</td>
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<td></td>
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<tr>
<td>LINE3.JR1</td>
<td>INACTIVE</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LINE3.JT1</td>
<td>INACTIVE</td>
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<td></td>
<td></td>
<td></td>
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</tr>
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<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Display</th>
<th>Filter</th>
<th>View</th>
<th>Print</th>
<th>Options</th>
<th>Search</th>
<th>Help</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>NP</th>
<th>NODENAME</th>
<th>Status</th>
<th>Path</th>
<th>PType</th>
<th>Hold</th>
<th>LineName</th>
<th>VerifyP</th>
<th>SendP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>APPLJES2</td>
<td>UNCONNECTED</td>
<td>SYSA5N</td>
<td>NONE</td>
<td>NOTSET</td>
<td>NOTSET</td>
<td>NOTSET</td>
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</tr>
<tr>
<td></td>
<td>KGNVMC</td>
<td>UNCONNECTED</td>
<td>SYSA2N</td>
<td>NONE</td>
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<td>NOTSET</td>
<td>NOTSET</td>
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<tr>
<td></td>
<td>PK705VMA</td>
<td>UNCONNECTED</td>
<td>SYSA2N</td>
<td>NONE</td>
<td>NOTSET</td>
<td>NOTSET</td>
<td>NOTSET</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PLPSC</td>
<td>UNCONNECTED</td>
<td>SYSA2N</td>
<td>NONE</td>
<td>NOTSET</td>
<td>NOTSET</td>
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</tr>
<tr>
<td></td>
<td>POK</td>
<td>CONNECTED/ALIAS</td>
<td>SYSA2N</td>
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<td>NOTSET</td>
<td>NOTSET</td>
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</tr>
<tr>
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<td>POKVMTL4</td>
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<td>NOTSET</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SYSA1N</td>
<td>OWNNODE</td>
<td>SYSA1N</td>
<td>NONE</td>
<td>NOTSET</td>
<td>OWNNO</td>
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</tr>
<tr>
<td></td>
<td>SYSA2N</td>
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<td>SYSA2N</td>
<td>BSC</td>
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<tr>
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<td></td>
</tr>
<tr>
<td></td>
<td>SYSA3N</td>
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<td>SYSA2N</td>
<td>NONE</td>
<td>NOTSET</td>
<td>NOTSET</td>
<td>NOTSET</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SYSA4N</td>
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<td>SYSA2N</td>
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<td>SYSA6N</td>
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<td></td>
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<td>NONE</td>
<td>NOTSET</td>
<td>NOTSET</td>
<td>NOTSET</td>
<td></td>
</tr>
</tbody>
</table>
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

### SDSF INITIATOR DISPLAY SY1

**COMMAND INPUT**

```
ACTION=//-Block,=-Repeat,+-Extend,D-Display,DL-DisplayLong,P-Stop,S-Start
```

<table>
<thead>
<tr>
<th>NP</th>
<th>ID</th>
<th>Status</th>
<th>Group</th>
<th>ResType</th>
<th>JobName</th>
<th>Stepname</th>
<th>JobID</th>
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<td>A</td>
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<tr>
<td>A</td>
<td>ON</td>
<td></td>
<td>JES3TEST</td>
<td>CLASS</td>
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<td>JOB00031</td>
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<td></td>
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<td>CLASS</td>
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<td>ANY</td>
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<tr>
<td>B</td>
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<td></td>
<td>JES3TEST</td>
<td>CLASS</td>
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<td></td>
<td>JES3TEST</td>
<td>CLASS</td>
<td>FAILCAN</td>
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<td>CLASS</td>
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<td>JES3TEST</td>
<td>CLASS</td>
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<td></td>
<td>JES3TEST</td>
<td>CLASS</td>
<td>FAILRES</td>
<td></td>
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</tr>
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<td></td>
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<td>CLASS</td>
<td>FORCESY1</td>
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<td>CLASS</td>
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<td>JES3TEST</td>
<td>CLASS</td>
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</tr>
<tr>
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<td></td>
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<td>CLASS</td>
<td>HOT</td>
<td></td>
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</tr>
<tr>
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<td>NOT ELIGIBLE</td>
<td></td>
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</tr>
<tr>
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<td></td>
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<td>CLASS</td>
<td>LOG</td>
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</tr>
<tr>
<td>MARYK</td>
<td>ON</td>
<td></td>
<td>JES3TEST</td>
<td>CLASS</td>
<td>MARYK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MYCLASS</td>
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<td></td>
<td>JES3TEST</td>
<td>CLASS</td>
<td>MYCLASS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Device</th>
<th>Status</th>
<th>Appl</th>
<th>Socket</th>
<th>Stack</th>
<th>Restart</th>
<th>Rest-Int</th>
<th>Tr</th>
</tr>
</thead>
<tbody>
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<td>DRAINED</td>
<td>S1</td>
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<td>NO</td>
<td>NO</td>
<td>NO</td>
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</tr>
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<td>DRAINED</td>
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<td>NO</td>
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<td>NO</td>
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</tr>
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<td>DRAINED</td>
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<td>NO</td>
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<tr>
<td>LOGON1</td>
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</table>

**SDSF INITIATOR DISPLAY** SY1

**COMMAND INPUT**

```
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**
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

| 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**

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<thead>
<tr>
<th>ACTION</th>
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<tbody>
<tr>
<td>//</td>
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<tr>
<td>=-Repeat</td>
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<tr>
<td>++-Extend</td>
<td>Extend</td>
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<tr>
<td>D-Display</td>
<td>Display</td>
</tr>
<tr>
<td>DL-DisplayLine</td>
<td>Display Line</td>
</tr>
<tr>
<td>E-Restart</td>
<td>Restart</td>
</tr>
<tr>
<td>P-Stop</td>
<td>Stop</td>
</tr>
<tr>
<td>S-Start</td>
<td>Start</td>
</tr>
<tr>
<td>SN-StartNetComm</td>
<td>Start NetComm</td>
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**Device Status Table**

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<tr>
<th>Device</th>
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<th>Type</th>
<th>ANode</th>
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### NS (Network Server) Display – JES2

<table>
<thead>
<tr>
<th>Display</th>
<th>Filter</th>
<th>View</th>
<th>Print</th>
<th>Options</th>
<th>Search</th>
<th>Help</th>
</tr>
</thead>
</table>

**SDSF NC DISPLAY SY1**

**COMMAND INPUT ====>** nc

**COMMAND INPUT ====>** nc

**SCROLL ====>** CSR

**ACTION=//-Block,=-Repeat,+-Extend,C-Cancel,D-Display,SN-StartNetComm**

<table>
<thead>
<tr>
<th>NP</th>
<th>DEVICE</th>
<th>Status</th>
<th>Type</th>
<th>ANode</th>
<th>JobName</th>
<th>JobID</th>
<th>JType</th>
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<tr>
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</tr>
</tbody>
</table>

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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.
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 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
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