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

SHARE in Orlando, Summer 2011

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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

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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

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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** (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

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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

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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

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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 **ISFPRM*xx*** custom property to control behavior:
    - Revert to MQ -or-
    - Use XCF and ignore downlevel systems

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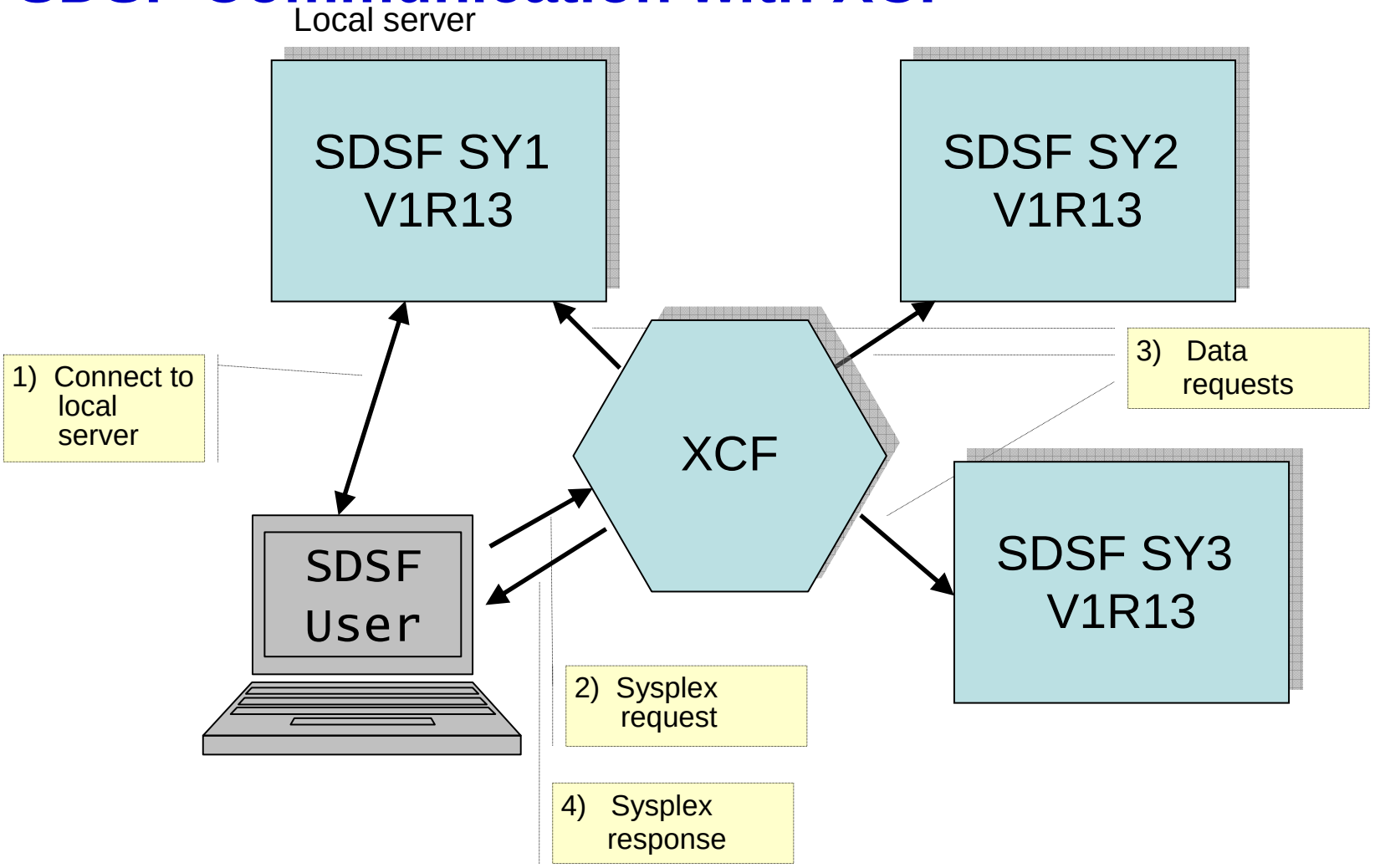
SDSF Communication with XCF



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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

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Configuration

- Use of XCF is configured by default
  - Use **CONNECT** and **PROPERTY** statements in ISFPRM*xx* 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

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ISFPRM*xx* 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*

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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 ISFPRM*xx*
  - Used to assign default CMODE
  - **SET CMODE** command overrides this property

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WHO Command Response

- **WHO** command response changed
  - **COMMX=** 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,COMMX=ENABLED
```

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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
```

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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

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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
    -

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SDSF/Rexx Operlog Example

```
/* REXX */
/* Read last day of operlog */

rc=isfcalls(“on”)
isfdate="mmddyyyy /"          /* 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
```

Add host command environment

Prepare to set set start date

Set date/time range

Set maximum number of lines

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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

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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.
```

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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
```

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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

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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(IBMRACF
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
```

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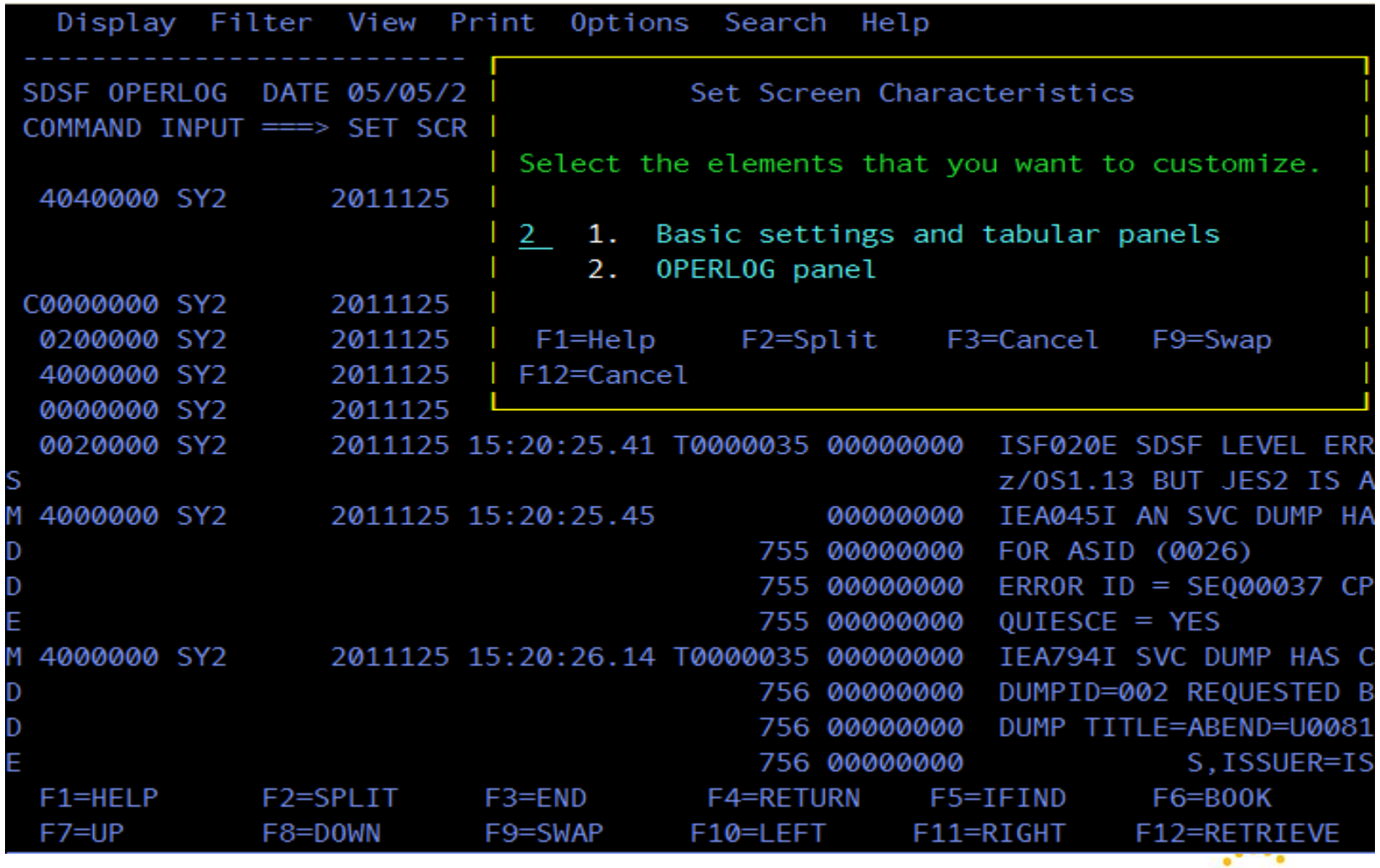
SET SCREEN Popup



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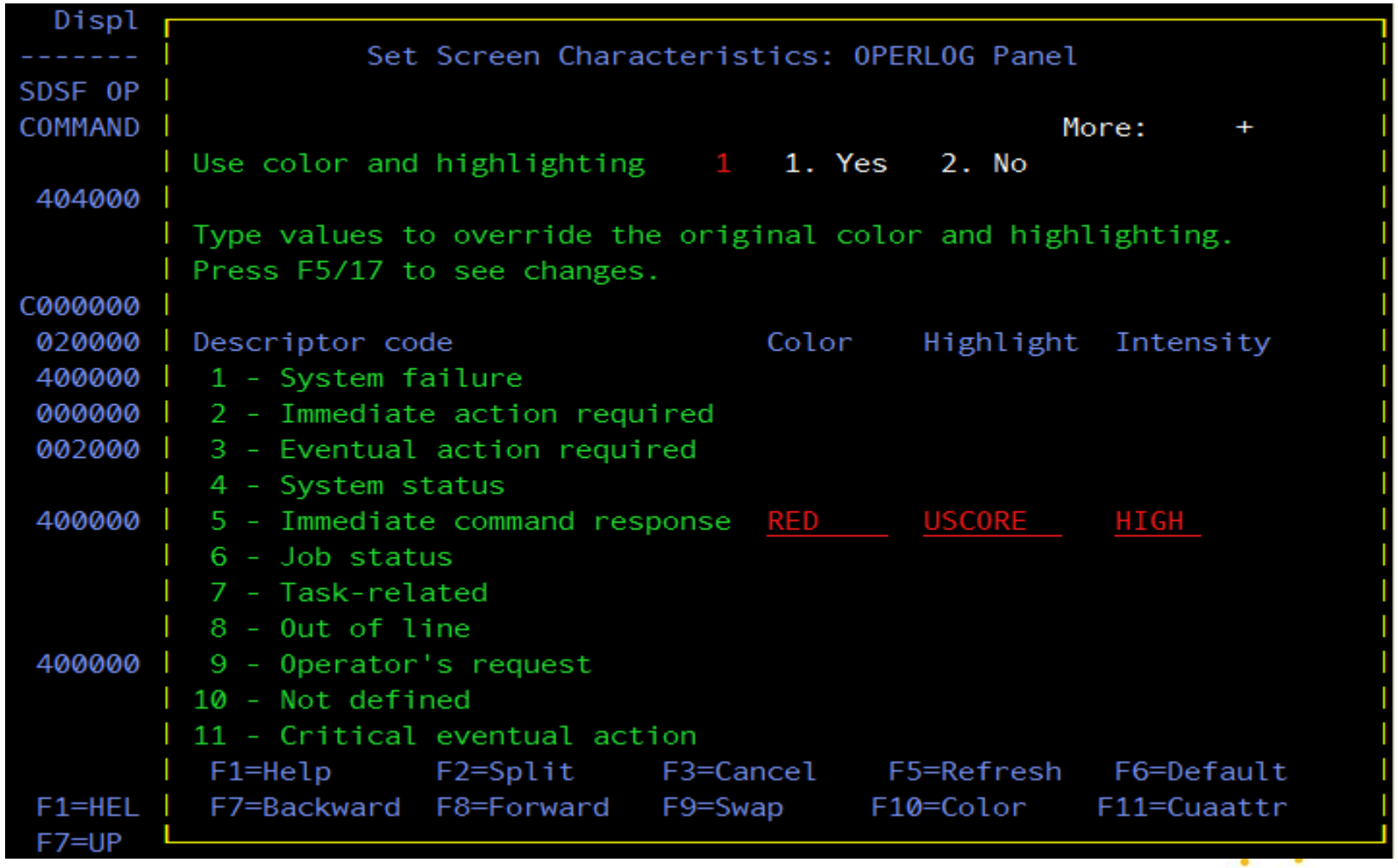
Operlog Color Popup



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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

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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
  Record length      ===> 240
  Block size         ===> 3120
Data set name type   ===>            (LIBRARY, blank, ... See Help for more)
Extended attributes  ===>            (NO, OPT, or blank)
```

NEW

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Rexx and Java

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

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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

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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

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SDSF Primary Option Menu – JES3

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

DA     Active users                      INIT  Initiators
I      Input queue                       PR    Printers
O      Output queue                      PUN   Punches
H      Held output queue                 RDR   Readers
ST     Status of jobs                    LINE  Lines
J0     Job zero                          NODE  Nodes
                                         SP    Spool volumes
LOG    System log                        NS    Network servers
SR     System requests                   NC    Network connections
JP     Members in the JESPlex
JC     Job classes                       CK    Health checker
SE     Scheduling environments
RES    WLM resources                     ULOG  User session log
ENC    Enclaves
PS     Processes

END    Exit SDSF
```

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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

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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
```

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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 ISFPRM*xx* to revert to prior behavior

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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

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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
```

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

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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          NOTSET   NOTSE
     KGNVMC   UNCONNECTED           SYSA2N           NONE          NOTSET   NOTSE
     PK705VMA UNCONNECTED           SYSA2N           NONE          NOTSET   NOTSE
     PLPSC    UNCONNECTED           SYSA2N           NONE          NOTSET   NOTSE
     POK      CONNECTED/ALIAS                        NONE          NOTSET   NOTSE
     POKVMTL4 UNCONNECTED           SYSA2N           NONE          NOTSET   NOTSE
     SYSA1N   OWNNODE               SYSA1N           NONE          NOTSET   OWNNO
     SYSA2N   UNCONNECTED           SYSA2N   BSC     NONE LINE3    NOTSET   NOTSE
     SYSA2TCP UNCONNECTED           SYSA2TCP TCPIP   NONE          NOTSET   NOTSE
     SYSA3N   UNCONNECTED           SYSA2N           NONE          NOTSET   NOTSE
     SYSA4N   UNCONNECTED           SYSA2N           NONE          NOTSET   NOTSE
     SYSA5N   UNCONNECTED           SYSA5N   SNA     NONE          NOTSET   NOTSE
     SYSA6N   UNCONNECTED           SYSA5N           NONE          NOTSET   NOTSE
     SYSA8N   UNCONNECTED           SYSA2N           NONE          NOTSET   NOTSE
```

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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** 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

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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
```

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

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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
```

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

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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
     SJO          ACTIVE   TCP  SANJOSE
     SJO1         INACTIVE TCP  SANJOSE
     SJO10        INACTIVE TCP  SANJOSE
     SJO11        INACTIVE TCP  SANJOSE
     SJO12        INACTIVE TCP  SANJOSE
     SJO13        INACTIVE TCP  SANJOSE
     SJO14        INACTIVE TCP  SANJOSE
     SJO15        INACTIVE TCP  SANJOSE
     SJO16        INACTIVE TCP  SANJOSE
     SJO17        INACTIVE TCP  SANJOSE
```

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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
     SJO          ACTIVE   TCP  SANJOSE
     L101.JR1     INACTIVE
     L101.JT1     INACTIVE
     L101.SR1     INACTIVE
     L101.ST1     INACTIVE
     SJO1         INACTIVE TCP  SANJOSE
```

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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
```

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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.

```
 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
```

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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.

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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

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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) colums 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

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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 **DEVSUP*xx*** member:
    - **NON_VSAM_XTIOT=YES**
    - If specified, SDSF will automatically allocate using XTIOT

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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

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