

# System Display and Search Facility (SDSF)

## Monitor, manager and control

SDSF gives you an easy and efficient way to monitor, manage and control the key aspects of your MVS/JES2 system. You can:

- Control job processing (hold, release, cancel, and purge jobs)
- Control output, and browse jobs without printing
- Control devices such as printers, lines, and initiators across the MAS
- Browse the syslog
- Manage system resources, such as members of the MAS, job classes, and WLM enclaves

```

Display  Filter  View  Print  Options  Help
-----
HQX7705----- SDSF PRIMARY OPTION MENU -----
COMMAND INPUT ==>_                               SCROLL ==> PAGE

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
                                         NODE  Nodes
LOG  System log                                 SO    Spool offload
SR  System requests                            SP    Spool volumes
MAS  Members in the MAS
JC  Job classes                                ULOG  User session log
SE  Scheduling environments
RES  WLM Resources
ENC  Enclaves
PS  Processes
    
```

SDSF menu

With SDSF panels, there is no need to learn or remember complex command syntax. SDSF's action characters, overtypable fields, action bar, pull-downs, and pop-up windows allow you to select available functions.

```

Display  Filter  View  Print  Options  Help
-----
SDSF DA AQTs SYS1      PAG 10 SIO 113 CPU 114/007
COMMAND INPUT ==>_                               SCROLL ==> PAGE
NP  JOBNAME  SysName  Real  Paging      SIO  CPU%  SrvClass
   *MASTER* AQFT      10T   0.00   7.06   0.15  SYSTEM
   *MASTER* AQTs      3594   0.00   0.12   0.04  SYSTEM
   ABOWEN   AQTs      742    0.00   0.00   0.00  TSOPRIME
   ADAM     AQTs     1310   0.00   0.00   0.00  TSOPRIME
   ADANPL   AQTs     1128   0.00   0.00   0.00  TSOPRIME
   ADINELL  AQTs      564    0.00   0.00   0.00  TSOPRIME
   ADOOLEY  AQFT     1472   0.00   0.00   0.00  TSOPRIME
   ADSM     AQTs     9544   0.00   0.00   0.59  SYSSTC
   AFOSTER  AQFT     1261   0.00   0.00   0.00  TSOPRIME
   AFUREY   AQTs     5496   0.00   0.00   0.00  TSOPRIME
    
```

- Select a function; no learning curve
- Authorized users can issue system commands from the command line
- System data, current and customizable

Type short commands here to take action; no need to remember command syntax.

Modify values by typing over them

## Control jobs

SDSF provides an easy way to control JES2 jobs, which can help your users work more efficiently. It gives immediate, up-to-date, sysplex-wide information about jobs waiting to be processed or in execution. You can display all active jobs, all jobs on a specific queue, or display detail for a job no matter where it is in the sysplex. And you can display output as it is created.

```

Display Filter View Print Options Help
-----
SDSF STATUS DISPLAY ALL CLASSES      LINE 1-20 (24651)
COMMAND INPUT ==>_                    SCROLL ==> PAGE
NP  JOBNAME  JobID    Owner    Prty Queue  C
   PEKOW2   JOB19199  SCHED    15  INPUT  J
   ACTAPSO2 JOB23991  SCHED    15  INPUT  J
   SCHEDULC JOB23474  ???????? 10  XMITTER J
   SCHEDULC JOB31939  ???????? 10  XMITTER J
   SCHEDULC JOB03103  ???????? 10  XMITTER J
   IBMUSERU JOB09173  RACF2ND  7  EXECUTION A
   AGRAFA   JOB13490  AGRAF    7  EXECUTION A
   XWALLET3 JOB04538  XWALLET  7  EXECUTION B

```

*Status Panel - jobs on any queue*

## Manage work productively

With SDSF commands and action characters, you can:

- ☛ Cancel, hold or release jobs
- ☛ Find out if jobs are waiting to be processed
- ☛ Filter the jobs to show just the jobs that interest you
- ☛ View output before it is printed
- ☛ Change a job's priority, class, or destination
- ☛ Edit and resubmit the JCL without leaving SDSF

```

Display Filter View Print Options Help
-----
SDSF INPUT QUEUE DISPLAY ALL CLASSES  LINE 22-42 (69)
COMMAND INPUT ==>                      SCROLL ==> PAGE
NP  JOBNAME  JobID    Owner    Prty C  Pos PrtDest
   #CLRLCG   JOB26627  CLRUSER  8  D   18  LOCAL
   #CLRLCG   JOB26658  CLRUSER  8  D   19  LOCAL
   #CLRLCG   JOB26693  CLRUSER  8  D   20  LOCAL
   JYINBKUP  JOB27326  ++++++++ 7  D   21  LOCAL
   JYINFPS   JOB32332  ++++++++ 7  D   22  LOCAL
   JYINFPS   JOB32333  ++++++++ 7  D   23  LOCAL
   JYINS     JOB32337  ++++++++ 7  D   24  LOCAL
   C WLBKBP#   JOB32343  THERESA  7  D   25  LOCAL
   WLBKBP#   JOB30138  THERESA  7  G    1  LOCAL

```

*Canceling a job on the Input Queue*

## Control Output

SDSF displays detailed information about output that is ready to be printed, including:

- ☛ The high return code for a job
- ☛ The total number of lines to be printed
- ☛ Classes the output is assigned to
- ☛ Forms needed for printing
- ☛ Date the output was created.

```

Display Filter View Print Options Help
-----
SDSF OUTPUT ALL CLASSES  ALL FORMS  LINES 1,442
COMMAND INPUT ==>_      SCROLL ==> PAGE
NP  JOBNAME  Max-RC    Owner    C Forms  JobID  Dest
   NUCLEUS1  CC 0008   COREY    A  STD   JOB07873 LOCAL
   GOJEFFY   CC 0000   GOJEFF   A  STD   JOB10001 LOCAL
   HARTMANC  CC 0004   HARTMAN  A  STD   JOB10467 LOCAL
   KOCHR     CC 0001   KOCH     A  STD   JOB11540 LOCAL
   JPAOQQ    JCL ERROR JPAO     A  STD   JOB12002 LOCAL
   RONDA2A  CC 0000   RONDA    A  STD   JOB14138 LOCAL
   WLJLMK38 ABEND S806 LADYDI   A  STD   JOB16674 LOCAL
   NUCLEUS1  CC 0000   COREY    A  STD   JOB24196 LOCAL
   IWMINSTL JCL ERROR MONHEI2  A  STD   JOB25378 LOCAL
   DAVEHFTP  CC 0000   HILLIAR  A  STD   JOB28811 LOCAL

```

*Output Panel*

SDSF allows you to control how and where your output is printed. You can:

- Hold or purge the output
- Change the output's class, destination or forms
- Set output descriptors to be printed on separator pages.

```

Display Filter View Print Options Help
-----
SDSF HELD OUTPUT DISPLAY ALL CLASSES LINES 20,599
COMMAND INPUT ==>
NP  JOBNAME      JobID      Owner      Prty C ODisp Dest
//  D16DRS1A     JOB16330 DLR         7 H HOLD  P2D436
    HASCUBES     JOB15536 DLR         7 C HOLD  LOCAL
    DLRTTEST     JOB16339 DLR         7 H HOLD  LOCAL
    DLRRRPTA     JOB17832 DLR         7 H HOLD  LOCAL
    DLRRPTB     JOB17848 DLR         7 H HOLD  LOCAL
//  DLREXT       JOB17888 DLR         7 H HOLD  LOCAL

```

*Changing the destination on multiple rows*

When you work with the individual output data sets for a job, you can:

- Purge or release a data set
- Browse or print a data set
- Change the class, destination or output descriptors of a data set

```

Display Filter View Print Options Help
-----
SDSF JOB DATA SET DISPLAY - JOB BERKEA5 (JOB00042)
COMMAND INPUT ==>          SCROLL ==> PAGE
NP  DDNAME      StepName ProcStep DSID Owner C Dest
    JESJCLIN     JES2         1 BEVK  R LOCAL
    JESMSG LG    JES2         2 BEVK  R LOCAL
    JESJCL       JES2         3 BEVK  R LOCAL
    JESYSMSG     JES2         4 BEVK  R LOCAL
    $INTTEXT     JES2         5 BEVK  A LOCAL
    ISFIN        FINDDA      101 BEVK  R LOCAL
xdc ISFOUT       FINDDA      104 BEVK  R LOCAL

```

*Printing an individual output dataset on the Job Data Set Panel*

### **Browse output**

You can display job output before deciding to print it. Print or search output. Or exploit the power of ISPF and use ISPF's edit or browse function to view output.

SDSF shows the job's SYSOUT data sets, the JES2 job log, the JCL for the job, and any job-related messages. You can optionally include SYSIN, as well.

```

SDSF OUTPUT DISPLAY BKELLERZ JOB26263 DSID      2
COMMAND INPUT ==>_
      J E S 2  J O B  L O G  --  S Y S T E M  A Q F T
-----
09.25.05 JOB26263  IRR010I  USERID BKELLER  IS ASSIGNED
09.25.06 JOB26263  ICH70001I BKELLER  LAST ACCESS AT 09:
09.25.06 JOB26263  $HASP373 BKELLERZ  STARTED - INIT 12 -
09.25.07 JOB26263  IEF403I  BKELLERZ  - STARTED - TIME=09.
-----
      1 //BKELLERZ JOB '141691,B001D49A','WR KELLER'
        //          MSGCLASS=H,NOTIFY=BKELLER,CLASS=T
      2 //OUT OUTPUT FORMDEF=010111,PAGEDEF=V06481
        // *
        // *      THIS JOB COMPARES 2 DATA SETS.
      3 //COMPARE PROC NAME=,
        //          FORMAT=FULL,
-----
      16 IEFC001I  PROCEDURE COMPARE WAS EXPANDED USING
      ICH70001I  BKELLER  LAST ACCESS AT 09:25:06 ON MONDAY,
      IEF236I  ALLOC. FOR BKELLERZ COMPARE ZACTION

```

*Excerpts from an Output Dataset Panel*

You can display just the JCL, modify it, and resubmit it.

```

Command ==> sub          Scroll ==> CSR
//BKELLERZ JOB '141691,B001D49A','WR KELLER'
//          MSGCLASS=H,NOTIFY=BKELLER,CLASS=T
//OUT OUTPUT FORMDEF=010111,PAGEDEF=V06481
// *
// *      THIS JOB COMPARES 2 DATA SETS.
//COMPARE PROC NAME=,
//          FORMAT=FULL,

```

## Control devices

With SDSF you have a single interface to the devices on your system. With SDSF and MQSeries for OS/390, you can work with devices anywhere in the MAS.

### Control local and remote printers, punches and readers

SDSF displays the status (for example, active, halted, or drained) of all printers, punches and readers on each system, and information about a job currently being processed on a device. By typing over current values, you can change the characteristics of a device. You can start, stop, halt, restart, interrupt, forward and backward space printers or punches.

Display Filter View Print Options Help						
-----						
SDSF PRINTER DISPLAY						LINE 33-54 (102)
COMMAND INPUT ==>> _						SCROLL ==>> PAGE
NP	PRINTER	Status	SForms	SClass	Jobname	JobID
	PRT33	ACTIVE	STD	UIC12	TDOOLY	JOB02733
	PRT34	ACTIVE	NAR	UIC12	KHODGE	JOB02539
	PRT35	INACTIVE	NAR	UIC12		
	PRT36	INACTIVE	NAR	UIC12		
	PRT37	INACTIVE	NAR	UIC12		
	PRT38	ACTIVE	NAR	UIC12	ADIGA	JOB02704
	PRT39	ACTIVE	NAR	UIC12	ADONOVAN	JOB02138
	PRT40	DRAINED	NAR	UIC12		
	PRT41	DRAINED	NAR	UIC12		
	PRT42	ACTIVE	NAR	UIC12	BFM1	JOB09784
	PRT43	ACTIVE	NAR	UIC12	D58RXS1	TSU21026
	PRT44	DRAINED	NAR	UIC12		
	PRT45	INACTIVE	NAR	UIC12		
	PRT46	ACTIVE	NAR	UIC12	FKETTER	JOB28755

Printer Panel

### Stop and start initiators

SDSF displays the class and status of all initiators defined for each system, and the name and number of the job assigned to each initiator. Using this information, you can decide how to schedule jobs to make optimal use of the system's resources.

Display Filter View Print Options Help						
-----						
SDSF INITIATOR DISPLAY						LINE 1-20 (30)
COMMAND INPUT ==>> _						SCROLL ==>> PAGE
NP	ID	Status	Classes	Jobname	StepName	ProcStep JobID
	1	ACTIVE	ABJ	BERKEA5	FINDDA	JOB00068
	2	INACTIVE	N			
	3	DRAINED	CBA			
	4	DRAINED	JIFAB74			
	5	DRAINED	EB74A			
	6	DRAINED	BAG			

Initiator Panel

### Control lines

SDSF displays the status of each NJE and RJE line and its associated transmitters and receivers. You can start, drain, and restart the devices. By typing over fields, you can change characteristics of the devices.

SDSF also shows information about the job currently being processed by a transmitter or receiver, such as the number of lines that have been processed.

Display Filter View Print Options Help						
-----						
SDSF LINE DISPLAY						LINE 1-20 (34)
COMMAND INPUT ==>> _						SCROLL ==>> CSR
NP	DEVICE	Status	Unit	Node	Jobname	JobID
	LINE1	ACTIVE	B00	PLPSB		
	L1.JR1	INACTIVE				
	L1.JT1	INACTIVE				
	L1.SR1	ACTIVE			WOODVINE	RSCS1900
	L1.ST1	ACTIVE			LETERSKA	JOB01234
	LINE2	DRAINED				
	LINE3	ACTIVE	B00	PLPSB		
	L3.JR1	INACTIVE				
	L3.JT1	INACTIVE				
	L3.SR1	ACTIVE			WOODVINE	RSCS1903
	L3.ST1	ACTIVE			LETERSKX	JOB02243

Lines Panel

**Offload the spool**

You can better manage the spool because SDSF makes it easy to control the spool offload devices. SDSF displays the status of each offloader and its associated transmitters and receivers, and shows information about the jobs being processed. You can start, drain, and restart the devices. Typing over fields lets you set characteristics of the devices, and control the jobs that are selected.

Display	Filter	View	Print	Options	Help
SDSF SPOOL OFFLOAD DISPLAY					LINE 1-20 (25)
COMMAND INPUT ==>_					SCROLL ==> CSR
NP	DEVICE	Status	Type	Jobname	JobID
	OFFLOAD1	ACTIVE	TRANSMIT		
	OFF1.JT	INACTIVE			
	OFF1.ST	ACTIVE		SDSF	STC00035
	OFF1.JR	STARTABLE			
	OFF1.SR	STARTABLE			
	OFFLOAD2	DRAINED			
	OFF2.JT	STARTABLE			
	OFF2.ST	STARTABLE			
	OFF2.JR	STARTABLE			
	OFF2.SR	STARTABLE			

Spool Offload Panel

**Manage spool volumes**

SDSF displays the status, usage information and characteristics of JES2 spool volumes. You can start, drain and halt spool volumes.

Display	Filter	View	Print	Options	Help			
SDSF SPOOL DISPLAY AQFT 82% ACT 181500 FRE 31185								
COMMAND INPUT ==>								
NP	VOLUME	Status	TGPct	TGNum	TGUse	Command	Saff	Ext
	SPOL1C	ACTIVE	99	16500	16487		ANY	02
	SPOL1D	ACTIVE	83	16500	13718		ANY	01
	SPOL1E	ACTIVE	79	16500	13107		ANY	00

**Manage system resources**

**Reduce problem management time**

SDSF lets you view the system log online and search for specific information using SDSF commands. You can also view a merged sysplex log. A separate display of system requests, which includes WTORS and action messages, makes it easy to find and reply to those messages.

**Avoid printing the system logs**

With SDSF, you can view an up-to-date copy of the log online, and therefore, print the log less often. Individual users can have a private log of their own activity. This user session log captures all commands and responses for one user ID.

You can specify which system's log you want to display.

N 4000000	AQFT	01303	16:37:20.94	JOB23185	00000091	\$HASP395	DIANAM	ENDED
NC0000000	AQFT	01303	16:37:21.33	INTERNAL	00000281	SE '16.37.21	JOB23185	\$H
SC						USER=(DIANA)		
N 0000000	AQFT	01303	16:37:21.37	TSU21704	00000081	IEF126I	RIMFIRE	- LOGGED
N 4000000	AQFT	01303	16:37:21.37	TSU21704	00000091	\$HASP395	RIMFIRE	ENDED
N 0000000	AQFT	01303	16:37:26.65		00000291	IEA989I	SLIP TRAP	ID=X33
N 0200000	AQFT	01303	16:37:29.08	JOB23211	00000081	\$HASP100	D75CEM1C	ON INT
S						D75CEM1		
N 0000000	AQFT	01303	16:37:29.14	JOB23211	00000281	IRR010I	USERID	D75CEM1
N 0020000	AQFT	01303	16:37:29.33	JOB23211	00000081	ICH70001I	D75CEM1	LAST
N 4000000	AQFT	01303	16:37:29.34	JOB23211	00000091	\$HASP373	D75CEM1C	STARTE
N 0000000	AQFT	01303	16:37:29.35	JOB23211	00000091	IEF403I	D75CEM1C	- STAR
8000000	AQFT	01.10.09	STC17351	*60	DSI802A	CNM03		REPLY WITH VALID NCCF SY
8000000	AQFT	01.04.42		*57	DSI802A	M03AO		REPLY WITH VALID NCCF SY
0002000	AQFT	01.49.45	STC15235	*12	DENQ002D	ENQ Monitor		- Reply 'ENQ' or 'EN
***** BOTTOM OF DATA *****								

- Link from messages to online books

- WTORS at the bottom

Syslog Panel

### Control and manage a multi-access spool (MAS)

SDSF displays the status of all the systems, simplifying the task of controlling and managing a MAS. You can start, restart, or stop a member.

Display Filter View Print Options Help						
-----						
SDSF MAS DISPLAY S32			DEFINED SYSTEMS		9% SPOOL	
COMMAND INPUT ==>>_			SCROLL ==> PAGE			
NP	NAME	Status	SID	PrevCkpt	Hold	ActHold
S01	ACTIVE		1	26.75	0	6
S02	ACTIVE		2	37.72	0	5
S03	INACTIVE		3	0.00	0	0
S04	INACTIVE		4	0.00	0	0
S05	ACTIVE		5	23.44	0	6
S06	ACTIVE		6	21.83	0	6
S07	INACTIVE		7	0.00	0	0
S08	ACTIVE		8	44.29	0	5

MAS Panel

### Control and manage nodes

You can see the status of each node, and modify its characteristics, such as what the node transmits and receives. With action characters, you can start node communication on a line, and display information about the network connections or paths for a node.

Display Filter View Print Options Help						
-----						
SDSF NODE DISPLAY SYSA1N			N2		LINE 1-9 (38)	
COMMAND INPUT ==>>_			SCROLL ==> CSR			
NP	NUMBER	NodeName	Status	Authority		
N1	KGNSVLSI	VIA LINE2/SYSA1N		(D=Y,J=Y,N=Y,S=Y)		
N2	SYSA1N	OWNNODE		(D=N,J=Y,N=N,S=Y)		
N3	SYSA2N	UNCONNECTED		(D=Y,J=Y,N=N,S=Y)		
N4	SYSA3N	UNCONNECTED		(D=Y,J=Y,N=N,S=Y)		
N5	SYSA4N	UNCONNECTED		(D=N,J=Y,N=N,S=Y)		
N6	SYSA5N	UNCONNECTED		(D=Y,J=Y,N=N,S=Y)		
N7	SYSA6N	UNCONNECTED		(D=Y,J=Y,N=N,S=Y)		
N8	POKVMTL4	VIA LINE2/SYSA1N		(D=Y,J=Y,N=N,S=Y)		
N9	SYSA8N	UNCONNECTED		(D=Y,J=Y,N=N,S=Y)		

Node Panel

### Display WLM enclaves

View the status of WLM enclaves, and the CPU time each has consumed. With a single character command, you can quickly see all instances of a multi-system enclave.

Display Filter View Print Options Help						
-----						
SDSF ENCLAVE DISPLAY (ALL ALL			LINE 0-0 (0)			
COMMAND INPUT==>>_			SCROLL==>>CSR			
NP	TOKEN	SSType	Status	SrvClass	Per	PGN RptClass
	1800000005	DB2	ACTIVE	SYSCLASS	1	2 ACLASS
	2800000104	IMS	ACTIVE	SYSCLASS	2	4 BCLASS
	12280000000	MQ	ACTIVE	ACLASSA	3	1 BCLASS
	30300330005	MQ	ACTIVE	BCLASSB	4	2 BCLASS
	32800000003	MQ	ACTIVE	SYSCLASS	5	5 CCLASS
	89000000026	MQ	ACTIVE	SYSCLASS	5	5 CCLASS
	99800000005	MQ	ACTIVE	TSYSCLAS	6	6 DCLASS

Enclave Panel

### Control z/OS Unix System Services Processes

The PS panel shows the status and owner of each process, and the CPU time each has consumed. You can cancel a process.

Display Filter View Print Options Help						
-----						
SDSF PROCESS DISPLAY SY1 ALL			LINE 1- 10 (10)			
COMMAND INPUT==>>_			SCROLL==>>CSR			
NP	JOBNAME	Status	Owner	State	CPU-	
	BPXOINIT	SWAPPED, RUNNING	SYSTASK	MRI		1
	MQS1CHIN	RUNNING	MQS	1R		11
	MQS1CHIN	RUNNING	MQS	1R		12
	MQS1CHIN	FILE SYS KERNEL WAIT	MQS	1F		20
	KDMQDKJ	RUNNING	SYSTASK	HR		

Process Display

## Customize SDSF panels

Any SDSF user can:

- Set the color, highlighting, and intensity of the SDSF panels to suit your taste
- Display the valid actions for each panel
- Arrange the order and widths of columns on SDSF panels

	Column	Width
—	SysName	8
/	Real	4
—	Paging	6
—	SIO	6
—	CPU%	6
—	SrvClass	8
a	StepName	8
—	ProcStep	8
—	Owner	8
—	Status	6
—	C	1
—	ASID	4
—	ASIDX	5
—	CPU-Time	10
—	SR	2

## Sort and filter

Using SDSF commands or pop-up windows, you can sort and filter information to show just what you need:

- Sort by column
- Filter on any column or combination of columns
- Filter data by owner, destination or job name

	Filter	Row 1 to 9 of 25
Command ==>		
Type filter criteria. Type a / in the Column or Oper fields for valid values. Press F11/23 to clear all filter criteria.		
Filtering is OFF		
AND/OR between columns	AND	(AND/OR)
AND/OR within a column	OR	(AND/OR)
Column	Oper	Value (may include * and %)
sysname_____	eq	sy1_____
cpu%_____	ge	.5_____
_____	—	_____
_____	—	_____

## Secure SDSF Function

The system programmer can control which SDSF panels users can display, which jobs and columns of data are displayed on those panels, which SDSF commands users can issue and which fields they can modify.

You can establish security through SDSF parameters and exit points or you can use the standard interface (SAF, the System Authorization Facility) in conjunction with an external security program. SDSF is designed for and intended to be used with IBM's Resource Access Control Facility (RACF). However, you can implement any security product that supports the 1.9 level of the RACROUTE macro.

The SDSF parameters can be defined either as assembler macros or statements. The statements, used with an SDSF server, allow you to dynamically update SDSF parameters without the need to assemble SDSF macros.

## Learn about SDSF

No training is needed to use SDSF because the action bar and pop-up windows guide you through the tasks you need to perform. For assistance, you can consult a variety of information.

- The **online interactive tutorial** lets you try the most common tasks.
- **Help panels** describe SDSF panels, commands, and messages. You can install them in English and Japanese.
- **SDSF Operation and Customization**, the SDSF manual, provides detailed information for the system programmer. SDSF provides an interface to BookManager that lets you search this and other online books without leaving SDSF.
- The **SDSF Web site** has tips, presentations, and the latest information, at [www.ibm.com/servers/eserver/zseries/zos/sdsf/](http://www.ibm.com/servers/eserver/zseries/zos/sdsf/).
- The **SDSF customization wizard** helps you exploit SDSF's sysplex function, and is an interactive reference to SAF resources, at [www.ibm.com/servers/eserver/zseries/zos/wizards/sdsf/sdsfv1r1/](http://www.ibm.com/servers/eserver/zseries/zos/wizards/sdsf/sdsfv1r1/)