

# SDSF Security Introduction

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- ISFPARMS
- Health Checker - RACF
- z/OSMF
- SDSF Panel
- SDSF Profiles – High Level
- Next Steps

- z/OS 2.5 SDSF security needs to be external
- Are you ready?

# SDSF Class - Profiles

```
CLASS      NAME
-----
SDSF      ISF.*.** (G)
```

```
GROUP CLASS NAME
-----
GSDSF
```

```
RESOURCE GROUPS
-----
NONE
```

LEVEL	OWNER	UNIVERSAL ACCESS	YOUR ACCESS	WARNING
00	SYS1	READ	READ	NO

```
USER      ACCESS
-----
IBMUSER   ALTER
```

# SDSF Class - Profiles

```
CLASS      NAME
-----    -
SDSF      ISF*.** (G)
```

```
GROUP CLASS NAME
----- -
GSDSF
```

```
RESOURCE GROUPS
-----
NONE
```

LEVEL	OWNER	UNIVERSAL ACCESS	YOUR ACCESS	WARNING
-----	-----	-----	-----	-----
00	SYS1	READ	ALTER	NO

```
USER      ACCESS
-----    -
ADCDMST   ALTER
IBMUSER   ALTER
```

# SDSF Class - Profiles

```
CLASS      NAME
-----    -
OPERCMDS   JES%.** (G)
```

```
LEVEL  OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----  -
00     IBMUSER      CONTROL          CONTROL      NO
```

```
USER      ACCESS
-----    -
IBMUSER   ALTER
SYS1      CONTROL
```

# SDSF Class - Profiles

- **ISFATTR**
- **ISFCMD**
- **ISFAUTH**
- **ISFOPER**
- **ISFPARMS**

# Group 1 - Systems Programmers - ISFPROG

## Without SAF

```
GROUP NAME(ISFSPROG),  
  TSOAUTH(JCL,OPER,ACCT),  
  AUTH(ALL),  
  CMDAUTH(ALL),  
  CMDLEV(7),  
  DSPAUTH(ALL),  
  DFIELD2(DAFLD2),  
  GPLEN(2),  
  ACTION(ALL),  
  ACTIONBAR(YES),  
  APPC(ON),  
  OWNER(NONE),  
  CONFIRM(ON),  
  CURSOR(ON),  
  DATE(MMDDYYYY),  
  DATESEP(/),  
  LOG(OPERACT),  
  ISYS(NONE),  
  DADFLT(IN,OUT,TRANS,STC,TSU,JOB),  
  VALTAB(TRTAB),  
  UPCTAB(TRTAB2),  
  DISPLAY(OFF)
```

## With SAF

```
GROUP NAME(ISFSPROG),  
  DFIELD2(DAFLD2),  
  ACTION(ALL),  
  ACTIONBAR(YES),  
  APPC(ON),  
  CONFIRM(ON),  
  CURSOR(ON),  
  DATE(MMDDYYYY),  
  DATESEP(/),  
  LOG(OPERACT),  
  DADFLT(IN,OUT,TRANS,STC,TSU,JOB),  
  VALTAB(TRTAB),  
  UPCTAB(TRTAB2),  
  DISPLAY(OFF)
```



# Group 2 - Operators - ISFOPER

## Without SAF

```
GROUP NAME(ISFOPER),  
  TSOAUTH(JCL,OPER),  
  AUTH(ALLOPER),  
  CMDAUTH(ALL),  
  CMDLEV(7),  
  DSPAUTH(USERID,NOTIFY,AMSG),  
  GPLEN(2),  
  ACTION(ALL),  
  ACTIONBAR(YES),  
  APPC(ON),  
  OWNER(NONE),  
  CONFIRM(ON),  
  CURSOR(ON),  
  DATE(MMDDYYYY),  
  DATESEP(/),  
  LOG(OPERACT),  
  ISYS(NONE),  
  DADFLT(IN,OUT,TRANS,STC,TSU,JOB),  
  VALTAB(TRTAB),  
  UPCTAB(TRTAB2),  
  DISPLAY(OFF)
```

## With SAF

```
GROUP NAME(ISFOPER),  
  ACTION(ALL),  
  ACTIONBAR(YES),  
  APPC(ON),  
  CONFIRM(ON),  
  CURSOR(ON),  
  DATE(MMDDYYYY),  
  DATESEP(/),  
  LOG(OPERACT),  
  DADFLT(IN,OUT,TRANS,STC,TSU,JOB),  
  VALTAB(TRTAB),  
  UPCTAB(TRTAB2),  
  DISPLAY(OFF)
```

# Group 3 - End Users - ISFUSER

## Without SAF

```
GROUP NAME(ISFUSER),  
  TSOAUTH(JCL),  
  AUTH(ALLUSER),  
  CMDAUTH(USERID,NOTIFY),  
  CMDLEV(2),  
  AUPDT(10),  
  DSPAUTH(USERID,NOTIFY),  
  PREFIX(USERID),  
  ACTION(11,12,USER),  
  ACTIONBAR(YES),  
  APPC(ON),  
  CONFIRM(ON),  
  CURSOR(ON),  
  DATE(MMDDYYYY),  
  DATESEP(/),  
  DADFLT(IN,OUT,TRANS,STC,TSU,JOB),  
  VALTAB(TRTAB),  
  UPCTAB(TRTAB2),  
  DISPLAY(OFF)
```

## With SAF

```
GROUP NAME(ISFUSER),  
  AUPDT(10),  
  PREFIX(USERID),  
  ACTION(11,12,USER),  
  ACTIONBAR(YES),  
  APPC(ON),  
  CONFIRM(ON),  
  CURSOR(ON),  
  DATE(MMDDYYYY),  
  DATESEP(/),  
  DADFLT(IN,OUT,TRANS,STC,TSU,JOB),  
  VALTAB(TRTAB),  
  UPCTAB(TRTAB2),  
  DISPLAY(OFF)
```

# SDSF WHO command

Display Filter View Print Options Search Help

-----  
SDSF PARMLIB DISPLAY S0W1 S0W1 EXT 4 LINE 1-4 (4)  
COMMAND INPUT ==> SCROLL ==> CSR  
USERID=ADCDMST,PROC=ISPFPROC,TERMINAL=TCP00005,GRPINDEX=1,GRPNAME=ISFSPROG,  
MVS=z/OS 02.04.00,JES=z/OS 2.4,SDSF=HQX77C0,ISPF=7.4,RMF/DA=HSF/NORMF,  
SERVER=YES,SERVERNAME=SDSF,JESNAME=JES2,MEMBER=S0W1,JESTYPE=JES2,SYSNAME=S0W1,  
SYSPLEX=ADCDPL,COMM=NOTAVAIL,COMM=ENABLED,JOBID=TSU02044

- ISFPARMS
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# SDSF - Health Checker

-----  
SDSF OUTPUT DISPLAY SDSF\_CLASS\_SDSF\_ACTIVE

LINE 0

COLUMNS 02- 81

COMMAND INPUT ==>

SCROLL ==> CSR

\*\*\*\*\* TOP OF DATA \*\*\*\*\*

CHECK(IBMSDSF,SDSF\_CLASS\_SDSF\_ACTIVE)

SYSPLEX: ADCDPL SYSTEM: S0W1

START TIME: 04/15/2021 16:30:46.827342

CHECK DATE: 20080324 CHECK SEVERITY: LOW

ISFH1015I The class SDSF is active.

END TIME: 04/15/2021 16:30:46.856328 STATUS: SUCCESSFUL

# SDSF - Health Checker

\*\*\*\*\* TOP OF DATA \*\*\*\*\*

CHECK(IBMSDSF,SDSF\_ISFPARMS\_IN\_USE)

SYSPLEX: ADCDPL SYSTEM: S0W1

START TIME: 04/15/2021 16:30:46.831880

CHECK DATE: 20170105 CHECK SEVERITY: LOW












ISFH1001I SDSF server SDSF is using statements from member ISFPRM00 of  
data set ADCD.Z24A.PARMLIB.

END TIME: 04/15/2021 16:30:46.864591 STATUS: SUCCESSFUL

\*\*\*\*\* BOTTOM OF DATA \*\*\*\*\*

- ISFPARMS
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# z/OSMF Components - SDSF

▼ Jobs		
	Active Jobs	Work with active jobs
	All Jobs	Work with jobs in any phase of processing
	Input Queue	Work with jobs on the input queue
	Output Queue	Work with jobs on the output queue
	Held Output Queue	Work with jobs on the held output queue
	Address Space Memory	Work with address space memory utilization
	Unix Processes	Work with z/OS Unix processes
▼ Sysplex		
	z/OS Health Checks	Manage z/OS Health Checks
	Systems Information	Display systems in the Sysplex
	Spool Datasets	Work with JES spool volumes
	CF Structures	Work with CF structures

## SDSF

The SDSF task of z/OSMF provides key summary information about your sysplex. It also allows you to work with objects, such as jobs and data sets, check for IBM z/OS Health Checker, and issue system commands

```
TS6779  ROCKPROC S01TCP07 TSU01323 TS6779
TS6779  ROCKPROC IZUTSOAP TSU01322 TS6779
```

*Notice Userid with PROC that starts with IZUTSOAP - this is from z/OSMF, the other one is my TSO logon session*



# z/OSMF Components - Desktop User Interface



# z/OSMF Components - SDSF Desktop View

SDSF

TSO Messages

## SDSF (RSPLEXRS)

Common Filters

Overview

Explore the summary data, or choose a task. Messages 0 0 1 | Help

### System Activity Summary: RS01 (Local)

System: RS01 (Local) View text

System Activity Percent Busy		z/OS Health Checks by Exception	
zIIP	0%	None	0
LPAR	17%	Low	4
MVS/SRM	9%	Medium	4
		High	0

Spool utilization: 13% Active checks: 0 Eligible checks: 132

Refresh Last refresh: More than 55 seconds ago View icons

### Jobs

- Active Jobs Work with active jobs
- All Jobs Work with jobs in any phase of processing
- Input Queue Work with jobs on the input queue
- Output Queue Work with jobs on the output queue
- Held Output Queue Work with jobs on the held output queue

Software Management

SDSF Settings

# z/OSMF Components – SDSF

- You must have access to resources in the ZMFAPLA class.

*Table 201. Resources in the ZMFAPLA Class*

<b>z/OSMF Task</b>	<b>Resource</b>	<b>Access Required</b>	<b>Class</b>
SDSF	<i>saf-prefix</i> .ZOSMF.IBMSSDSF.SDSF.JOBS	READ	ZMFAPLA
SDSF Settings	<i>saf-prefix</i> .ZOSMF.IBMSSDSF.SDSF.SETTINGS	READ	ZMFAPLA

You configure *saf-prefix* in z/OSMF. The default is IZUDFLT.

- Your user ID must be connected to the IZUUSER group.

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# SDSF - Options

<b>SMSG</b>	<b>SMS storage groups</b>	<b>Devices</b>
<b>SMSV</b>	<b>SMS volumes</b>	<b>Devices</b>
<b>DEV</b>	<b>Device activity</b>	<b>Devices</b>
<b>DA</b>	<b>Active users</b>	<b>Jobs</b>
<b>I</b>	<b>Input Queue</b>	<b>Jobs</b>
<b>ST</b>	<b>Status of jobs</b>	<b>Jobs</b>
<b>AS</b>	<b>Address space memory</b>	<b>Jobs</b>

# SDSF - Options

JG	Job groups	JES
MAS	Members in the MAS	JES
JC	Job classes	JES
INIT	Initiators	JES
PR	Printers	JES
PUN	Punches	JES
RDR	Readers	JES
SO	Spool offload	JES
SP	Spool volumes	JES
RM	Resource monitor	JES
PROC	Proclib data sets	JES
RMA	Resource monitor alerts	JES
JES	Job entry subsystems	JES
JRI	JES resource information	JES
JRJ	JES resource by job	JES

# SDSF - Options

LOG	System log	Log
SR	System requests	Log
ULOG	User session log	Log
VMAP	Virtual storage map	Memory
CSR	Common storage remaining	Memory
LINE	Lines	Network
NODE	Nodes	Network
NS	Network servers	Network
NC	Network connections	Network
NA	Network activity	Network
O	Output Queue	Output
H	Held output Queue	Output

# SDSF - Options

PS	Processes	OMVS
FS	File systems	OMVS
BPXO	OMVS options	OMVS
ENQD	Enqueued datasets	Sysplex
CFC	CF Connections	Sysplex
CFS	CF Structures	Sysplex
EMCS	Extended consoles	Sysplex
XCFM	XCF groups and members	Sysplex



# SDSF - Options

<code>SYM</code>	System symbols	System
<code>SYS</code>	System information	System
<code>ENQ</code>	Enqueues	System
<code>ENQC</code>	Enqueue contention	System
<code>DYNX</code>	Dynamic exits	System
<code>CK</code>	Health checker	System
<code>LNK</code>	Link list data sets	System
<code>LPA</code>	Link pack data sets	System
<code>APF</code>	APF data sets	System
<code>PAG</code>	Page data sets	System
<code>PARM</code>	Parmlib data sets	System
<code>SSI</code>	Subsystem information	System
<code>GT</code>	Generic tracker	System
<code>LPD</code>	Link pack directory	System

# SDSF - Options

SE	Scheduling environments	WLM
RES	WLM resources	WLM
ENC	Enclaves	WLM
WLM	WLM policy data	WLM
SRVC	Service classes	WLM
REPC	WLM report classes	WLM
RGRP	WLM resource groups	WLM
WKLD	WLM workloads	WLM

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# SDSF – Action Characters

Most action characters cause an interaction with two resources:

- The object of the action character, such as an initiator, printer, MAS member, job, or data set
- The MVS command that is generated by the action

When these resources are protected, a user must have authority to both resources to use the action characters.

ISFCMD - The authorized SDSF commands are the SDSF commands that can be on the AUTH parameter in ISFPARMS, with the addition of OWNER, which can only be protected through SAF. If no SAF protection exists for the OWNER command, then all users can issue the OWNER command

ISFJOB

# SDSF – Action Characters

You can set up two generic profiles to allow use of all action characters

**JES Commands** *jesx.\*\** OPERCMDS CONTROL

**MVS Commands** *MVS.\*\** OPERCMDS CONTROL

## SDSF Class - Profiles

- **ISFAPF** - Protecting authorized program facility data sets
- **ISF.CONNECT** - Connection to SDSFAUX
- **ISFXCFM** - XCF groups and members
- **ISFCFC** - Protecting CF connections
- **ISFCFS** - Protecting CF structures
- **HZS.** - Checks on the CK and CKH panels
- **ISFOPER** - Protecting destination names
- **ISFAUTH** - Protecting destination names.

# SDSF Class - Profiles

- ISFDEV - Protecting device activity**
- ISFDYNX - Protecting dynamic exits**
- ISFEMCS - Protecting EMCS consoles**
- ISFENC - Protecting enclaves**
- ISFENQ - Protecting Enqueue Information**
- ISFFS - Protecting file systems**
- ISFGT - Protecting generic tracker events**
- ISFINIT - Protecting initiators**
- ISFRM - Protecting JES2 resources**
- ISFJES - Protecting JES subsystems**

## SDSF Class - Profiles

**ISFJOBCL - Protecting job classes and job class members**

**ISFJDD – Protecting job devices - Jobs, job groups, output groups, and SYSIN/SYSOUT data sets – JES uses the JESSPOOL class to protect SYSIN/SYSOUT data sets and the EVENTLOG, which SDSF uses to display job step information. SDSF extends the use of the JESSPOOL class to protect SDSF job and output group resources as well.**



## SDSF Class - Profiles

**ISFJRI - Protecting JESInfo resources**

**ISFJRJ - Protecting JESInfo by job resources**

**ISFLINES - Protecting lines**

**ISFLNK - Protecting link list data sets**

**ISFMEMB - Protecting MAS and JESPLEX members**

**GROUP – (SDSF class) - You can control membership in groups defined by ISFPARMS using SAF. This is an alternative to using ISFPARMS to control membership in the groups. Controlling membership in groups**

## SDSF Class - Profiles

**ISFOPER - MVS and JES commands on the command line (/)**

**ISFNETACT - Protecting network activity**

**ISFAPPL - Protecting network connections**

**ISFSOCK - Protecting network connections**

**ISFNS - Protecting network servers**

**ISFNODE - Protecting nodes**

**ISFOMVS - Protecting OMVS options**

**SYSPLEX.OPERLOG (LOGSTRM)**

**ISFATTR - Overtypable fields**

# SDSF Class - Profiles

- ISFPAGE - Protecting page data sets**
- ISFPARM - Protecting PARM data sets**
- WRITER class - Protecting printers / Punches**
- ISFPROG - Protecting processes**
- ISFPLIB - Protecting proclibs**
- ISFRDR - Protecting readers**
- ISFRMA - Protecting resource monitor alerts**
- ISFRES - Protecting WLM resources**
- ISFSE - Protecting scheduling environments**
- SERVER - Protecting the SDSF server**
- ISFSTORGRP - Protecting SMS storage groups**
- ISFSMSVOL - Protecting SMS volumes**
- ISFSO - Protecting spool offloaders**

## SDSF Class - Profiles

**ISFSP - Protecting spool volumes**

**ISFSUBSYS - Protecting subsystems**

**SYSLOG – JESSPOOL - Protecting the logical log**

**ISFSYM- Protecting system symbol information**

**ISFSYS - Protecting system information**

**ISFSR - Protecting system requests**

**ULOG – user log - OPERCMDS**

**ISFXCFM - Protecting XCF groups and members**

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```
CLASS      NAME
-----    -
SDSF      ISF.*.** (G)
```

```
GROUP CLASS NAME
----- -
GSDSF
```

```
RESOURCE GROUPS
-----
NONE
```

LEVEL	OWNER	UNIVERSAL ACCESS	YOUR ACCESS	WARNING
-----	-----	-----	-----	-----
00	SYS1	READ	READ	NO

```
USER      ACCESS
-----    -
IBMUSER   ALTER
```

# SDSF Class - Profiles

```
CLASS      NAME
-----    -
SDSF      ISF*.** (G)
```

```
GROUP CLASS NAME
----- -
GSDSF
```

```
RESOURCE GROUPS
-----
NONE
```

LEVEL	OWNER	UNIVERSAL ACCESS	YOUR ACCESS	WARNING
-----	-----	-----	-----	-----
00	SYS1	READ	ALTER	NO

```
USER      ACCESS
-----    -
ADCDMST   ALTER
IBMUSER   ALTER
```

# SDSF Class - Profiles

```
CLASS      NAME
-----    -
OPERCMDS   JES%.** (G)
```

```
LEVEL      OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----    -
00         IBMUSER      CONTROL          CONTROL      NO
```

```
USER      ACCESS
-----    -
IBMUSER   ALTER
SYS1      CONTROL
```



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