

# SDSF Security – How it works on z/OS 2.5 and what has changed

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# Agenda

- SAF Security Migration
- Security Fundamentals
  - SDSF and SDSFAUX server requirements
  - Connecting to SDSF
- Using SDSF Panels
  - Accessing panels
  - Actions and overtypes
- Advanced Functions
  - Controlling the scope of data
  - Destination operator authority
  - Foreign address space data access
  - Issuing operator commands
- Using SDSF to Understand SDSF Security

# SAF Security Migration

# Security Migration Implications

- SAF security required starting from z/OS 2.5
  - SDSF Security Migration Guide (SC27-4942)
  - SDSF Operation And Customization (SA23-2274)
- z/OS security planning if currently using non-SAF SDSF security
  - Plan to activate JESSPOOL class
    - Protects JES spool data from both inside and outside SDSF
    - Share session 2665 “JES2 RACF Calls, Control Points and Profiles” (2007)
    - Share session 19490 “Security in JES Best Practices” (2016)
  - Plan to activate OPERCMDS class
    - Protects ability to issue z/OS operator commands from both inside and outside SDSF
  - Activating JESSPOOL and OPERCMDS can be performed in advance of any SDSF security migration
    - Do not underestimate the amount of testing required to implement JESSPOOL successfully
    - Dynamically switching to WARNING mode for JESSPOOL class can aid during the migration effort
      - Check with Broadcom for equivalent functionality for ACF/2 and TSS
    - OPERCMDS and JESSPOOL profiles will affect other software products and z/OS components
      - Automated operations and output archiving products

# SDSF Security Migration

- Assess current settings from ISFPARMS and ISFPRMxx
  - ISFPARMS is load module assembled from legacy SDSF macros to define options and security settings. Functionally stabilized for decades.
  - ISFPRMxx is PARMLIB statements read by SDSF server to define options and security settings
  - ISFPARMS can be converted to ISFPRMxx using REXX exec “ISFACP”
  - Review any ISFUSER exit logic and attempt to remove the exit if at all possible
- Understand current SDSF user population
  - Sysprogs, operators and end users
  - Move away from classification by TSO logonproc, terminal name and userid and try to use grouping methods via your ESM instead
    - RACF Groups or equivalent functionality in ACF/2 and TSS
- Security migration utility – “ISFACR”
  - ISPF dialog that takes ISFPRMxx statements and attempts to supply sample RACF commands to define SDSF security profiles
  - Not perfect and will require extensive testing and review
  - Sample JCL provided in SISFJCL to analyze SMF data for SDSF SAF security usage
  - Will require several iterations on test systems to fine tune the new profiles and settings

# SDSF Security Migration

- After migration to SAF the following keywords in SDSF GROUP in ISFPRMxx are not required :

|           |        |
|-----------|--------|
| • AUTH    | ILPROC |
| • CMDAUTH | XLPROC |
| • CMDLEV  | ITNAME |
| • DSPAUTH | XTNAME |
| • GPLN    | IUID   |
| • ISYS    | XUID   |
| • TSOAUTH |        |
- Non-SAF keywords will be parsed but will not affect security decisions
  - Parsed values are still presented to ISFUSER for compatability
- Whole migration process is described in detail in the new “SDSF Security Migration Guide”

# Security Fundamentals

# SDSF Security SAF Classes

- SAF class **SDSF** used to protect SDSF resources and product functionality
  - Ability to display certain panels
  - Ability to take actions against objects shown on panels
- SDSF will perform SAF checks for other classes such as **JESSPOOL** and **OPERCMDS**
  - SDSF does not own the resources for these classes and the authority check is performed by SDSF to improve the messages and/or displays presented to the user
  - If SAF authority is granted within SDSF code, the request is forwarded to the owning component (eg z/OS BCP or JES2) and they will perform their own SAF checks



# SDSF and SDSFAUX Server Requirements

- SDSF server mandatory from z/OS 2.5
  - Security checks performed by SDSF server on behalf of user
  - Unless installing maintenance, there is no need to restart SDSF server after IPL
- SDSFAUX required for data collection and sysplex communication
- Entries required in the **STARTED** class for each server address space
  - OMVS segment required for SDSFAUX userid
    - If not present, data for z/OS unix resources (eg “FS”) panel will be incomplete
- SDSFAUX userid requires
  - READ access to **FACILITY** class resource **MVSADMIN.WLM.POLICY** for WLM data
  - READ access to **FACILITY** class resource **ERBSDS.MON2DATA** for RMF DA data

# Connecting to SDSF

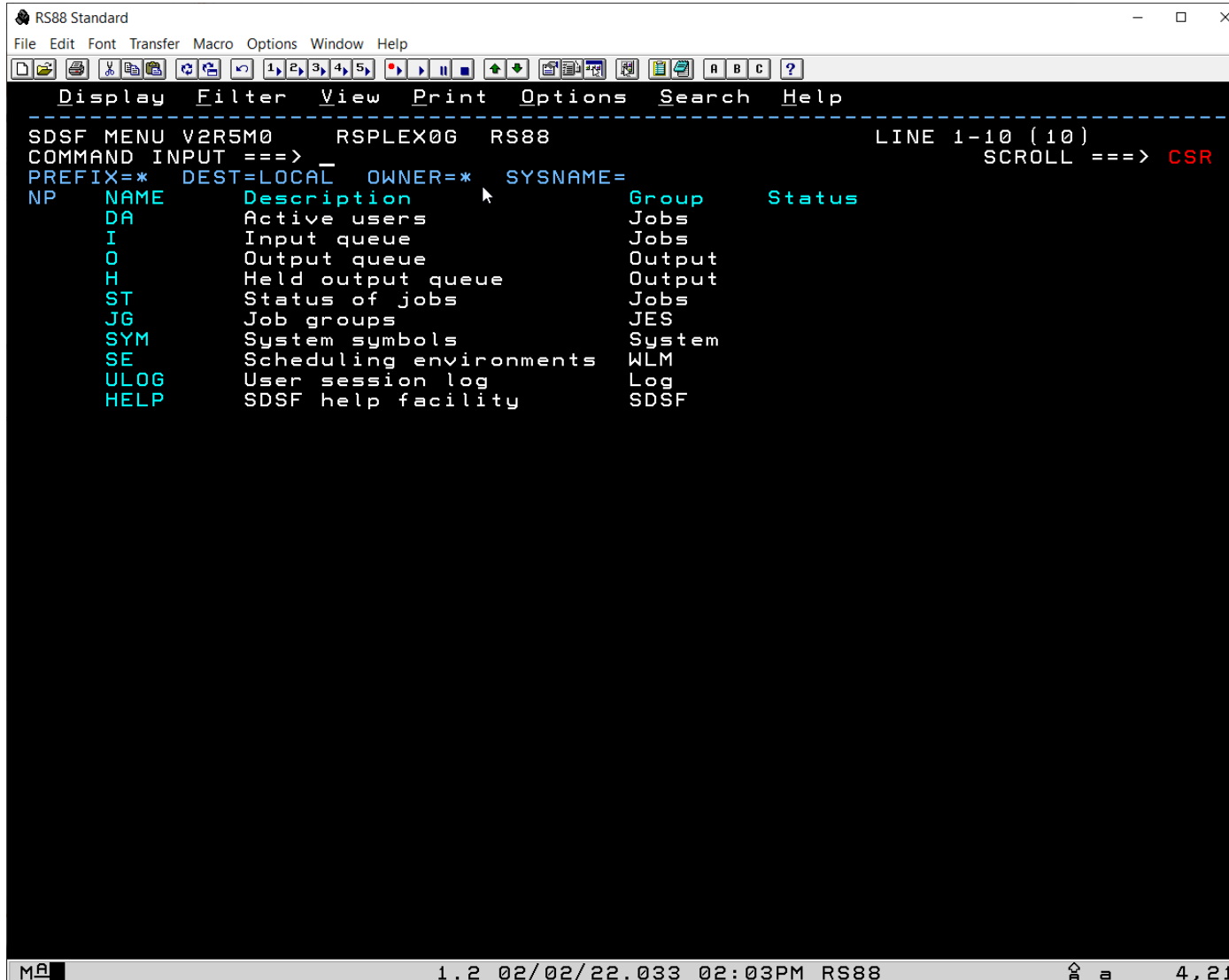
- Each SDSF user must connect to the SDSF server
  - One connection per task (TCB)
- Ability to connect to SDSF requires
  - READ access to **SDSF** class profile **ISF.CONNECT.sysname**
- SDSF server attempts to place user into a SDSF group
  - Groups are specified in ISFPRMxx PARMLIB member
  - READ access to **SDSF** class profile **GROUP.name.sysname**
  - User placed into first valid group in the sequence specified in ISFPRMxx
  - If no matching group found the connection will fail
  - SDSF groups dictate options and customizations
    - Examples include “Date Format” and “Cursor position behaviour”
    - No longer used for authorization settings

Using SDSF Panels

# Access to SDSF Panels

- Three types of SDSF user in provided ISFPRMxx PARMLIB member
  - Systems programmer
  - Operator
  - General user – for example, a COBOL programmer
- SDSF main panel will normally only show entries that user is authorized to
  - General users have been seeing the same 5 to 8 choices for many years
  - Over 60 other panels for systems programmers and operators
  - SET MENU ALL shows entries for unauthorized and not applicable choices

# General User



```
RS88 Standard
File Edit Font Transfer Macro Options Window Help
-----
Display Filter View Print Options Search Help
-----
SDSF MENU V2R5M0 RSPLEX06 RS88 LINE 1-10 (10)
COMMAND INPUT ==> SCROLL ==> CSR
PREFIX=* DEST=LOCAL OWNER=* SYSNAME=
NP NAME Description Group Status
DA Active users Jobs
I Input queue Jobs
O Output queue Output
H Held output queue Output
ST Status of jobs Jobs
JG Job groups JES
SYM System symbols System
SE Scheduling environments WLM
ULOG User session log Log
HELP SDSF help facility SDSF
```

MA 1.2 02/02/22.033 02:03PM RS88 4,21

General user panels protected by READ access to **SDSF** class profile :

*ISFCMD.DSP.name.qualifier*

Think of “DSP” standing for “display”

Includes active jobs and JES input and output queues

# Sysprog/Operator Users

```
RS88 Standard
File Edit Font Transfer Macro Options Window Help
Display Filter View Print Options Search Help
SDSF MENU V2R5M0 RSPLEX06 RS88 LINE 1-37 (72)
COMMAND INPUT ==> SCROLL ==> CSR
PREFIX=* DEST=(ALL) OWNER=* SYSNAME=
NP NAME Description Group Status
DA Active users Jobs
I Input queue Jobs
O Output queue Output
H Held output queue Output
ST Status of jobs Jobs
JG Job groups JES
SYM System symbols System
LOG System log Log
SR System requests Log
MAS Members in the MAS JES
JC Job classes JES
SE Scheduling environments WLM
RES WLM resources WLM
ENC Enclaves WLM
PS Processes OMVS
SYS System information System
ENQ Enqueues System
ENQC Enqueue contention System
ENQD Enqueued data sets Sysplex
DYNX Dynamic exits System
AS Address space memory Jobs
INIT Initiators JES
PR Printers JES
PUN Punches JES
RDR Readers JES
LINE Lines Network
NODE Nodes Network
SP Spool volumes JES
NS Network servers Network
NC Network connections Network
RM Resource monitor JES
CK Health checker System
LNK Link list data sets System
LPA Link pack data sets System
APF APF data sets System
PAG Page data sets System
PARM Parmlib data sets System
MA 1.1 02/02/22.033 02:01PM RS88 a 4,22
```

Systems programmer and operator panels protected by READ access to SDSF class profile :

ISFCMD.ODSP.name.qualifier

Think of “ODSP” standing for “operator display”

Includes more powerful displays and functions

General users can be easily denied access to advanced displays by having no access to ISFCMD.ODSP.\*.\*

# Actions Typed in “NP”

- NP column is where row actions are entered (“*iNP*ut”)
- Access checked against resource that protects the row
  - READ access for display style actions
  - Higher access (UPDATE, CONTROL or ALTER) for change or delete style actions
  - When action just displays another SDSF panel, then row object access is not required
- **JESSPOOL** class profile used for active jobs and output
  - Rows on ST, DA, H, I and O
- Other IBM classes used if applicable
  - For example, **XFACILIT** for CK rows (HealthCheck)
- **SDSF** class profile used for other panel objects when generating operator commands
  - ISFxxxxx.*qualifier\_1.qualifier\_2...qualifier\_n*
  - xxxxx = short name for panel object, e.g. “APF” for entries on APF panel
  - Qualifiers depend on panel, e.g. the dataset name on APF
- **OPERCMD** profile checked when action generates z/OS operator command
  - Checked after successful access to profile covering row object
- SDSF manuals contain tables of resources checked

# Action Typed in “NP” – Example 1

|  |         |          |        |      |   |            |         |                |       |
|--|---------|----------|--------|------|---|------------|---------|----------------|-------|
| SDSF HELD OUTPUT DISPLAY ALL CLASSES LINES 418,875 |         |          |        |      |   |            |         | LINE 1-41 (41) |       |
| COMMAND INPUT ==>                                  |         |          |        |      |   |            |         | SCROLL ==> CSR |       |
| NP   | JOBNAME | JobID    | Owner  | Prty | C | Max-RC     | REC-Cnt | PAGE-Cnt       | Dest  |
| P  | BOWLING | JOB01234 | BARNEY | 128  | H | ABEND S522 | 3,989   |                | LOCAL |
|  | BAMBAM  | JOB01235 | BETTY  | 144  | F | ABEND S522 | 52      |                | LOCAL |

- User FRED types “H” to display the held output queue for the JES subsystem “JES2”
- User “FRED” then issues “P” against JES jobid JOB01234 “BOWLING” on node “BEDROCK”. The job is owned by user “BARNEY”.
  - “P” action requires ALTER access as “delete” style request.
  - Row is protected by JESSPOOL profile
  - OPERCMDS profile checked as “P” generates operator command
  - Sequence of SAF checks :
    - READ access for SDSF profile ISFCMD.DSP.HELD.JES2
    - ALTER access for JESSPOOL profile BEDROCK.BARNEY.BOWLING.JOB01234.qualifiers
    - UPDATE access for OPERCMDS profile JES2.CANCEL.BATOUT
      - BATOUT means “batch job output” in JESSPOOL profile name



# Action Typed in “NP” – Example 2

| SDSF NETWORK ACTIVITY WILMA WILMA |         |          |                    | LINE 39-51 (51) |         |          |          |
|-----------------------------------|---------|----------|--------------------|-----------------|---------|----------|----------|
| COMMAND INPUT ==>                 |         |          |                    | SCROLL ==> CSR  |         |          |          |
| NP                                | JOBNAME | Status   | IPAddr             | Port            | InBufSz | OutBufSz | EXCP-Cnt |
|                                   | GPMSEMS | LISTEN   | ::0                | 31350           | 0       | 0        | 0        |
|                                   | SSHD3   | ESTABLSH | 10.117.222.101     | 35762           | 65536   | 65536    | 82498    |
|                                   | SSHD3   | ESTABLSH | 10.117.222.101     | 45510           | 65536   | 65536    | 827123   |
| dn                                | TN3270  | ESTABLSH | ::FFFF:10.5.82.199 | 52365           | 65536   | 65536    | 465      |

- User FRED types “NA” on system WILMA to show the network activity and then types “DN” beside the row for TN3270 to display the connections.
  - “DN” action requires READ as a “display” style request
  - Row is protected by SDSF class profile ISFNETACT.qualifiers
  - OPERCMDS profile checked as “DN” generated operator command
  - Sequence of SAF checks
    - READ access for SDSF profile ISFCMD.ODSP.NETACT.WILMA
    - READ access for SDSF profile ISFNETACT.TN3270
    - READ access for OPERCMDS profile MVS.DISPLAY.TCPIP

# Action Typed in “NP” – Example 3

```
SDSF HEALTH CHECKS  WILMA                                LINE 3-59 (169)
COMMAND INPUT ==>                                         SCROLL ==>

NP   NAME                                           CheckOwner      State
    ALLOC_SPEC_WAIT_POLICY                         IBMALLOC        ACTIVE (ENABLED)
    ALLOC_TIOT_SIZE                                IBMALLOC        ACTIVE (ENABLED)
ds   ASM_LOCAL_SLOT_USAGE                           IBMASM          ACTIVE (ENABLED)
    ASM_PAGE_ADD                                    IBMASM          ACTIVE (ENABLED)
```

- User FRED types “CK” on system WILMA to show the HealthChecks and then types “DS” against the ASM\_LOCAL\_SLOT\_USAGE check to display its status
  - “DS” action requires READ as a “display” style request
  - Row is protected by **XFACILIT** class profile **HZS.qualifiers**
  - **OPERCMDs** profile checked as “DS” generates operator command
  - Sequence of SAF checks
    - READ access for **SDSF** profile **ISFCMD.ODSP.HCHECKER.WILMA**
    - READ access for **XFACILIT** profile **HZS.WILMA.IBMASM.ASM\_LOCAL\_SLOT\_USAGE.QUERY**
    - UPDATE access for **OPERCMDs** profile **MVS.MODIFY.STC.HZSPROC.HZSPROC**

# Overtyping value on panel

- Overtyping columns protected by SDSF class profile
  - *ISFATTR.type.column*
    - *Type* describes the panel row object
    - *Column* is the internal column name (not the title)
      - See “COLH” display for panel to see list of internal column names
    - UPDATE access required
- SAF check performed when column becomes first becomes visible in the display
  - All of the column (both left and right bounds) must be visible on the screen
  - If access allowed, the screen attributes for the column are changed to allow input
  - If access denied, the screen attributes for the column are left as output only
- If valid overtype value is detected, security processing matches the sequence described for “NP” actions

# Advanced Functions

# Controlling the Scope of Data Displayed

- PREFIX command
  - Allows filtering by jobname using masking characters
    - Applies to active jobs and JES queue displays
  - Only user with authority to PREFIX can change the default specified in the SDSF group they are assigned to
  - READ access to SDSF class profile ISFCMD.FILTER.PREFIX
- OWNER command
  - Allows filtering by job owner using masking characters
    - Applies to active jobs and JES queue displays
  - Only user with authority to OWNER can change the default specified in the SDSF group they are assigned to
  - READ access to SDSF class profile ISFCMD.FILTER.OWNER

# Controlling the Scope of Data Displayed

- DEST command
  - Allows filtering by destination using masking characters
    - Applies to JES queue displays
  - Only user with authority to DEST can change the default specified in the SDSF group they are assigned to
  - READ access to SDSF class profile ISFCMD.FILTER.DEST
- Careful specification of PREFIX, OWNER and DEST can safeguard general users from seeing or manipulating jobs outside of their normal responsibilities
  - SET DISPLAY ON causes values to be shown above the column titles

# Cross-System Data Access

- **SYSNAME** command
  - Allows the user to access data from one or more systems in the sysplex
  - Masking characters can be used against the z/OS system name (CVTSNAME)
  - Causes SDSF to send a message from the local SDSFAUX server to other SDSFAUX address spaces in the sysplex
  - Responses are collected from all responding systems and presented locally to the user
  - READ access to **SDSF** class profile **ISFCMD.FILTER.SYSNAME**
  - If **SYSNAME** authority denied, then data gathering request is confined to the local system

# Destination Operator Authority

- Sometimes impractical to permit operators to every **JESSPOOL** class profile so that they can view or manage output
- SDSF provides ability to define users with authority based on the destination for output rather than owner, jobname etc
  - SDSF uses term “destination operator”
- To be a destination operator, the userid must have
  - READ access to **SDSF** class profile **ISFOPER.DEST.jesname**
  - ALTER access to **SDSF** class profile **ISFAUTH.DEST.destname** for full management
    - READ access for just browse authority to output
- Destination operator authority functions
  - SDSF populates the BTOKRCID (network receiver userid) in the JES browse token
  - SAF authority check by JES for **JESSPOOL** uses RECVR keyword on RACROUTE



# Foreign Address Space Data Access

- Some SDSF commands require cross-memory access to other address spaces that are not necessarily under SDSF (or user) control
  - Defines the term “foreign address space”
  - Data is typically gathered by scheduling SRB into foreign ASID
- Ability to gather foreign address space data protected by SDSF class profiles
  - *ISFJOB.type.owner.jobname.sysname*
  - READ access required
  - If no owner assigned to address space then SDSF uses value “+++++++”
    - Typically system address spaces started early in IPL process, eg “RASP” and “PCAUTH”
  - Type values
    - DDNAME            JDD action
    - MODULE            JC action
    - TASK                JT action
    - STORAGE            JM, JMO and MEM

# Issuing operator commands

- Freeform operator commands using “/”
  - Or ISFSLASH function in REXX
- READ access to **SDSF** class profile
  - **ISFOPER.SYSTEM**
  - Only restricts user from issuing operator commands in SDSF
    - Other authorized programs can issue operator commands outside of SDSF
- Command text passed directly to z/OS to process
  - No attempt made by SDSF to parse the freeform text and internally issue **OPERCMDS** authority checks
    - Includes any saved operator commands in SDSF profile or command groups
  - z/OS BCP will issue SAF **OPERCMDS** check on the command passed to it

# Handling “No Decision” Situations

- SAF authority check return code
  - RC=0      User access is permitted to the profile covering the resource
  - RC=4      No decision can be made
  - RC=8      User access is denied to the profile covering the resource
- No decision circumstances
  - Class is not active
  - Class is active but not RACLISTed (applies to certain classes only)
  - Class is active (and RACLISTed if applicable) but no matching profile found
    - No “catch-all” profile “\*\*” defined with site-defined UACC value
- ISFPRMxx CONNECT statement keyword AUXSAF(FAILRC4/NOFAILRC4)
  - FAILRC4              Convert RC=4 from SAF into RC=8 (Default)
  - NOFAILRC4            Convert RC=4 from SAF into RC=0
- Applies to all profiles checked by SDSF, not just **SDSF** class profiles

Using SDSF to understand SDSF  
Security

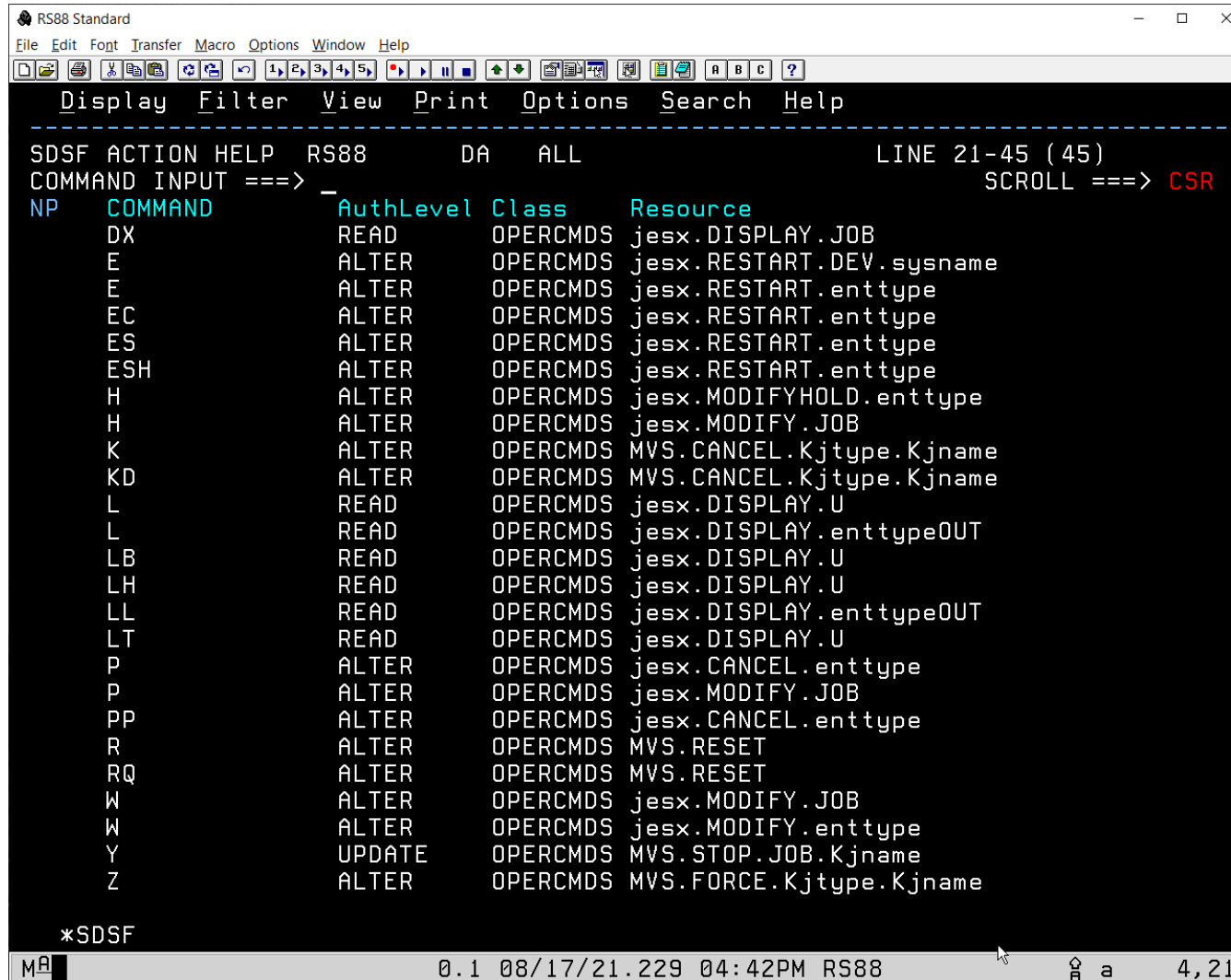
# CMDH (Command Help)

```
RS88 Standard
File Edit Font Transfer Macro Options Window Help
-----
Display Filter View Print Options Search Help
-----
SDSF COMMAND HELP RS88 LINE 3-28 (80)
COMMAND INPUT ==> SCROLL ==> CSR
NP NAME JESplex Aux Release Class Resource
APF YES NO Z/OS 2.2 SDSF ISFCMD.ODSP.APF.sysname
AS YES NO Z/OS 2.2 SDSF ISFCMD.ODSP.AS.sysname
BPX0 YES NO Z/OS 2.4 SDSF ISFCMD.ODSP.OMVS.sysname
CFC NO NO Z/OS 2.3 SDSF ISFCMD.ODSP.COUPLE.sysname
CFD NO NO Z/OS 2.5 SDSF ISFCMD.ODSP.COUPLED.sysname
CFS NO NO Z/OS 2.3 SDSF ISFCMD.ODSP.CFSTRUCT.sysname
CK YES NO Z/OS 1.7 SDSF ISFCMD.ODSP.HCHECKER.sysname
CMDH NO NO Z/OS 2.5
COLH NO NO Z/OS 2.5
CS YES NO Z/OS 2.5 SDSF ISFCMD.ODSP.CS.sysname
CSR YES NO Z/OS 2.3 SDSF ISFCMD.ODSP.CSR.sysname
DA YES YES BASE SDSF ISFCMD.DSP.ACTIVE.jesx
DEV YES YES Z/OS 2.3 SDSF ISFCMD.ODSP.DEVACT.sysname
DYNX YES NO Z/OS 2.2 SDSF ISFCMD.ODSP.DYNX.sysname
EMCS NO NO Z/OS 2.4 SDSF ISFCMD.ODSP.EMCS.sysname
ENC YES NO BASE SDSF ISFCMD.ODSP.ENCLAVE.sysname
ENQ YES NO Z/OS 2.3 SDSF ISFCMD.ODSP.ENQUEUE.sysname
ENQC YES NO Z/OS 2.3 SDSF ISFCMD.ODSP.ENQUEUE.sysname
ENQD YES NO Z/OS 2.3 SDSF ISFCMD.ODSP.ENQUEUE.sysname
FS YES NO Z/OS 2.3 SDSF ISFCMD.ODSP.FILESYS.sysname
GT YES NO Z/OS 2.3 SDSF ISFCMD.ODSP.TRACKER.sysname
H NO NO BASE SDSF ISFCMD.DSP.HELD.jesx
HELP NO NO Z/OS 2.5
I NO NO BASE SDSF ISFCMD.DSP.INPUT.jesx
INIT NO NO BASE SDSF ISFCMD.ODSP.INITIATOR.jesx
JC NO NO BASE SDSF ISFCMD.ODSP.JOBCLASS.jesx
*SDSF
```

List of primary SDSF commands and include any covering resource profile and class

Note that basic user interface commands are not protected by SAF

# ACTH (Action Help)



```
RS88 Standard
File Edit Font Transfer Macro Options Window Help
-----
Display Filter View Print Options Search Help
-----
SDSF ACTION HELP RS88 DA ALL LINE 21-45 (45)
COMMAND INPUT ==> _ SCROLL ==> CSR
NP COMMAND AuthLevel Class Resource
DX READ OPERCMDS jesx.DISPLAY.JOB
E ALTER OPERCMDS jesx.RESTART.DEV.sysname
E ALTER OPERCMDS jesx.RESTART.enttype
EC ALTER OPERCMDS jesx.RESTART.enttype
ES ALTER OPERCMDS jesx.RESTART.enttype
ESH ALTER OPERCMDS jesx.RESTART.enttype
H ALTER OPERCMDS jesx.MODIFYHOLD.enttype
K ALTER OPERCMDS jesx.MODIFY.JOB
KD ALTER OPERCMDS MVS.CANCEL.Kjtype.Kjname
L READ OPERCMDS jesx.DISPLAY.U
L READ OPERCMDS jesx.DISPLAY.enttypeOUT
LB READ OPERCMDS jesx.DISPLAY.U
LH READ OPERCMDS jesx.DISPLAY.U
LL READ OPERCMDS jesx.DISPLAY.enttypeOUT
LT READ OPERCMDS jesx.DISPLAY.U
P ALTER OPERCMDS jesx.CANCEL.enttype
P ALTER OPERCMDS jesx.MODIFY.JOB
PP ALTER OPERCMDS jesx.CANCEL.enttype
R ALTER OPERCMDS MVS.RESET
RQ ALTER OPERCMDS MVS.RESET
W ALTER OPERCMDS jesx.MODIFY.JOB
W ALTER OPERCMDS jesx.MODIFY.enttype
Y UPDATE OPERCMDS MVS.STOP.JOB.Kjname
Z ALTER OPERCMDS MVS.FORCE.Kjtype.Kjname

*SDSF
MA 0.1 08/17/21.229 04:42PM RS88 a 4,21
```

Shows all actions for one or more panels

Auth level required shown along with the resource profile name and class

Lowercase values in resource name indicate variable replacements (inserts)

# COLH (Column Help)

```
RS88 Standard
File Edit Font Transfer Macro Options Window Help
[Icons] [A] [B] [C] [?]

Display Filter View Print Options Search Help
-----
SDSF COLUMN HELP RS88 ST LINE 1-7 (7)
COMMAND INPUT ==> _ SCROLL ==> CSR

NP COLUMN Description Class Resource
JPRIO JES job queue priorit SDSF ISFATTR.JOB.PRTY
JCLASS JES input class SDSF ISFATTR.JOB.CLASS
SYSAFF JES execution system SDSF ISFATTR.JOB.SYSAFF
PRTDEST JES print destination SDSF ISFATTR.JOB.PRTDEST
EXECNODE Execution node name SDSF ISFATTR.JOB.EXECNODE
SRVCLS Service class SDSF ISFATTR.JOB.SRVCLS
SCHENV Scheduling environmen SDSF ISFATTR.JOB.SCHENV

*SDSF
MA 0.1 08/17/21.229 04:46PM RS88 a 4,21
```

Shows column attributes for  
one or more panels

Overtyping columns show resource name and class

Note that internal column name is used in the resource name and not the title

# Security Trace

- Independent of normal SDSF trace
- Can be used to see all SAF checks issued by SDSF for current user
- Trace output sent to ULOG by default
- Issued via SET command
  - SET SECTRACE ON
  - SET SECTRACE OFF
  - SET SECTRACE WTP
    - Issue “write to programmer” style WTOs instead of ULOG
    - Useful for tracing SDSF initialization security calls
- Messages issued
  - ISF051I
  - ISF059I
- Alternate special DD names
  - ISFSECTR     Equivalent to “SET SECTRACE ON”
  - ISFSECTW    Equivalent to “SET SECTRACE WTP”



# SECTRACE Output

```
RS88 Standard
File Edit Font Transfer Macro Options Window Help
-----
Display Filter View Print Options Search Help
-----
SDSF ULOG  CONSOLE PDSCOT                LINE 3          COLUMNS 45- 124
COMMAND INPUT ==> _                      SCROLL ==> CSR
ISF051I SAF Access allowed SAFRC=0 ACCESS=READ CLASS=SDSF RESOURCE=ISFCMD.DSP.HE
ISF051I SAF Access allowed SAFRC=0 ACCESS=READ CLASS=SDSF RESOURCE=ISFCMD.DSP.HE
ISF059I SAF Access allowed SAFRC=(0,0,0) ACCESS=READ CLASS=SDSF RESOURCE=ISFCMD.
ISF051I SAF Access allowed SAFRC=0 ACCESS=UPDATE CLASS=SDSF RESOURCE=ISFATTR.OUT
ISF051I SAF Access allowed SAFRC=0 ACCESS=UPDATE CLASS=SDSF RESOURCE=ISFATTR.OUT
ISF051I SAF Access allowed SAFRC=0 ACCESS=UPDATE CLASS=SDSF RESOURCE=ISFATTR.OUT
ISF051I SAF Access allowed SAFRC=0 ACCESS=UPDATE CLASS=SDSF RESOURCE=ISFATTR.OUT
ISF051I SAF Access allowed SAFRC=0 ACCESS=ALTER CLASS=SDSF RESOURCE=ISFAUTH.DEST
ISF051I SAF Access allowed SAFRC=0 ACCESS=ALTER CLASS=JESSPOOL RESOURCE=N88.PDSC
ISF051I SAF Access allowed SAFRC=0 ACCESS=UPDATE CLASS=OPERCMD5 RESOURCE=JES2.CA
ISF031I CONSOLE PDSCOT ACTIVATED
$COJ(5729),OUTGRP=1.1.1
$HASP686 OUTPUT(PDSCOTW)  OUTGRP=1.1.1 CANCELLED
***** BOTTOM OF DATA *****

*SDSF
MR 0.1 08/16/21.228 12:03PM RS88 a 4,21
```

# HealthCheck - SDSF\_CLASS\_SDSF\_ACTIVE

- Verifies if **SDSF** class is active
- Produces report on **SDSF** resources and how the security decision is derived
  - SAFRC
    - Covering profile found and SAF return code will be used
  - FAILRC4
    - No covering profile found and access will be denied due to AUXSAF(FAILRC4) in ISFPRMxx
  - NOFAILRC4
    - No covering profile found and access will be allowed due to AUXSAF(NOFailRC4) in ISFPRMxx
- Note that no security check is performed by this healthcheck, it only reports the method that will be used.

# HealthCheck Output

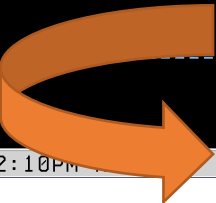
```
RS88 Standard
File Edit Font Transfer Macro Options Window Help
-----
Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY SDSF_CLASS_SDSF_ACTIVE          LINE 0
COMMAND INPUT ==> _
***** TOP OF DATA *****
CHECK(IBMDSF,SDSF_CLASS_SDSF_ACTIVE)
SYSPLEX:  RSPLEX06  SYSTEM: RS88
START TIME: 08/16/2021 07:04:42.723424
CHECK DATE: 20080324  CHECK SEVERITY: LOW

ISFH1015I The class SDSF is active.

SDSF class resource definition report column and value descri
0 Status(S) column with value ** means resource not define
Please define resource in SAF.
0 Decision column describes whether SAF RC to use or FAILR
from ISFPRMxx member.
o Value SAFRC means SAF will determine authorization.
o Value FAILRC4 means SAF no decision and FAILRC4 was se
ISFPRMxx member.
o Value NOFAILRC4 means SAF no decision and NOFAILRC4 wa
ISFPRMxx member.
0 Access column tell level of authority requested.
0 Resource column contains resource being checked.

SDSF Class Resource Definition Report

S Decision Access Resource
-----
SAFRC Read GROUP.ISFSPROG.HSF
SAFRC Read ISF.CONNECT.RS88
*SDSF
```



```
RS88 Standard
File Edit Font Transfer Macro Options Window Help
-----
Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY SDSF_CLASS_SDSF_ACTIVE          LINE 23          COLUMNS 02- 81
COMMAND INPUT ==> _          SCROLL ==> CSR
S Decision Access Resource
-----
SAFRC Read GROUP.ISFSPROG.HSF
SAFRC Read ISF.CONNECT.RS88
SAFRC Update ISFATTR.CHECK.CATEGORY
SAFRC Update ISFATTR.CHECK.DEBUG
SAFRC Update ISFATTR.CHECK.EINTERVAL
SAFRC Update ISFATTR.CHECK.INTERVAL
SAFRC Update ISFATTR.CHECK.PARM
SAFRC Update ISFATTR.CHECK.REXXHLQ
SAFRC Update ISFATTR.CHECK.SEVERITY
SAFRC Update ISFATTR.CHECK.USERDATE
SAFRC Update ISFATTR.CHECK.VERBOSE
SAFRC Update ISFATTR.CHECK.WTOTYPE
SAFRC Update ISFATTR.CKPT.OPVERIFY
SAFRC Update ISFATTR.EMCS.AUTH
SAFRC Update ISFATTR.EMCS.INTIDS
SAFRC Update ISFATTR.EMCS.MSCOPE
SAFRC Update ISFATTR.EMCS.ROUTCDE
SAFRC Update ISFATTR.EMCS.UNKNIDS
SAFRC Update ISFATTR.ENCLAVE.SRVCLASS
SAFRC Update ISFATTR.INIT.ALLOC
SAFRC Update ISFATTR.INIT.BARRIER
SAFRC Update ISFATTR.INIT.DEFCNT
SAFRC Update ISFATTR.INIT.GROUP
SAFRC Update ISFATTR.INIT.MODE
SAFRC Update ISFATTR.INIT.UNALLOC
*SDSF

0.1 08/16/21.228 12:11PM RS88          a 4,21
```