

# What's New in SDSF 3.1?

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Session **HA**



# Agenda

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- Recent SDSF Enhancements
- Configure SDSF Features
- SDSF Event Log
- Module Fetch Monitor
- RACF Panels
- MEM Enhancements
- Other New SDSF Panels
- Useability Enhancements

# Recent SDSF Enhancements

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- Pre-z/OS 2.2
  - Approximately 35 panels and object displays
- z/OS 2.3
  - SDSF server rewrite
  - 25 new panels including system data sets, XCF objects and address space storage
- z/OS 2.4
  - Display manager rewrite
  - 18 new panels including WLM objects and JES resource information
- z/OS 2.5
  - SAF-only security
  - 16 new panels including memory browse, detailed common and private storage information
- z/OS 3.1
  - New concept of SDSF features
  - Over 30 new panels

# Configure SDSF Features

# Configure SDSF Features

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- New SDSF concept of a “feature”
  - Optional component of SDSF that can be configured via new FEATURE and FEATENT statements in ISFPRMxx
  - Certain SDSF panels can depend on a specific feature being active
  - FEATURE statement
    - Initial status of the feature when SDSF server starts
    - Resource limits for any data collection
    - Level of detail maintained
  - FEATENT statements
    - One or more optional filters for the data collected
  - Features can be dynamically started and stopped using operator commands

# SDSF 3.1 Available Features

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- Event log (ELOG) feature
  - Active by default
  - SDSF assigned category and event names can be used to filter data collected on FEATENT statements in ISFPRMxx
- Module fetch (MFM) feature
  - Is inactive by default to minimize collection overhead
  - FEATENT statements can filter on data set name, module name and fetch-causing jobname

# Example FEATURE And FEATENT

```

/*****
/* The ELOG feature gathers important system events and the data */
/* collected is displayed by the "ELOG" command.                */
*****/

FEATURE NAME(ELOG),          /* SDSF feature - Event log      */
        START(YES),          /* Automatically start on server start */
        LIMIT(50000)         /* Record limit                  */

/*****
/* The ELOG feature processes NAME and CATEGORY keywords.      */
/*
/* The following FEATENTs show examples of how that might be   */
/* coded, however note that the "BADNAME" data is not used     */
/* in the classification of ELOG data - this is just an example */
*****/

FEATENT NAME(*),             /* Exclude BADNAME category events */
        CATEGORY(BADNAME),
        ENABLE(NO)

FEATENT NAME(SMF_SYNC),     /* Include SMF-SYNC events         */
        CATEGORY(SMF),
        ENABLE(YES)         /* Change to NO to exclude        */

FEATENT NAME(*),            /* Exclude JOB events for BADJOB*  */
        CATEGORY(JOB),
        JOBNAME(BADJOB*),
        ENABLE(NO)

FEATENT NAME(*),            /* Include all other events        */
        CATEGORY(*),
        ENABLE(YES)

```



# SDSF Event Log



# Event Log (ELOG)

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- Event Log is a new feature in SDSF.
  - Active by default at SDSF server start
- Data source for Event Log includes
  - ENF signals
  - SMF records
    - IEFU86 exit must be active.
      - Use new SDSF command "SMFS" to verify.
  - Dynamic exits

# Event Log Captured Data Examples

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- System status changes
  - I/O configuration
  - WLM policy
  - Boost activity
  - SET operator commands
  - RSM detected shortages and any subsequent relief
- Dynamic updates to system resources
  - APF list
  - Link list
  - LPA
- Abnormal end to jobs
- SVC dump creation

# Event Log (ELOG) - Screenshot

- Captures important recent system events (default 10,000) and presents the SDSF user with a summary row for each event

The screenshot displays the SDSF Event Log (ELOG) interface. At the top, there is a menu bar with options: Display, Filter, View, Print, Options, Search, and Help. Below the menu bar, the header shows 'SDSF EVENT LOG RS79', 'RS79', 'ACTIVE', 'ALL', 'LINE 1-33 (65)', and 'SCROLL ==> CSR'. The main content area is a table with two columns: 'NAME' and 'Description'. The table lists various system events, including SET DAE commands, sysplex joins and partitions, job completions, dynamic exit additions, device status changes, and data set additions. Annotations with arrows point to specific events in the table:

- 'SET command' points to the first 'SET DAE' event.
- 'Abnormal job completion' points to the 'Job TS7897(TSU03750) owner=TS7897 abended CC=S622' event.
- 'Changes to dynamic exits' points to the 'Dynamic exit ADD ACTIVE issued for module HSFFTCX for exit CSVFETCH by job SDSFH6' event.
- 'APF ADD' points to the 'Data set RSRTE.DSN.VB10.SDSNLOAD (SMS) added using CSVAPF by job CAZ0' event.

NAME	Description
SET_DAE	SET DAE command issued, new member in effect RS85
SYS_JOIN_SYSPLEX	System RS85 has joined the sysplex
SYS_LEFT_SYSPLEX	System RS85 has been partitioned from the sysplex
SET_DAE	SET DAE command issued, new member in effect RS85
SYS_JOIN_SYSPLEX	System RS85 has joined the sysplex
SYS_LEFT_SYSPLEX	System RS85 has been partitioned from the sysplex
SET_DAE	SET DAE command issued, new member in effect RS86
SYS_JOIN_SYSPLEX	System RS86 has joined the sysplex
SYS_LEFT_SYSPLEX	System RS86 has been partitioned from the sysplex
SYS_JOIN_SYSPLEX	System RS86 has joined the sysplex
JOB_ABEND	Job TS7897(TSU03750) owner=TS7897 abended CC=S622
WLM_RESET	Jobname LLA changed service class to SYSTEM from SYSSTC
DYNAMIC_EXIT_ADD	Dynamic exit ADD ACTIVE issued for module HSFFTCX for exit CSVFETCH by job SDSFH6
DYNAMIC_EXIT_ADD	Dynamic exit ADD ACTIVE issued for module HSFLLP1 for exit CSVLLIX1 by job SDSFH6
JOB_ABEND	Job TS7897(TSU03747) owner=TS7897 abended CC=S622
DEVICE_ONLINE	Device number 000C placed online
DEVICE_OFFLINE	Device number 000C placed offline
DEVICE_PENDING	Device number 000C placed pending offline
JOB_ABEND	Job TS7897(TSU03738) owner=TS7897 abended CC=S622
DYNAMIC_APF_ADD	Data set RSRTE.APA.SCAZAUTH (SMS) added using CSVAPF by job CAZ0
DYNAMIC_APF_ADD	Data set RSRTE.DSN.VB10.SDSNLOAD (SMS) added using CSVAPF by job CAZ0
SRU_ISSUE	SRU message issued job=TCPIP
DYNAMIC_EXIT_ADD	Dynamic exit ADD ACTIVE issued for module EZBHCAC1 for exit HZSADDCHECK by job TCPIP
SYSPLEX_JOIN	TCP/IP stack joining sysplex job=TCPIP
PAGENT_ISSUE	TCP/IP stack start/refresh job=TCPIP

# Event Log (ELOG) – Fastpath To Operlog

- The “L” action against the row takes the user to the nearest OPERLOG record to the event timestamp
  - Can save numerous “FIND xxx PREV” activities in the LOG panel

Display	Filter	View	Print	Options	Search	Help
SDSF EVENT LOG	RS79	RS79	ACTIVE	ALL	LINE 1-2 (2)	
COMMAND INPUT ==>						SCROLL ==> CSR
NP	NAME	Description				
	JOB_ABEND	Job TS7897(TSU03747) owner=TS7897 abended CC=S622				
L	JOB_ABEND	Job TS7897(TSU03738) owner=TS7897 abended CC=S622				

Display	Filter	View	Print	Options	Search	Help
SDSF OPERLOG	RS79	07/03/2023	4w	COLUMNS 02- 134		
COMMAND INPUT ==>						SCROLL ==> CSR
N 4100000	RS79	2023184 01:14:55.25	TSU03738 00000281	IKT100I USERID TS7897 CANCELED DUE TO UNCONDITIONAL LOGOFF		
N 4100000	RS79	2023184 01:14:55.25	TSU03738 00000090	IKT122I IPADDR..PORT 10.45.18.159..55291		
N 0000000	RS79	2023184 01:14:55.25	00000281	IEA989I SLIP TRAP ID=X622 MATCHED. JOBNAME=TS7897 , ASID=0078.		
N 0000000	RS79	2023184 01:14:55.25	00000281	IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME=TS7897 , ASID=0078.		
N 0000000	RS79	2023184 01:14:55.25	00000281	IEA989I SLIP TRAP ID=X13E MATCHED. JOBNAME=TS7897 , ASID=0078.		
N 4000000	RS79	2023184 01:14:55.26	TSU03738 00000281	IEF450I TS7897 ROCKPROC ROCKPROC - ABEND=S622 U0000 REASON=000000000		
N 4000000	RS79	2023184 01:14:55.39	TSU03738 00000281	\$HASP395 TS7897 ENDED - ABEND=S622		
N 0000000	RS79	2023184 01:15:00.44	00000281	IEA989I SLIP TRAP ID=X33E MATCHED. JOBNAME=*UNAVAIL, ASID=0078.		
NC0000000	RS79	2023184 01:15:09.06	INSTREAM 00000290	LOGON		
N 0200000	RS79	2023184 01:15:14.28	TSU03741 00000281	\$HASP100 TS7897 ON TSOINRDR		

# Module Fetch Monitor

# Module Fetch Monitor Implementation

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- Module Fetch Monitor is a new feature
  - Inactive by default to minimize collection overhead
  - Similar functionality was provided by adhoc tool provided (on request) by IBM z/OS development in Poughkeepsie "MFM"
- Captures program fetch data from CSVFETCH and CSVLLIX1 dynamic exits
- Support 3 levels of data collection detail
  - LEVEL(1) Only collect module fetch data for data set names
  - LEVEL(2) Collect module fetch data for both data set and module name
  - LEVEL(3) Collect module fetch data for data set name, module name and job names



# Module Fetch By Data Set Name (MFD)

- Module fetch activity summarized by data set

Display Filter View Print Options Search Help											
-----											
SDSF FETCH DATA SETS RS79 RS79 ACTIVE LINE 1-17 (17)											
COMMAND INPUT ==> SCROLL ==> CSR											
NP	DSNAME	Fetch	AvgDASD	MaxDASD	AvgVLF	MaxVLF	FetchDASD	LastDASD	FirstDASD		
	CEE.SCEERUN	694	0.212	7.142	0.018	0.064	386	07/05/2023 11:45:46	07/03/2023	07:56:35	
	CEE.SCEERUN2	2	40.801	41.873	0.000	0.000	2	07/04/2023 12:59:36	07/03/2023	12:58:53	
	CSF.SCSFMODE	3	0.316	0.339	0.000	0.000	3	07/04/2023 11:36:21	07/04/2023	11:35:08	
	DEV RTE.HSF.HSFE0301.SISFLOAD	509	7.379	339.365	1.553	5.319	492	07/05/2023 11:56:24	07/03/2023	04:00:44	
	GDDM.SADMMOD	2	6.391	9.777	0.000	0.000	2	07/04/2023 07:12:13	07/04/2023	07:12:13	
	ISP.SISPLOAD	144	0.136	1.247	0.005	0.032	78	07/05/2023 11:56:24	07/03/2023	04:01:06	
	REXX.SEAGALT	80	0.204	3.571	0.013	0.025	45	07/05/2023 11:56:20	07/03/2023	07:56:36	
	RSRTE.LINKLIB	46	0.378	2.142	0.000	0.000	46	07/05/2023 11:56:20	07/03/2023	07:56:36	
	RSRTE.ZSECURE.SCKRLOAD	14	1.177	3.320	0.000	0.000	14	07/05/2023 00:06:46	07/04/2023	00:06:46	
	SYS1.CMDLIB	1313	0.199	4.865	0.015	0.750	725	07/05/2023 11:56:24	07/03/2023	04:01:43	



# Module Fetch By Module Name (MFM)

- xxxDASD indicates program fetch versus xxxVLF for LLA fetch

Display Filter View Print Options Search Help													
-----													
SDSF FETCH MODULES		RS79		RS79	ACTIVE		LINE 1-33 (100)						
COMMAND INPUT ==>					SCROLL ==> CSR								
NP	MODULE	Fetch	Type	Size	AvgDASD	MaxDASD	AvgVLF	MaxVLF	Dataset	APF	AC	AM	RM
	ALLOC	1	PGM	0000D8E0	1.767	1.767	0.000	0.000	SYS1.CMDLIB	YES	0	31	31
	ALTLIB	2	PGM	000042F8	0.400	0.490	0.000	0.000	SYS1.CMDLIB	YES	0	31	31
	BPXINPRM	3	VLF	00037130	2.732	5.095	0.218	0.218	SYS1.LINKLIB	YES	0	64	24
	CSVLLCRE	3	PGM	0001DF08	3.469	4.024	0.000	0.000	SYS1.LINKLIB	YES	1	31	31
	CSVLLIS	1	PGM	00001D88	1.095	1.095	0.000	0.000	SYS1.LINKLIB	YES	0	31	31
	CSVLLNXT	1	PGM	00000FB8	1.256	1.256	0.000	0.000	SYS1.LINKLIB	YES	0	31	31
	ERBMFALL	395	VLF	000046A8	0.053	1.210	0.009	0.064	SYS1.SERBLNKE	YES	0	31	24
	ERBMFCNV	594	VLF	000009A8	1.199	20.763	0.005	0.022	SYS1.SERBLNKE	YES	0	31	24
	ERBRCHAN	1	PGM	00004000	0.691	0.691	0.000	0.000	SYS1.SERBLNKE	YES	0	31	31
	ERBRIGQ	1	PGM	00004000	0.873	0.873	0.000	0.000	SYS1.SERBLNKE	YES	0	31	31
	ERB3GCOM	102	PGM	00000390	3.907	35.682	0.000	0.000	SYS1.SGRBLINK	YES	0	31	31
	ERB3RCPD	594	VLF	000020C8	1.023	12.631	0.007	0.049	SYS1.SERBLNKE	YES	0	31	24
	ERB3RDEC	1	PGM	00000468	0.206	0.206	0.000	0.000	SYS1.SGRBLINK	YES	0	31	31
	ERB3RDSI	1	PGM	00004000	0.846	0.846	0.000	0.000	SYS1.SERBLNKE	YES	0	31	31

# Module Fetch By Job Name (MFJ)

- Module fetch activity summarized by Jobname (has date stamp column)

Display	Filter	View	Print	Options	Search	Help				
-----										
SDSF	FETCH	JOBNAMES	RS79	RS79	ACTIVE	LINE 207-239 (2390)				
COMMAND INPUT ==>						SCROLL ==> CSR				
NP	JOBNAME	Module	Fetch	AvgDASD	MaxDASD	AvgVLF	MaxVLF	ASIDX	Dataset	
	BPXAS	IEFCNAMS	1	0.271	0.271	0.000	0.000	0079	SYS1.LINKLIB	
	BPXAS	IEFCNDDV	2	0.266	0.268	0.000	0.000	0079	SYS1.LINKLIB	
	BPXAS	IEFIB600	100	0.093	1.657	0.054	1.621	0079	SYS1.LINKLIB	
	BPXAS	IEFVH1	2	0.111	0.111	0.088	0.088	0079	SYS1.LINKLIB	
	BPXAS	IFAEASIL	1	0.323	0.323	0.000	0.000	0079	SYS1.LINKLIB	
	CONSOLE	IEAVC702	8	0.534	0.888	0.000	0.000	000A	SYS1.LINKLIB	
	CONSOLE	IEAVG604	1	0.712	0.712	0.000	0.000	000A	SYS1.LINKLIB	
	CONSOLE	IEAVG608	9	0.647	1.677	0.000	0.000	000A	SYS1.LINKLIB	
	CONSOLE	IEAVG710	4	0.392	0.446	0.000	0.000	000A	SYS1.LINKLIB	
	CONSOLE	IEAVM610	4	0.455	0.509	0.000	0.000	000A	SYS1.LINKLIB	
	DUMPSRV	ADYDFLT	4	0.349	0.389	0.000	0.000	0005	SYS1.LINKLIB	
	DUMPSRV	ADYMSGT	4	0.455	0.562	0.000	0.000	0005	SYS1.LINKLIB	
	DUMPSRV	IEAVTSEP	21	0.436	0.751	0.000	0.000	0005	SYS1.LINKLIB	
	FTPD1	CEEBINIT	2	0.041	0.041	0.021	0.021	0051	CEE.SCEERUN	
	FTPD1	EDCZEMSG	1	0.959	0.959	0.000	0.000	0051	CEE.SCEERUN	

# Module Fetch By Job Name (MFJ)

- FJ action on DA to see Module fetch by Jobname

```
Display Filter View Print
-----
SDSF DA RS79 RS79 PAG
COMMAND INPUT ==>
NP JOBNAME StepName ProcStep
FJ TS7897 ROCKPROC S79TCP28
```

```
Display Filter View Print Options Search
-----
SDSF FETCH JOBNAMES RS79 RS79 ACTIVE
COMMAND INPUT ==>
NP JOBNAME Module Fetch AvgDASD MaxDASD
TS7897 ALLOC 10 0.053 0.073
TS7897 ALLOCATE 2 0.074 0.085
TS7897 ALTLIB 1 0.057 0.057
TS7897 ATTR 4 0.056 0.114
TS7897 BPXWREXX 2 0.146 0.146
TS7897 EAGRTALT 1 0.000 0.000
TS7897 EAGRTPRC 1 0.077 0.077
TS7897 EXEC 3 0.074 0.139
TS7897 EXECUTIL 1 0.054 0.054
TS7897 EZAFTPKR 2 0.049 0.049
```

# RACF Panels

# RACF Panels

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- RACF panels
  - RACF classes (RAC)
  - RACF profiles (RACP)
  - RACF options (RACO)
  - RACF users (RACU)
  - RACF groups (RACG)
- Uses IRRSEQ00 (r\_admin) to collect data
  - Access to the panels are controlled using SDSF profiles
    - ISFCMD.ODSP.RACFLIST.sysname in the SDSF class
    - Row actions are controlled by ISFRACF.CLASS.classname.sysname

**Note: RACF only, other ESM products not supported**

# RACF Classes (RAC)

- Display RACF classes and attributes
- Command parameters
  - ACTIVE – Default
  - ALL
  - INACTIVE

Display Filter View Print Options Search Help																	
-----																	
SDSF RACF CLASSES			RS79	ACTIVE		LINE 1-33 (65)											
COMMAND INPUT ==>			RAC	SCROLL ==> CSR													
NP	NAME	Xref	Active	Dynamic	MaxLen	DfltRC	RacList	Group	UACC	Oper	Genlist	Signal	SecLabel	IBM	Posit	KeyQual	MAC
	ACCTNUM		YES	NO	39	4	ALLOWED	NO	NONE	NO	NO	NO	NO	YES	126	0	NORMAL
	ACICSPCT	BCICSPCT	YES	NO	13	4	NO	NO	NONE	NO	NO	NO	NO	YES	5	0	NORMAL
	APPL		YES	NO	8	4	YES	NO	NONE	NO	YES	NO	YES	YES	3	0	EQUAL
	BCICSPCT	ACICSPCT	YES	NO	13	4	NO	YES	NONE	NO	NO	NO	NO	YES	5	0	NORMAL
	CBIND		YES	NO	41	8	YES	NO	ACEE	NO	NO	NO	NO	YES	545	0	NORMAL
	CCICSCMD	VCICSCMD	YES	NO	21	4	NO	NO	NONE	NO	NO	NO	NO	YES	5	0	NORMAL
	CDT		YES	NO	8	4	ALLOWED	NO	NONE	NO	NO	YES	NO	YES	572	0	NORMAL
	CFIELD		YES	NO	26	4	NO	NO	NONE	NO	NO	NO	NO	YES	588	0	NORMAL



# RACF Profiles (RACP)

- Profiles for a specific class.
- Default is DATASET and class can be passed as parameter in RACP command

```
Display Filter View Print Options Search Help
-----
SDSF RACF PROFILES      RS79      FACILITY
COMMAND INPUT ==> RACP FACILITY
NP  Profile
    $SYSVOL.RP*
    **
    AOPADMIN
    BBG.SYNC.IZUDFLT
    BPX.CONSOLE
    BPX.DAEMON
    BPX.DAEMON.HFSCTL
    BPX.DEBUG
    BPX.FILEATTR.APF
    BPX.FILEATTR.PROGCTL
    BPX.FILEATTR.SHARELIB
    BPX.JOBNAME
    BPX.SERVER
    BPX.SMF
    BPX.SUPERUSER
    BPX.WLMSEVER
LINE 1-33 (94)
SCROLL ==> CSR
```



# RACF Profiles (RACP)

- User can also access RACP panel using L action on RACF classes (RAC)

	Display	Filter	View	Print	Options	Search	Hel
SDSF	RACF	CLASSES	RS79		ACTIVE		
COMMAND	INPUT	==>	RAC				
NP	NAME	Xref	Active	Dynamic	MaxLen	DfltRC	
L	ACCTNUM		YES	NO	39	4	
	ACICSPCT	BCICSPCT	YES	NO	13	4	
	APPL		YES	NO	8	4	
	BCICSPCT	ACICSPCT	YES	NO	13	4	
	CBIND		YES	NO	41	8	
	CCICSCMD	VCICSCMD	YES	NO	21	4	

	Display	Filter	View	Print	Options	Search	Help
SDSF	RACF	PROFILES	RS79		ACCTNUM		
COMMAND	INPUT	==>					
NP	Profile						
	ACCT#						
	IZUACCT						
	123						
	123/456						

# RACF Profile Access List

- L action on RACP to see RACF Profile Access List
- Access list entries for specific profile is shown
- Special value of "--UACC—" in access list for profile universal access

```
Display Filter View Print Option
-----
SDSF RACF PROFILES RS79 FACILITY
COMMAND INPUT ==> RACP FACILITY
NP Profile
  BPX.FILEATTR.SHARELIB
  BPX.JOBNAME
  L BPX.SERVER
  BPX.SMF
  BPX.SUPERUSER
  BPX.WLMSEVER
```

```
Display Filter View Print Options Search Help
-----
SDSF RACF ACCESS RS79 FACILITY BPX.SERVER
COMMAND INPUT ==>
NP ID Access Cond whenClass whenEntity
  --UACC-- NONE NO
  CBLDAP UPDATE NO
  CFZSRV UPDATE NO
  DBMUSS READ NO
  GPMSEVER READ NO
  IMWEBSRV UPDATE NO
  KBMUSER READ NO
  PDMGK READ NO
  ROOT READ NO
  WEBSRV UPDATE NO
```

# RACF Connected Groups

- List RACF group that a specific user ID has been connected to.
- RACF connected Group is shown in response to L action on RACU panel

```
Display Filter View Print Opt
-----
SDSF RACF PROFILES RS79 USER
COMMAND INPUT ==> RACU_
NP Profile
L TS7897
  TS7897A
```

```
Display Filter View Print Options Search Help
-----
SDSF RACF CONNECTS RS79 USER TS7897 LINE 1-4 (4)
COMMAND INPUT ==> SCROLL ==> CSR
NP GROUP Special operations Auditor Owner Connected Class Profile
#ZVNEXT NO NO NO #ZVNEXT 07/27/2022 USER TS7897
IZUADMIN NO NO NO IZUADMIN 05/06/2022 USER TS7897
IZUUSER NO NO NO TS5582 03/17/2022 USER TS7897
PDUSER NO NO NO PDUSER 01/11/2019 USER TS7897
```

# RACF Profile Browse

- Shows detailed RACF profile information for a profile from all segments
- RACF Profile Browse can be accessed with S action from various RACF panels
- Left Hand Side column shows RACF database template fields

```
Display Filter View Print Options
-----
SDSF RACF PROFILES RS79 DATASET
COMMAND INPUT ==>
NP Profile
S_ CATALOG.*.MASTER*.*
  CBC.*.*
```

```
Display Filter View Print Options Search
-----
SDSF RACF BROWSE CATALOG.*.MASTER*.*
COMMAND INPUT ==>
***** TOP OF DATA ***
CLASS : DATASET
PROFILE : CATALOG.*.MASTER*.*
SEGMENT : BASE
CREATDAT: 05/28/15
OWNER : SYS1
LREFDAT : 05/28/15
LCHGDAT : 05/28/15
ACSALTR : 0
ACSENTL : 0
ACSUPDT : 0
ACSREAD : 0
UACC : READ
GROUPDS : YES
RAUDIT : FAILURES(READ)
GROUPNM : SYSPROG
DSTYPE : NON-VSAM
LEVEL : 0
RGAUDIT : NONE
WARNING : NO
ERASE : NO
ACLcnt : (REPEAT GROUP)
ACLID : SYSPROG
ACLACS : ALTER
ACLID : SMSVSAM
ACLACS : UPDATE
ACLID : SUBJCL
ACLACS : UPDATE
***** BOTTOM OF DATA *
```

# RACF Options (RACO)

- Show current RACF options
- Data is *similar* to SETROPTS LIST command output

```
  _Display_  _Filter_  _View_  _Print_  _options_  _Search_  _Help_
-----
SDSF RACF OPTIONS   RS79                                     LINE 0
COMMAND INPUT ==>
***** TOP OF DATA *****
RACF GLOBAL OPTIONS AND SETTINGS
INITSTATS                               : YES
TERMINAL UACC                           : READ
LOG COMMAND VIOLATIONS                  : YES
AUDIT OPERATIONS                        : NO
AUDIT SPECIAL                           : YES
AUDIT APPC TRANSACTIONS                  : NO
AUDIT SECLABEL                           : NO
ADD CREATOR TO ACCESS LIST               : NO
AUTOMATIC DATA SET PROTECTION           : NO
CATALOGUED DATA SETS ONLY               : NO
SECLABEL COMPATABILITY                   : NO
ENHANCED GENERIC NAMING                  : YES
GENERIC OWNER ONLY                       : YES
LIST OF GROUPS ACCESS CHECKING           : YES
MULTI-LEVEL QUIET                        : NO
MULTI-LEVEL STABLE                       : NO
```

# MEM Enhancements

# MEM and MAP Enhancements

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- New “RC” action added to **MEM** display to perform a “run chain” to process linked lists
- Memory **MAP** Panel now uses SDSF table display *instead of browse*
  - “D” and “G” actions supported
    - D – Display using 31 bit address
    - G – Display using 64 bit address
  - No longer need “MEMCSR” assigned to PF-Key – still exists – might use on SYSOUT browse
- MVS control block mapping in z/OS 3.1 is provided by SDSF in ISFPRMxx statements
  - z/OS 2.5 used internal structure
- Provides ability for installation/customer to define map for their own structures.
  - Structure definitions externalized to new ISFPRMxx statements.
    - MAP
    - MAPENT
    - MAPOPT
    - MAPDEF



# Memory MAP (MEM MAP) - Screenshot

- User can do row action (D & G) and Point and Shoot within address field
- Equated fields shown under associated data

Display Filter View Print options Search Help									
-----									
SDSF MAP RS79		RS79	SSCT	004E TS7897	LINE 1-20 (20)				
COMMAND INPUT ==> _									
NP	NAME	Content			off	Key	FProt	Address	AltContent
	SSCTID	SSCT			0000	0	NO	<u>00000000_00C2FBE8</u>	E2E2C3E3
	SSCTSCTA	00C2FC48			0004	0	NO	<u>00000000_00C2FBEC</u>	
	SSCTSNAME	DFRM			0008	0	NO	<u>00000000_00C2FBF0</u>	C4C6D9D4
	SSCTFLG1	00 B'00000000'			000C	0	NO	<u>00000000_00C2FBF4</u>	
	+EQUATED VALUES	--							
	+SSCTSFOR	80 B'10000000'							
	+SSCTUPSS	40 B'01000000'							
	+SSCTARDR	20 B'00100000'							
	+SSCTLDEL	10 B'00010000'							
	SSCTSSID	00 B'00000000'			000D	0	NO	<u>00000000_00C2FBF5</u>	
	+EQUATED VALUES	--							
	+SSCTJES3	03 B'00000011'							
	+SSCTJES2	02 B'00000010'							
	+SSCTUNKN	00 B'00000000'							
	SSCTRSV1(2)	0000			000E	0	NO	<u>00000000_00C2FBF6</u>	
	SSCTSSVT	00000000			0010	0	NO	<u>00000000_00C2FBF8</u>	
	SSCTSUSE	00000000			0014	0	NO	<u>00000000_00C2FBFC</u>	
	SSCTSYN	00000000			0018	0	NO	<u>00000000_00C2FC00</u>	
	SSCTSUS2	90000000			001C	0	NO	<u>00000000_00C2FC04</u>	
	SSCTSCTX	00C2FC0C			0020	0	NO	<u>00000000_00C2FC08</u>	

# MEM MAP – Display memory for fields

D or G action to invoke MEM on address value in content field

<u>D</u> isplay	<u>F</u> ilter	<u>V</u> iew	<u>P</u> rint	<u>O</u> ptions	<u>S</u> earch
SDSF MAP RS79		RS79	SSCT	004E	TS7897
COMMAND INPUT ==>					
NP	NAME		Content		
	SSCTID		SSCT		
D	SSCTSCTA		00C2FC48		
	SSCTSNAME		DFRM		

<u>D</u> isplay	<u>F</u> ilter	<u>V</u> iew	<u>P</u> rint	<u>O</u> ptions	<u>S</u> earch	<u>H</u> elp
SDSF MEMORY RS79		RS79		004E	TS7897	
COMMAND INPUT ==>						LINE 1-33 (257)
NP	ADDRESS	off	Contents			SCROLL ==> CSR
	00000000_00C2FC48	0000		E2E2C3E3	00C2FCA8	EBCDIC
	00000000_00C2FC50	0008	D3D6C7D9 00000000	1A2D3860	00000000	SSCT.B y
	00000000_00C2FC60	0018	00000000 00000000	00C2FC6C	E2E2C3E7	LOGR.....-
	00000000_00C2FC70	0028	0100003C 00000000	00000000	00000000	B %SSCX
	00000000_00C2FC80	0038	00000000 00000000	00000000	00000000	

# MEM MAP – Structure Inheritance

M action allow user to process linked list in structure format

```
Display Filter View Print Options
-----
SDSF MAP RS79          RS79          SSCT          004E
COMMAND INPUT ==>
NP      NAME           Content
        SSCTID         SSCT
M_      SSCTSCTA       00C2FC48
        SSCTSNA        DFRM
```

```
Display Filter View Print Options Search Help
-----
SDSF MAP RS79          RS79          SSCT          004E TS7897          LINE 1-20 (20)
COMMAND INPUT ==>
NP      NAME           Content           SCROLL ==> CSR
        SSCTID         SSCT           off  Key  FProt Address
        SSCTSCTA       00C2FCA8         0000  0  NO  00000000_00C2FC48
        SSCTSNA        LOGR             0004  0  NO  00000000_00C2FC4C
        SSCTFLG1        00             0008  0  NO  00000000_00C2FC50
        +EQUATED VALUES --             000C  0  NO  00000000_00C2FC54
        +SSCTSFOR       80             B'00000000'
        +SSCTUPSS       40             B'10000000'
        +SSCTARDR       20             B'01000000'
        +SSCTLDEL       10             B'00100000'
        SSCTSSID        00             B'00010000'
        +EQUATED VALUES --             000D  0  NO  00000000_00C2FC55
        +SSCTJES3       03             B'00000011'
```

# Example MAP Structure Definition

## what installation defined coding would look like

```
MAP NAME(SSCT) REFNAME(IEFJSCVT) LENGTH(36)
MAPENT FIELD(SSCTID) LENGTH(4) TYPE(CHAR) OFFSET(0000)
MAPENT FIELD(SSCTSCTA) LENGTH(4) TYPE(ADDR) OFFSET(0004)
MAPENT FIELD(SSCTSNA) LENGTH(4) TYPE(CHAR) OFFSET(0008)
MAPENT FIELD(SSCTFLG1) LENGTH(1) TYPE(BYTE) OFFSET(000C)
MAPENT FIELD(SSCTSFOR) LENGTH(1) TYPE(BIT) REF(SSCTFLG1) VALUE(80)
MAPENT FIELD(SSCTUPSS) LENGTH(1) TYPE(BIT) REF(SSCTFLG1) VALUE(40)
MAPENT FIELD(SSCTARDR) LENGTH(1) TYPE(BIT) REF(SSCTFLG1) VALUE(20)
MAPENT FIELD(SSCTLDEL) LENGTH(1) TYPE(BIT) REF(SSCTFLG1) VALUE(10)
MAPENT FIELD(SSCTSSID) LENGTH(1) TYPE(BYTE) OFFSET(000D)
MAPENT FIELD(SSCTUNKN) LENGTH(1) TYPE(BIT) REF(SSCTSSID) VALUE(00)
MAPENT FIELD(SSCTJES2) LENGTH(1) TYPE(BIT) REF(SSCTSSID) VALUE(02)
MAPENT FIELD(SSCTJES3) LENGTH(1) TYPE(BIT) REF(SSCTSSID) VALUE(03)
MAPENT FIELD(SSCTRSV1) LENGTH(1) TYPE(HEX) OFFSET(000E),
    DUPLICATION(2)
MAPENT FIELD(SSCTSSVT) LENGTH(4) TYPE(ADDR) OFFSET(0010)
MAPENT FIELD(SSCTSUSE) LENGTH(4) TYPE(HEX) OFFSET(0014)
MAPENT FIELD(SSCTSYN) LENGTH(4) TYPE(ADDR) OFFSET(0018)
MAPENT FIELD(SSCTSUS2) LENGTH(4) TYPE(HEX) OFFSET(001C)
MAPENT FIELD(SSCTSCTX) LENGTH(4) TYPE(HEX) OFFSET(0020)
```

Bitmask value  
specifies associated  
byte using "REF"

TYPE(ADDR) makes  
the value active for  
memory browse

# MEM Run Chain

- RC action on MEM panel cause pop-up to show

```
Display  Filter  View  Print  Options  Search  Help
-----
SDSF MEM
COMMAND
NP  ADDR
RC  0000
    0000
    0000
    0000
    0000
    0000
    0000
    0000
    0000
    0000
    0000
    00000000_00C2FC80 0098 00000000 00000000 00000000 00000000 .....
    00000000_00C2FC90 00A8 00000000 00000000 00000000 00000000 .....
    00000000_00C2FCA0 00B8 00000000 00000000 E2E2C3E3 00C2FD08 .....SSCT.B .
    00000000_00C2FCB0 00C8 D4D7C6E7 00000000 00000000 00000000 MPFX.....
    00000000_00C2FCC0 00D8 00000000 00000000 00C2FCCC E2E2C3E7 .....B öSSCX
    00000000_00C2FCD0 00E8 0100003C 00000000 00000000 00000000 .....

Memory Run Chain Definition

Type run chain parameters to describe control block.

offset to next pointer  4      (hexadecimal, 000 to FFF)
Length of next pointer  4      (4 or 8 bytes)
Number bytes to display 20     (hexadecimal, 001 to 400)

Traversal limit . . . . 255

F1=Help   F3=Cancel F12=Cancel

)
==> CSR

..SSCT.B
.....
...B .SSCX
.....
.....
..SSCT.B y
.....
...B %SSCX
.....
```



# MEM Run Chain

- Results from run chain show in selectable list using length and limit specified in pop up
- Command line D, G, M possible here

```

  _Display_  _Filter_  _View_  _Print_  _Options_  _Search_  _Help_
-----
SDSF MEMORY CHAIN RS79          RS79          0086 TS7897          LINE 1-32 (36)
COMMAND INPUT ==>                SCROLL ==> CSR
ACTION=+,/,%,D1,D2,D3,D4,G1,G2,G3,M,S
NP      ADDRESS              Seq Contents
00000000_00C2FBE8          1 E2E2C3E3 00C2FC48 C4C6D9D4 00000000 EBCDIC
00000000_00C2FBF8          00000000 00000000 00000000 90000000 SSCT.B DFRM....
00000000_00C2FC48          2 E2E2C3E3 00C2FCA8 D3D6C7D9 00000000 .....
00000000_00C2FC58          1A1C2C78 00000000 00000000 00000000 SSCT.B yLOGR....
00000000_00C2FCA8          3 E2E2C3E3 00C2FD08 D4D7C6E7 00000000 ...
00000000_00C2FCB8          00000000 00000000 00000000 00000000 SSCT.B .MPFX....
00000000_00C2FD08          4 E2E2C3E3 00C2FD68 C4F7F8C1 00000000 .....
00000000_00C2FD18          1A0C6EF8 1A0C7F58 00C1AAE0 00000000 SSCT.B D78A....
00000000_00C2FD68          5 E2E2C3E3 00C2FDC8 C4F7F8C2 00000000 ..>8.." .A \....
00000000_00C2FD78          1A0C6950 1A0C6B50 00C2FDC8 00000000 SSCT.B HD78B....
00000000_00C2FDC8          6 E2E2C3E3 00C2FE28 C4F7F9C1 00000000 .. &...&.B H....
00000000_00C2FDD8          1A0ADEF8 1A0C68A8 00C1ABA0 00000000 SSCT.B .D79A....
                                .. 8.. y.A .....
```

# Other New SDSF Panels



# Other New SDSF Panels

---

- |        |                       |        |                         |
|--------|-----------------------|--------|-------------------------|
| • CF   | Coupling facilities   | • SMFD | SMF data sets           |
| • CFSA | CF structure activity | • SMFO | SMF options             |
| • DASH | Dashboard             | • SMFS | SMF subsystems          |
| • EDT  | Eligible device table | • PROD | Registered products     |
| • LPAR | Logical partitions    | • UCB  | Unit control blocks     |
| • PLEX | Sysplex systems       | • XCFA | XCF Application servers |
| • PPT  | Program properties    | • XCFP | XCF Signalling paths    |

# Coupling Facilities (CF)

- Show all coupling facility defined in the system
- LC action will take to CFC panel filtering on CF name
- LS action will take to CFS panel filtering on CF name

<u>D</u> isplay	<u>F</u> ilter	<u>V</u> iew	<u>P</u> rint	<u>O</u> ptions	<u>S</u> earch	<u>H</u> elp					
-----											
SDSF CF DISPLAY	RS79	RSPLEX0G		LINE 1-1 (1)							
COMMAND INPUT ==>		SCROLL ==> CSR									
NP	CFNAME	Status	CFLevel	Partition	Proc	SysCount	StrCount	Size	Free	StorInc	Volatile
	CF85	ACTIVE	25	0	1	4	4	430080	353280	1024	YES

<u>D</u> isplay	<u>F</u> ilter	<u>V</u> iew	<u>P</u> rint	<u>O</u> ptions
-----				
SDSF	CF	DISPLAY	RS79	RSPLEX0G
COMMAND INPUT ==>				
NP	CFNAME	Status	CFLevel	Partition
LS	CF85	ACTIVE	25	0

Display	Filter	View	Print	Options	Search
-----					
SDSF CF STRUCTURES	RS79	RSPLEX0G			
COMMAND INPUT ==>					
NP	STRNAME	CFName	Encrypt	EncrType	
	ISGLOCK	CF85	NO		
	IXCLIST1	CF85	NO		

# CF Structure Activity (CFSA)

- Information about synchronous and asynchronous requests for each structure of a coupling facility
- SDSF calls RMF to retrieve information on CF structure activity.
- RMF MON III must be active

Display Filter View Print Options Search Help									
-----									
SDSF CF STRUCTURE ACTIVITY		RS79	RSPLEX0G	LINE 1-8 (8)					
COMMAND INPUT ==>				SCROLL ==> CSR					
NP	STRNAME	Type	SysName	SyncRate	SyncAvgTime	AsyncRate	AsyncAvgTime	SyncToAsync%	AsyncDelay%
	ISGLOCK	LOCK	RS79	1.08	1	0.00	0	0.00	0.00
	IXCLIST1	LIST	RS79	0.00	0	4.20	436	0.00	0.00
	IXCLIST2	LIST	RS79	0.00	0	4.77	527	0.00	0.00
	OPERLOG	LIST	RS79	0.00	0	0.00	0	0.00	0.00
	ISGLOCK	LOCK	RS86	1.01	1	0.00	0	0.00	0.00
	IXCLIST1	LIST	RS86	0.00	0	4.42	590	0.00	0.00
	IXCLIST2	LIST	RS86	0.00	0	5.30	384	0.00	0.00
	OPERLOG	LIST	RS86	0.00	0	0.00	0	0.00	0.00

# Dashboard (DASH) – Informational View

- Display configuration information along with utilization and up to top 5 consumer of system resources
- Default view is DASH INFO

Display	Filter	View	Print	Options	Search	Help		
SDSF DASHBOARD RS79 RSPLEX0G							LINE 1-33 (46)	
COMMAND INPUT ==>							SCROLL ==>	CSR
Attribute	Value				Metric		Measure	
Sysplex	RSPLEX0G				CPU%		6	
Sysname	RS79				ZIIP%		0	
Syslevel	z/OS 03.01.00 HBB77E0				Spool%		21	
Sysclone	79				SIO		0	
SMFID	RS79				Aux%		0	
JESName	JES2				RealAFC		686535	
JESNode	RSP0				Real%		44	
JESMember	RS79				PageRate		0	
LPAR					SysMSU		394	
IPLVolser	RZ301A				AvgMSU		3	
IPLDate	2023/07/03-00:59:51				MaxASID		705	
IEASYS	RS				FreeASID		588	
IEASYM	(31,79,L)				BadASID		0	
CVTVERID	ETPBLDE 20Jun23				TSO		1	
HardwareName	Z16				Job		0	
CPCNode	003931.A01.IBM.02.000000088DC8				WTOR		3	
Userid	TS7897				HVComm%		14	
ASID	004E				ECSA%		14	
LogonProc	ROCKPROC				ESQA%		73	
Terminal	S79TCP26				CSA%		34	
JobID	TSU04423				SQA%		24	
Spool(1)	USER01TS JOBID(JOB03015)				Spool%(1)		7	

# Dashboard (DASH) – Top Consumers View

- DASH TOP shows system resources (Spool, Real, (E)CSA, and (E)SQA) first

Display	Filter	View	Print	Options	Search	Help
SDSF DASHBOARD	RS79		RSPLEX0G			
COMMAND INPUT	====>					
Attribute	Value					LINE 1-33 (46) SCROLL ==> CSR
					Metric	Measure
Spool(1)	USER01TS	JOBID(JOB03015)			Spool%(1)	7
Spool(2)	TS7897	JOBID(TSU04340)			Spool%(2)	5
Spool(3)	TS5485A	JOBID(TSU04182)			Spool%(3)	4
Spool(4)	SDSFKJ	JOBID(STC04185)			Spool%(4)	3
Spool(5)	TS5479	JOBID(TSU03447)			Spool%(5)	1
Real(1)	ZFS	ASID(001F)	OWNER(+++++)		Real%(1)	15
Real(2)	GRS	ASID(0007)	OWNER(+++++)		Real%(2)	1
Real(3)	OMVS	ASID(0010)	OWNER(+++++)		Real%(3)	1
Real(4)	TCPIP	ASID(0058)	OWNER(TCPIP	)	Real%(4)	1
Real(5)	RMF	ASID(0059)	OWNER(RMF	)	Real%(5)	1
ECSA(1)	*MASTER*	ASID(0001)	OWNER(+MASTER+)		ECSA%(1)	4
ESQA(1)	*MASTER*	ASID(0001)	OWNER(+MASTER+)		ESQA%(1)	8
ESQA(2)	RMFGAT	ASID(0077)	OWNER(RMF	)	ESQA%(2)	5
ESQA(3)	XCFAS	ASID(0006)	OWNER(+++++)		ESQA%(3)	2
ESQA(4)	WLM	ASID(000B)	OWNER(+++++)		ESQA%(4)	1
CSA(1)	MXIMAST	ASID(005C)	OWNER(MXISTC	)	CSA%(1)	4
CSA(2)	*MASTER*	ASID(0001)	OWNER(+MASTER+)		CSA%(2)	2
SQA(1)	*MASTER*	ASID(0001)	OWNER(+MASTER+)		SQA%(1)	2
sysplex	RSPLEX0G				CPU%	7

# Dashboard (DASH) as Main Menu

- User can set DASH panel as main menu using "SET MAIN DASH" command.
- To go back to table main menu use "SET MAIN TABLE" command.
- Use MENU command to display tabular menu

Display Filter View Print Options Search Help				
-----				
SDSF MENU 3.1 RSPLEX0G RS79				
COMMAND INPUT ==> SET MAIN DASH				
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	

<u>D</u> isplay <u>F</u> ilter <u>V</u> iew <u>P</u> rint <u>O</u> ptions <u>S</u> earch <u>H</u> elp			
SDSF DASHBOARD RS79 RSPLEX0G		SET COMMAND COMPLETE	
COMMAND INPUT ==>		SCROLL ==> CSR	
Attribute	Value	Metric	Measure
Sysplex	RSPLEX0G	CPU%	1
Sysname	RS79	ZIIP%	0
Syslevel	z/OS 03.01.00 HBB77E0	Spool%	19
Sysclone	79	SIO	10
SMFID	RS79	Aux%	0
JESName	JES2	RealAFC	684153
JESNode	RSP0	Real%	44
JESMember	RS79	PageRate	0
LPAR		SysMSU	394
IPLVolser	RZ301A	AvgMSU	3



# Eligible Device Table (EDT)

- Display installation-defined I/O devices that are eligible for allocation
- Use L action to invoke new UCB display for the unit name

Display Filter View Print Options Search Help											
SDSF EDT DISPLAY RS79				RS79				LINE 1-33 (42)			
COMMAND INPUT ==>				SCROLL ==> CSR							
NP	UNITNAME	Type	DevClass	DevCount	VIO	Token	SysName	SysLevel			
	CXCART	ESOTERIC	TAPE	16	NO	00028000	RS79	z/OS 03.01.00 HBB77E0			
	CXCLOUD	ESOTERIC	TAPE	8	NO	000B8000	RS79	z/OS 03.01.00 HBB77E0			
	CXLARGE	ESOTERIC	TAPE	8	NO	00098000	RS79	z/OS 03.01.00 HBB77E0			
	CXOAM	ESOTERIC	TAPE	8	NO	00168000	RS79	z/OS 03.01.00 HBB77E0			
	CXSMALL	ESOTERIC	TAPE	8	NO	000A8000	RS79	z/OS 03.01.00 HBB77E0			
	DASD	ESOTERIC	DASD	28778	YES	00032000	RS79	z/OS 03.01.00 HBB77E0			
	DASDGLO	ESOTERIC	DASD	1	NO	000F2000	RS79	z/OS 03.01.00 HBB77E0			
	EXCLDA	ESOTERIC	DASD	3	NO	000D2000	RS79	z/OS 03.01.00 HBB77E0			
	FBA	GENERIC	UNITREC	256	NO	00000860	RS79	z/OS 03.01.00 HBB77E0			
	FBADASD	ESOTERIC	UNITREC	256	NO	00180800	RS79	z/OS 03.01.00 HBB77E0			
	IQD	GENERIC	CTC	540	NO	00004107	RS79	z/OS 03.01.00 HBB77E0			
	OSA	GENERIC	CTC	474	NO	00004105	RS79	z/OS 03.01.00 HBB77E0			
	OSAD	GENERIC	CTC	1	NO	00004106	RS79	z/OS 03.01.00 HBB77E0			
	RBRNSMS	ESOTERIC	DASD	2	NO	000E2000	RS79	z/OS 03.01.00 HBB77E0			
	SWCH	GENERIC	UNITREC	4	NO	0000083A	RS79	z/OS 03.01.00 HBB77E0			



# Unit Control Blocks (UCB)

- Use L action on EDT panel to see UCB for a device name

Display	Filter	View	Print
SDSF	EDT	DISPLAY	RS79
COMMAND INPUT ==>			
NP	UNITNAME	Type	DevClass
	CXCART	ESOTERIC	TAPE
	CXCLoud	ESOTERIC	TAPE
	CXLARGE	ESOTERIC	TAPE
	CXOAM	ESOTERIC	TAPE
	CXSMALL	ESOTERIC	TAPE
L	DASD	ESOTERIC	DASD
	DASDGLO	ESOTERIC	DASD

Display	Filter	View	Print	Options	Search
SDSF	UCB	DISPLAY	RS79	RS79	ONLINE
COMMAND INPUT ==>					
NP	UNIT	DevType	VolSer	DevClass	Status
	5003	3390-3	RZ301S	DASD	ONLINE
	5081	3390-9	R3P1D3	DASD	ONLINE
	50C4	3390-3	SFPG01	DASD	ONLINE
	510F	3390-3	RZ205S	DASD	ONLINE
	5170	3390-9	R3L100	DASD	ONLINE
	5491	3390-3	JSPG61	DASD	ONLINE
	5493	3390-3	JSPG81	DASD	ONLINE
	5506	3390-9	R3P113	DASD	ONLINE
	5507	3390-9	R3P114	DASD	ONLINE
	5566	3390-9	RZ205C	DASD	ONLINE
	5574	3390-9	RZ205E	DASD	ONLINE
	5578	3390-9	R3P115	DASD	ONLINE

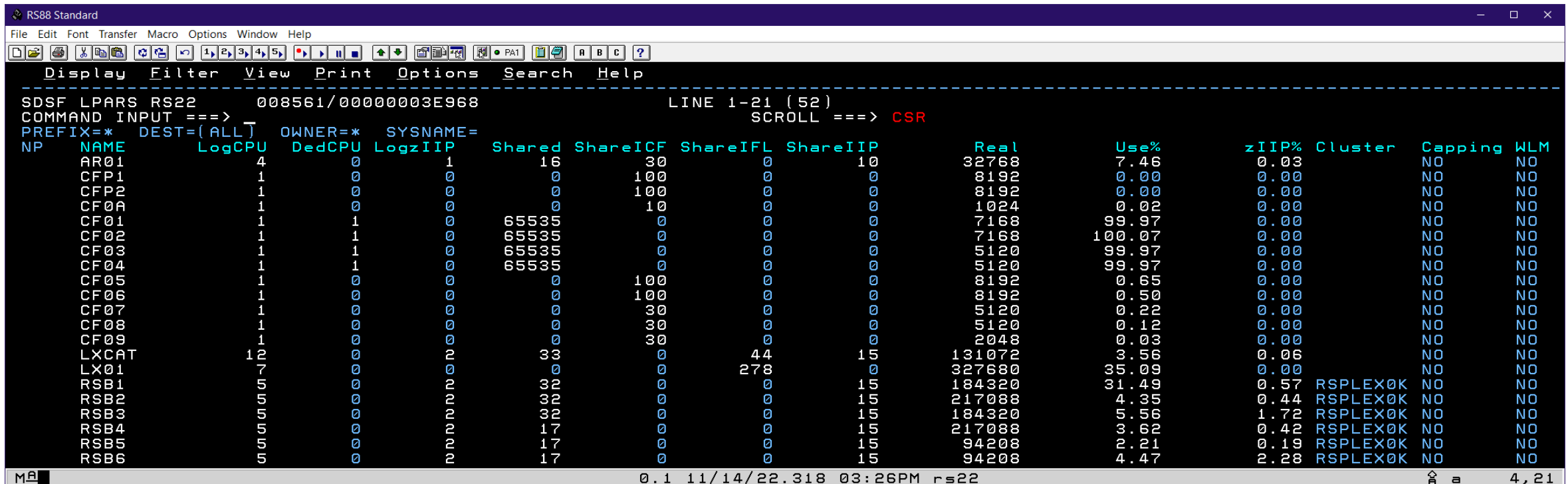
# Unit Control Blocks (UCB)

- Display status and information for static and dynamic UCB
- Show online UCB by default.
- Use command parameter OFF|OFFLINE for offline and A|ALL for ALL UCB

Display Filter View Print options Search Help														
-----														
SDSF UCB DISPLAY RS79			RS79		ONLINE		LINE 1-33 (260)							
COMMAND INPUT ==> SCROLL ==> CSR														
NP	UNIT	DevType	VolSer	DevClass	Status	SMS	EAV	Loc	UCB	UCBPDATA	UCBCMEXT	UCBType	Paths	offlinePaths
	000C	2540		UNITREC	ONLINE			24	00F1B140	00F1B118	02BA9D70	10000801	03	
	000E	1403		UNITREC	ONLINE			24	00F1B180	00F1B158	02BA9DA0	10000808	03	
	1100	OSA		CTC	ONLINE			31	02656B70	02656B48	02BB7B70	00004105	03	
	1101	OSA		CTC	ONLINE			31	02656BC0	02656B98	02BB7BA0	00004105	03	
	1102	OSA		CTC	ONLINE			31	02656C10	02656BE8	02BB7BD0	00004105	03	
	5003	3390-3	RZ301S	DASD	ONLINE	NO	NO	31	026B57A8	026B5780	02BD2F00	3030200F	32,38,3F,40,39,3A,41,42	
	5081	3390-9	R3P1D3	DASD	ONLINE	NO	NO	31	026BAB98	026BAB70	02BD46A0	3030200F	32,38,3F,40,39,3A,41,42	
	50C4	3390-3	SFPG01	DASD	ONLINE	NO	NO	31	026BD850	026BD828	02BD5330	3030200F	32,38,3F,40,39,3A,41,42	
	510F	3390-3	RZ205S	DASD	ONLINE	NO	NO	31	026BF508	026BF4E0	02BD5B40	3030200F	32,38,3F,40,39,3A,41,42	
	5170	3390-9	R3L100	DASD	ONLINE	NO	NO	31	026C35B0	026C3588	02BD6D70	3030200F	32,38,3F,40,39,3A,41,42	
	5491	3390-3	JSPG61	DASD	ONLINE	NO	NO	31	026E0B98	026E0B70	02BDF1A0	3030200F	32,38,3F,40,39,3A,41,42	
	5493	3390-3	JSPG81	DASD	ONLINE	NO	NO	31	026E0CE8	026E0CC0	02BDF200	3030200F	32,38,3F,40,39,3A,41,42	

# Logical Partitions (LPAR)

- SDSF calls RMF to retrieve information about LPAR
- Usage percentage based on last RMF interval
- RMF MON III must be active and command not applicable on VM guest



SDSF LPARS RS22 008561/00000003E968 LINE 1-21 (52)  
COMMAND INPUT ==> SCROLL ==> CSR

PREFIX=\* DEST=(ALL) OWNER=\* SYSNAME=

NP	NAME	LogCPU	DedCPU	LogzIIP	Shared	ShareICF	ShareIFL	ShareIIP	Real	Use%	zIIP%	Cluster	Capping	WLM
	AR01	4	0	1	16	30	0	10	32768	7.46	0.03		NO	NO
	CFP1	1	0	0	0	100	0	0	8192	0.00	0.00		NO	NO
	CFP2	1	0	0	0	100	0	0	8192	0.00	0.00		NO	NO
	CF0A	1	0	0	0	10	0	0	1024	0.02	0.00		NO	NO
	CF01	1	1	0	65535	0	0	0	7168	99.97	0.00		NO	NO
	CF02	1	1	0	65535	0	0	0	7168	100.07	0.00		NO	NO
	CF03	1	1	0	65535	0	0	0	5120	99.97	0.00		NO	NO
	CF04	1	1	0	65535	0	0	0	5120	99.97	0.00		NO	NO
	CF05	1	0	0	0	100	0	0	8192	0.65	0.00		NO	NO
	CF06	1	0	0	0	100	0	0	8192	0.50	0.00		NO	NO
	CF07	1	0	0	0	30	0	0	5120	0.22	0.00		NO	NO
	CF08	1	0	0	0	30	0	0	5120	0.12	0.00		NO	NO
	CF09	1	0	0	0	30	0	0	2048	0.03	0.00		NO	NO
	LXCAT	12	0	2	33	0	44	15	131072	3.56	0.06		NO	NO
	LX01	7	0	0	0	0	278	0	327680	35.09	0.00		NO	NO
	RSB1	5	0	2	32	0	0	15	184320	31.49	0.57	RSPLEX0K	NO	NO
	RSB2	5	0	2	32	0	0	15	217088	4.35	0.44	RSPLEX0K	NO	NO
	RSB3	5	0	2	32	0	0	15	184320	5.56	1.72	RSPLEX0K	NO	NO
	RSB4	5	0	2	17	0	0	15	217088	3.62	0.42	RSPLEX0K	NO	NO
	RSB5	5	0	2	17	0	0	15	94208	2.21	0.19	RSPLEX0K	NO	NO
	RSB6	5	0	2	17	0	0	15	94208	4.47	2.28	RSPLEX0K	NO	NO

MA 0.1 11/14/22.318 03:26PM rs22 4,21

# Sysplex Systems (PLEX)

- Display information about the sysplex
- Use various L actions to invoke sysplex related display filtered by system name

<u>D</u> isplay <u>F</u> ilter <u>V</u> iew <u>P</u> rint <u>O</u> ptions <u>S</u> earch <u>H</u> elp							
-----							
SDSF SYSPLEX DISPLAY		RS79	RSPLEX0G		LINE 1-3 (3)		
COMMAND INPUT		==>	SCROLL ==> CSR				
NP	SYSTEM	Status	Status-Time		MonitorTime	OperatorTime	LPAR CloneID
	RS79	ACTIVE	07/05/2023 00:55:29		16500	16800	79
	RS86	ACTIVE	07/05/2023 00:55:28		16500	16800	86
	RS87	ACTIVE	07/05/2023 00:55:28		16500	16800	87

# Program Properties Table (PPT)

- Display entries in program properties table
- Both IBM supplied and SCHEDxx specifications are shown

<div>DisplayFilterViewPrintOptionsSearchHelp</div>										
SDSF PROGRAM PROPERTIES RS79				RS79		LINE 1-33 (116)				
COMMAND INPUT ==>				SCROLL ==> CSR						
NP	MODULE	NoCancel	NonSwap	Privileged	SysTask	NoDSI	NoPass	Key	SPref	LPref
	AHLGTF	YES	YES	NO	YES	NO	NO	0	NO	NO
	ANFFIEP	NO	YES	NO	YES	YES	NO	1	NO	NO
	APSHPOSE	NO	YES	NO	YES	YES	NO	1	NO	NO
	APSKAFPD	NO	YES	NO	YES	YES	NO	1	NO	NO
	APSPPIEP	NO	YES	NO	YES	YES	NO	1	NO	NO
	ASBSCHIN	NO	YES	NO	YES	NO	NO	1	YES	YES
	ASBSCHWL	NO	NO	YES	NO	NO	NO	1	NO	NO
	ATBINITM	NO	YES	NO	YES	NO	NO	1	YES	YES
	ATBSDFMU	NO	NO	YES	NO	NO	NO	1	NO	NO
	AVFMNBLD	YES	YES	NO	YES	NO	NO	3	NO	NO
	AXRINIT	YES	NO	YES	NO	NO	NO	8	NO	NO
	AXRRXTSS	NO	NO	YES	NO	NO	NO	8	NO	NO
	BBOCTL	NO	YES	YES	YES	NO	NO	2	NO	NO
	BBODAEMN	NO	YES	YES	YES	NO	NO	2	NO	NO
	BBOSMS	NO	YES	YES	YES	NO	NO	2	NO	NO
	BHII1TPC	YES	NO	YES	YES	NO	NO	0	NO	NO
	BNJLINTX	NO	YES	NO	NO	NO	NO	8	NO	NO
	BPEINIOO	NO	YES	NO	YES	NO	NO	7	NO	NO
	BPXBATA2	NO	NO	YES	NO	NO	NO	2	NO	NO
	BPXINIT	YES	YES	NO	YES	NO	NO	0	NO	NO
	BPXPINPR	YES	NO	NO	YES	NO	NO	8	YES	YES
	BPXVCLNY	NO	YES	YES	YES	NO	YES	8	NO	NO

# Registered Products (PROD)

- Display registered product or enablement information
- Command parameter
  - STATE – Default (enablement)
  - REG
  - ALL

<u>D</u> isplay <u>F</u> ilter <u>V</u> iew <u>P</u> rint <u>O</u> ptions <u>S</u> earch <u>H</u> elp										
-----										
SDSF PROD DISPLAY RS79				RS79		STATE		LINE 9-15 (15)		
COMMAND INPUT ==>				SCROLL ==> CSR						
NP	PRODUCT		State	Owner		Feature	Version	ProdID	Type	Instances
	zSecure	Verifier	DISABLED	IBM	CORP	*	* . * . *	5655-N19	STATE	0
	zSecure	Visual	DISABLED	IBM	CORP	*	* . * . *	5655-N20	STATE	0
	IBM APP	DLIV FND	DISABLED	IBM	CORP	*	* . * . *	5655-AC6	STATE	0
	IBM APP	DLIV FND	ENABLED	IBM	CORP	FILE-MANAGER	* . * . *	5655-AC6	STATE	0
	IBM IDZ		DISABLED	IBM	CORP	*	* . * . *	5724-T07	STATE	0

# SMF Data Sets (SMFD)

- Display current SMF data set information

<u>Display</u> <u>F</u> ilter <u>V</u> iew <u>P</u> rint <u>O</u> ptions <u>S</u> earch <u>H</u> elp								
-----								
SDSF	SMF DATA SETS	RS79	RS79	LINE 1-3 (3)				
COMMAND INPUT ==>				SCROLL ==> CSR				
NP	DSNAME	Status	Blocks	Used	Use%	Volser	CRDate	CISize
	RS79.MAN1	ALTERNATE	27000	0	0.00	SFPG00	2019.057	4096
	RS79.MAN2	ACTIVE	27000	494	1.82	SFPG00	2019.057	4096
	RS79.MAN3	ALTERNATE	27000	0	0.00	SFPG00	2019.057	4096



# SMF Options (SMFO)

- Display current SMF option information

<u>D</u> isplay <u>F</u> ilter <u>V</u> iew <u>P</u> rint <u>O</u> ptions <u>S</u> earch <u>H</u> elp											
-----											
SDSF SMF OPTIONS RS79			RS79		LINE 1-1 (1)						
COMMAND INPUT ==>				SCROLL ==> CSR							
NP	ID	Option	Member	IntVal	SyncVal	FloodSupport	NoBufs	BufUseWarn	SMCA	SMCX	LogStream
	RS79	DATASET	SMFPRMRS	15	00	NO	MSG	25	00FAA808	023CE090	

# SMF Subsystem (SMFS)

- Display current SMF subsystem information
- SDSF requires IEFU86 for ELOG

Display Filter View Print Options Search Help																	
SDSF SMF SUBSYSTEMS RS79				RS79		LINE 1-3 (3)											
COMMAND INPUT ==>				SCROLL ==> CSR													
NP	SUBSYS	Detail	IntVal	IEFACTRT	IEFU29	IEFU29L	IEFU83	IEFU84	IEFU85	IEFU86	IEFUAV	IEFUJI	IEFUJP	IEFUJV	IEFUSI	IEFUSO	IEFUTL
	JES2	NO		YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO	NO
	STC	NO		NO	NO	NO	YES	YES	NO	YES	NO	NO	YES	NO	NO	YES	NO
	SYS	NO		YES	NO	NO	YES	YES	NO	YES	NO	YES	NO	NO	YES	NO	NO

# XCF Application Servers (XCFA)

- Show detailed XCF application server information
- SDSF uses XCF application server to provide cross-system data gathering

Display

Filter

View

Print

Options

Search

Help

</

# XCF Signaling Paths (XCFP)

- Signaling path status and statics information

Display Filter View Print Options Search Help										
SDSF XCF SIGNALING PATHS RS79 RSPLEX0G				LINE 1-12 (12)						
COMMAND INPUT ==>				SCROLL ==> CSR						
NP	STRNAME	RemoteSys	Status	Type	SignalCount	UnusedPath	RefuseCount	RetryLimit	RetryCount	RestartCount
	IXCLIST1		WORKING	PATHIN	0	50	0	10	0	1
	IXCLIST1		WORKING	PATHOUT	0	50		10	0	1
	IXCLIST1	RS86	WORKING	PATHIN	141434	19	0	10	0	3
	IXCLIST1	RS86	WORKING	PATHOUT	125842	18		10	0	2
	IXCLIST1	RS87	WORKING	PATHIN	206919	10	0	10	0	3
	IXCLIST1	RS87	WORKING	PATHOUT	197217	11		10	0	4
	IXCLIST2		WORKING	PATHIN	0	50	0	10	0	1
	IXCLIST2		WORKING	PATHOUT	0	50		10	0	1
	IXCLIST2	RS86	WORKING	PATHIN	127047	19	0	10	0	3
	IXCLIST2	RS86	WORKING	PATHOUT	123448	18		10	0	2
	IXCLIST2	RS87	WORKING	PATHIN	214967	10	0	10	0	3
	IXCLIST2	RS87	WORKING	PATHOUT	213012	11		10	0	4

# Useability Enhancements

# Extended Field Highlighting

---

- Fields on numerous panels now utilize extended highlighting
- Colour change for both character and numerical data depending on value
- Thresholds and ranges currently use internal definitions
- Examples
  - Non-zero return codes on ST and H
  - Percentage values on displays like DA and SMSG
  - Access level permitted for RACF profile
  - Number of extents for data set



# Extended Field Highlighting - Examples

MAX-RC highlight improves ability to see failing jobs immediately

```
SDSF STATUS DISPLAY ALL CLASSES
COMMAND INPUT ==>
NP  JOBNAME  Max-RC      SrvClass
    TS7897
    TS7897    SYS FAIL
    TS7897    ABEND S622
    TS7897    CC 0000
    TS7897    CC 0000
    TS7897    CC 0000
    TS7897    ABEND S622
    TS7897I   JCL ERROR
```

```
Display Filter View Print Opt
-----
SDSF SMS STORAGE GROUPS RS79 R
COMMAND INPUT ==>
NP  NAME      TotalMB Used% FreeMB
    DB2G1      0  0.00  0
    DMPG1     5414 26.19 3996
    EMCCXSG    0  0.00  0
    RCKG1     2707 98.67  36
    SBXG1      0  0.00  0
    SYSG1     2707 84.63  416
    SYSG2     5414 63.15 1995
    TSOG1    16240 82.31 2872
    WRKG1     2707  0.77 2686
    ZFSG1    16241 26.44 11946
```

Percentage value highlight helps to spot usage easily

# Extended Field Highlighting - Examples

Enhancement to certain browse style panels to highlight individual records

```
Display Filter View Print Options Search Help
-----
SDSF ULOG  CONSOLE TS7897
COMMAND INPUT ==>
***** TOP OF DATA *****
RS79      2023186  09:47:17.78      +ISF045W Unable to open table library ISFTABL, nu
RS79      2023186  10:50:47.29      +ISF050I USER=TS7897 GROUP=ISFSPROG PROC=ROCKPROC
RS79      2023186  10:50:47.29      +ISF061I User TS7897 assigned destination operato
RS79      2023186  10:50:49.15      ISF051I SAF Access allowed SAFRC=0 ACCESS=READ C
RS79      2023186  10:50:49.15
RS79      2023186  10:50:49.15
RS79      2023186  10:50:49.15
RS79      2023186  10:50:49.15
RS79      2023186  10:50:49.15
RS79      2023186  10:50:49.15

Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY ASM_PLPA_COMMON_SIZE
COMMAND INPUT ==>
***** TOP OF DATA *****
CHECK(IBMASM,ASM_PLPA_COMMON_SIZE)
SYSPLEX:      RSPLEX0G  SYSTEM: RS79
START TIME: 07/03/2023 01:00:08.134759
CHECK DATE: 20120120  CHECK SEVERITY: MEDIUM-DYNAMIC
CHECK PARM: THRESHOLD(100%)

* Medium Severity Exception *
```

# Notable New Columns

- AD (Address space diagnosis)
  - RAX RAX address
  - RAX64 RAX64 address
- AS (Address space storage)
  - DMEM Dedicated memory
  - DMEMPCT Dedicated memory percent used
- FS (File systems)
  - SETUID SetUID can be issued (Yes/No)
- JES (JES2 subsystems)
  - CKPTLEV Checkpoint level
- JMO (Address space memory objects)
  - REAL Real storage frames backing memory object
  - AUX Auxiliary storage slots occupied by memory object
  - HASN Home ASID when memory object created (HVCOMM)
  - PASN Primary ASID when memory object created (HVCOMM)
- SYS (System information)
  - DMEM Dedicated memory
  - DMEMPCT Dedicated memory percent used
- TCB (Job tasks)
  - ACEE ACEE address for task

# Notable New Action Characters

---

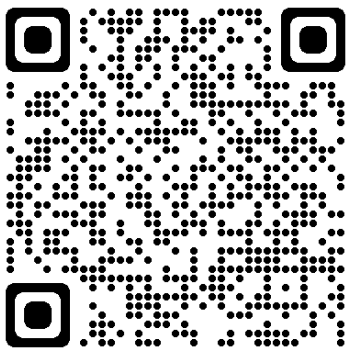
- WLM class panels
  - L                      Invoke DA with WLM class as filter
- DA (Active address spaces)
  - FJ                      Module fetch activity by job name
- APF (APF data sets) and LNK (link list data sets)
  - FD                      Module fetch activity for data set name
  - FJ                      Module fetch activity by job names for data set
- MEM (Memory display)
  - RC                      Perform “run-chain” for linked list

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# New SDSF functions in z/OS 3.1

Rob Scott

