

# Securing the “Cool Bits” in CA SYSDVIEW<sup>®</sup> using RACF

millennia...

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# abstract

Every CA SYSVIEW® Performance Management user already knows it is a very powerful tool but millennia... will share some really clever ways it is exploiting CA SYSVIEW to improve z/OS functionality and security.

From reducing the time to diagnose problems to updating the shape of the z/OS system, CA SYSVIEW provides help that's not available in native z/OS.

This session will describe how to use CA SYSVIEW to secure each of these functions using your external security manager. Both CA SYSVIEW users and mainframe security administrators will benefit from these helpful suggestions on how to meet your ever-increasing IT security requirements.

# think it's just performance?

- CA SYSVIEW is almost ubiquitous at z/OS sites around the world
  - Often misunderstood
    - Many believe it is just a CAP tool
  - So much more to offer!
    - Over 1500 commands, sub-commands and functions!
    - Including:
      - User friendly zap, more granular control of z/OS, directly accessible variables, etc .
- My personal Top Five favorite CA SYSVIEW functions
- Using CA SYVIEW without a Carbon-based Life-form



# cool things to do with CA SYSVIEW - 1



CA SYSVIEW function – Disassembling object modules

DISASSEM command

- What do you do if you no longer have the source to a problem exit?
  - Common question for consultants!
- Most z/OS systems are decades old
- Inefficient house-keeping in the early days
- z/OS flexibility
  - Exit points

# cool things to do with CA SYSVIEW - 1

```

SYSVIEW 13.5a CA31 ----- DISASSEM.B32, Disassemble ----- 2011/10/10 10:56:21
Command =====> -                                           Scroll =====> PAGE
                                                                Lvl 2 Row 1-38/2013
-----
Status  MASKFLD
Options DATA DDISP DEPTH 24 CNFM NOFLPT DREL OFFS NOLGND NOOWN NOBOTH NOAM64
Jobname CRAJA11D ASID 03DC Jobid JOB63224 Owner n/a ASID n/a
Region  E-RONUC AR OFF Dspnm n/a Module ICYPGAD
StrAddr 0109E7A8 DAT ON Spn n/a Symbol n/a
-----
Address  Offset  Label      Opcode Operands      Hex          Char  Ky P F Descr
0109E7A8 00000000          DS      XL10          B24000E0A7850004 . \xe.. 0 S Y Define Storage
0109E7B0 00000008          010A          ..          ..          ..          ..          ..          ..
0109E7B2 0000000A          BALR   R8,R4          0584          .d          ..          .. Branch and link register
0109E7B4 0000000C          L      R8,0(R8,)      5888 0000          .h..          ..          .. Load
0109E7B8 00000010          LLGTR  R8,R8          B917 0088          ...h          ..          .. Load logical 31-bits register
0109E7BC 00000014          LAE   AR8,0(R8,) 5188 0000          .h..          ..          .. Load address extended
0109E7C0 00000018          L      R0,4(R8)      5800 8004          ....          ..          .. Load
0109E7C4 0000001C          LA     R15,0      41F0 0000          .0..          ..          .. Load address
0109E7C8 00000020          CPYA  AR1,AR8      B24D 0018          (.   ..          ..          .. Copy access
0109E7CC 00000024          LAE   AR10,0      51A0 0000          ....          ..          .. Load address extended
0109E7D0 00000028          BALR  R10,R0      05A0          ..          ..          .. Branch and link register
0109E7D2 0000002A          EREG  CR1,CR1      B249 0011          ....          ..          .. Extract stacked registers
0109E7D6 0000002E          LA     R1,552(,R1) 4110 1228          ....          ..          .. Load address
0109E7DA 00000032          LLGTR  R1,R1      B917 0011          ....          ..          .. Load logical 31-bits register
0109E7DE 00000036          LAE   AR9,0(,R1) 5190 1000          ....          ..          .. Load address extended
0109E7E2 0000003A          LLGTR  R9,R9      B917 0099          ...r          ..          .. Load logical 31-bits register
0109E7E6 0000003E          SLGR  R13,R13      B90B 00DD          ....          ..          .. Subtract logical register (64)
0109E7EA 00000042          EREGG CR14,CR1  B90E 00E1          ...~          ..          .. Extract stacked registers (64)
0109E7EE 00000046          J      **46          00000074 A7F4 0017          x4..          ..          .. Branch relative on condition
0109E7F2 0000004A          DS      XL32          28C9C3E8D7C7C1C4 .ICYPGAD  ..          ..          .. Define Storage
0109E7FA 00000052          40F0F161F1F861F1 01/18/1  ..          ..          ..
0109E802 0000005A          F1C8C4E9F1C3F1F0 1HD21C10  ..          ..          ..
0109E80A 00000062          40E4C1F5F8F7F4F5 UA58745  ..          ..          ..
0109E812 0000006A          STH   R15,1611(R1,R15) 40F1 F64B          16.          ..          .. Store halfword
0109E816 0000006E          MVO   64(16,R4),0(6,R4) F1F5 4040 4000 15 .          ..          .. Move with offset
0109E81C 00000074          SAM64 ,          010E          ..          ..          .. Set addressing mode (64)
0109E81E 00000076          L      R12,896      58C0 0380          {...          ..          .. Load
0109E822 0000007A          LLGTR  R12,R12      B917 00CC          ....          ..          .. Load logical 31-bits register
0109E826 0000007E          STMH  R14,R3,64(R12) EBEB C040 0026 .T{ ..          ..          .. Store multiple high
0109E82C 00000084          L      R15,896      58F0 0380          .0..          ..          .. Load
0109E830 00000088          LLGTR  R15,R15      B917 00FF          ....          ..          .. Load logical 31-bits register
0109E834 0000008C          STM   R14,R3,16(R15) 90E3 F010          .T0.          ..          .. Store multiple
0109E838 00000090          L      R1,896      5810 0380          ....          ..          .. Load
0109E83C 00000094          LG     R12,72      E3C0 0048 0004 T{....          ..          .. Load (64)
0109E842 0000009A          LLGTR  R1,R1      B917 0011          ....          ..          .. Load logical 31-bits register
0109E846 0000009E          L      R12,276(,R12) 58C0 C114          .{A.          ..          .. Load
0109E84A 000000A2          LLGTR  R12,R12      B917 00CC          ....          ..          .. Load logical 31-bits register
0109E84E 000000A6          LHI   R2,16      A728 0010          x...          ..          .. Load halfword immediate

```

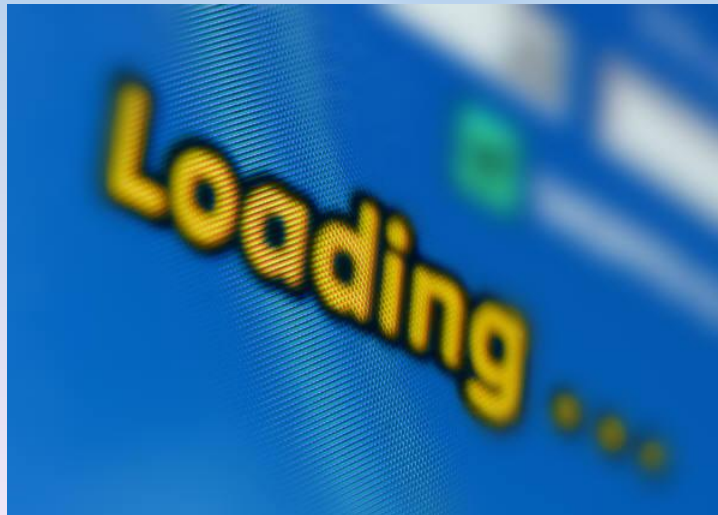
# cool things to do with CA SYSVIEW - 1

- Secure function – Disassembling object modules
  - SV.CMND.\*.DISASSEM
  - Likely to want to secure use of this command across all SMFIDs
  - User needs:
    - Read to FACILITY class profile SV.CMND.\*.DISASSEM
    - AND read to DATASET profile protecting library containing object code



# cool things to do with CA SYSVIEW - 2

- CA SYSVIEW function – Enhanced IPL Information
  - IPL Information
    - Some information available many different ways
    - Native MVS commands
    - CA SYSVIEW commands put everything you need in 2 commands
      - IPLINFO
      - IPLSTATS



# cool things to do with CA SYSVIEW - 2

- Enhanced IPL Information

```
SYSVIEW 13.5a CA31 ----- IPLSTATS, IPL Statistics ----- 2011/10/10 10:58:39
Command =====> -                                     Scroll *====> PAGE
-----
Status MASKFLD
Last IPL was on 2011/10/08 at 21:11:15 type COLD
IPL 0.186848 NIP 00:01:41 MSI 00:03:23 Total 00:05:04
-----
Cmd Type Module ExecTime TotlTime Description
---
IPL IEAIPL99 0.186848 0.186848 Page frame table and cleanup
NIP IEAVNIP0 0.010672 0.197520 NIP Base
. IEAVNIPM 0.076096 0.273616 Invoke NIP RIMs
. IEAVNPE6 0.072384 0.346000 Service Processor Interface
. IEAVNPF6 0.035632 0.381632 Loadwait/Restart
. IEAVNPA6 0.013520 0.395152 RTM - RTCT and recording buffer
. IEAVNPC6 0.012960 0.408112 WTC
. IEAVNPC3 0.012416 0.420528 Issue messages from IPL message queue
. IEAVNP24 0.028832 0.449360 SMS Open/Mount
. IEAVNP06 0.010752 0.460112 Machine Check
. IEAVNP27 0.013376 0.473488 Reconfiguration
. IEAVNPA2 41.41360 41.88708 IOS - Non-DASD UCBs
. IEAVNP4 0.010608 41.89769 NIP Console
. IEAVNPB2 17.38995 59.28764 IOS - DASD UCBs
. IEAVNP11 0.015072 59.30272 Locate and Open master catalog
. IEAVNPC7 0.007680 59.31040 Open SYS1.SVCLIB
. IEAVNPOP 0.044064 59.35446 Open PARMLIB
. IEAVNPIL 0.022016 59.37648 Process IEALSTxx
. IEAVNPC4 5.075472 00:01:04 Prompt for System Parameters
. IEAVNP03 0.007072 00:01:04 Merge and analyze system parameters
. IEAVNCFE 0.151792 00:01:04 Process system name and system variables
. IEAVNP76 0.013712 00:01:04 Open LOGREC
. IEAVNPE8 0.012752 00:01:04 RSM - Process REAL=
. IEAVNP23 0.029952 00:01:04 Build GRS blocks in SQA
. IEAVNP04 0.075728 00:01:04 ASM - Open page and swap data sets
. IEAVNPA8 0.007040 00:01:04 VSM - Expand SQA
. IEAVNP14 0.458368 00:01:05 ASM part 2 - Build SQA control blocks
. IEAVNPGD 0.002064 00:01:05 Move console data to ESQA
. IEAVNP25 0.056976 00:01:05 Process SVC=
. IEAVNP05 7.569504 00:01:12 LPA, APF
. IEAVNP44 0.002448 00:01:12 ASA Reuse stuff
. IEAVNPB1 0.001696 00:01:12 Process CSCBLOC=
. IEAVNPE2 0.003280 00:01:12 RACF SAF
. IEAVNPB8 0.013456 00:01:12 Create CSA
. IEAVNP47 0.004256 00:01:12 ENF
. IEAVNP06 0.001648 00:01:12 RTM - SDUMP, ABDUMP, ESTAE
. IEAVNP09 0.002032 00:01:12 Build ASVT
. IEAVNP08 1.345696 00:01:14 RSM - Frame queues, VRREGN= and RSU=
. IEAVNP10 0.011920 00:01:14 SRM - OPT=, IPS=, etc.
. IEAVNP01 0.009888 00:01:14 ABDUMP
```

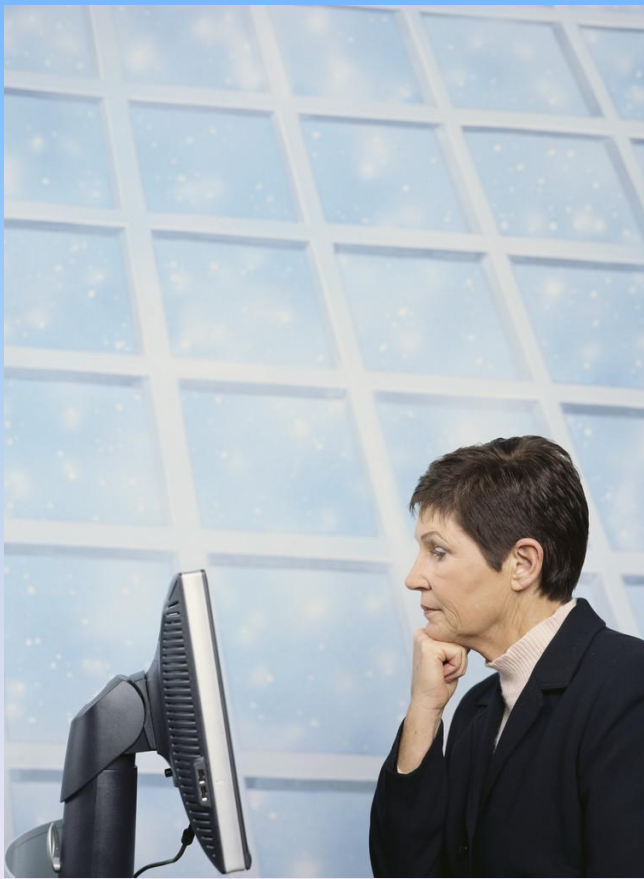


# cool things to do with CA SYSVIEW - 2

- Secure function – Enhanced IPL Information
  - SV.CMND.*smfid*.IPLINFO
  - SV.CMND.*smfid*.IPLSTATS
  - Secure use of these commands on individual SMFIDs
  - User needs:
    - Read to FACILITY class profile SV.CMND.*smfid*.IPLINFO
    - Read to FACILITY class profile SV.CMND.*smfid*.IPLSTATS



# cool things to do with CA SYSVIEW - 3



- CA SYSVIEW function – Link List Manipulation
  - z/OS flexibility again!
  - Display, explore and manipulate Link List contents
  - All the usual culprits, Add, Delete, etc.
  - And a host of other shortcuts and utilities
    - ISPF Browse a link list dataset
    - DUPLICAT to identify duplicate modules
    - DSINFO for the physical stuff
    - ZAP

# cool things to do with CA SYSVIEW - 3

- Link List Manipulation

```
SYSVIEW 13.5a CA31 ----- LINKLIBS, Dynamic Linklist Set Libraries ----- 2011/10/10 11:00:08
Command =====> - Scroll *====> PAGE
GSVX005I Beginning of data ----- Lvl 2 Row 1-44/136
Cmd Dataset-Name Set-Name Status LLA Pos Volser Apf Sms
-----
ASMA.SASMMOD1 LNKLST00 CURRENT LLA 73 MVR1CA APF
CAIPROD.ALLOC.R125S0B.CCTVLINK LNKLST00 CURRENT LLA 77 LNKD01 APF SMS
CAIPROD.ALLOC.R125S0B.CCTVLOAD LNKLST00 CURRENT LLA 78 LNKD01 APF SMS
CAIPROD.DISK.R125S0D.LINKLIST LNKLST00 CURRENT LLA 79 LNKD01 APF SMS
CAIPROD.ISM.R43080A.LINKLIST LNKLST00 CURRENT LLA 81 LNKD01 APF SMS
CAIPROD.JCLCHECK.R110S1A.CAILOAD LNKLST00 CURRENT LLA 29 LNKD01 APF SMS
CAIPROD.LIBR.R04480C.CALJLINK LNKLST00 CURRENT LLA 55 LNKD01 APF SMS
CAIPROD.MIM.R11880A.CBTDLOAD LNKLST00 CURRENT LLA 20 LNKD02 APF SMS
CAIPROD.OPSMVS.R119S8A.LOAD LNKLST00 CURRENT LLA 21 LNKD01 APF SMS
CAIPROD.OPTII.R085S0B.CARXLOAD LNKLST00 CURRENT LLA 117 LNKD01 APF SMS
CAIPROD.PDSMAN.R770S0A.CPDSLINK LNKLST00 CURRENT LLA 80 LNKD01 APF SMS
CAIPROD.SMPD.R126S8A.CASFLOAD LNKLST00 CURRENT LLA 53 LNKD01 APF SMS
CAIPROD.TIMS.R120S0B.CTAPLINK LNKLST00 CURRENT LLA 44 LNKD01 APF SMS
CAIPROD.TSS.R150S0G.CAKOLINK LNKLST00 CURRENT LLA 23 LNKD02 APF SMS
CAIPROD.TSS.R150S0G.CA11KEY.CAKOLINK LNKLST00 CURRENT LLA 22 LNKD01 APF SMS
CAIPROD.VTAPE.R125S8A.CCULOAD LNKLST00 CURRENT LLA 59 LNKD01 APF SMS
CBC.SCCNCMP LNKLST00 CURRENT LLA 120 MVR1CA APF
CBC.SCLBDLL LNKLST00 CURRENT LLA 99 MVR1CA APF
CBC.SCLBDLL2 LNKLST00 CURRENT LLA 121 MVR1CA APF
CEE.SCEERUN LNKLST00 CURRENT LLA 63 MVR1CA APF
CEE.SCEERUN2 LNKLST00 CURRENT LLA 122 MVR1CA APF
CSF.SCSFMOD0 LNKLST00 CURRENT LLA 115 MVR1CA APF
EOY.SEOYLOAD LNKLST00 CURRENT LLA 126 MVR1CA APF
EOY.SEOYLPA LNKLST00 CURRENT LLA 127 MVR1CA
EUV.SEUVLINK LNKLST00 CURRENT LLA 19 MVR1CA APF
GDDM.SADMMOD LNKLST00 CURRENT LLA 100 MVR1CA APF
GIM.SGIMLMD0 LNKLST00 CURRENT LLA 61 MVR1CA APF
IBM2.SIBMZCMP LNKLST00 CURRENT LLA 129 MVR1CA APF
IGY.SIGYCOMP LNKLST00 CURRENT LLA 64 MVR1CA
IOE.SIOELMOD LNKLST00 CURRENT LLA 114 MVR1CA APF
ISF.SISFLOAD LNKLST00 CURRENT LLA 14 MVR1CA APF
ISP.SISPLOAD LNKLST00 CURRENT LLA 13 MVR1CA APF
REXX.SFANLMD LNKLST00 CURRENT LLA 103 MVR1CA APF
SCRIPT.R40.DCFLOAD LNKLST00 CURRENT LLA 98 MVR1CA APF
SYSDEV.AJ035.EXAMINE.P00H.LINKLIST LNKLST00 CURRENT LLA 97 LNKD01 APF SMS
SYSDEV.AUDITOR.R12L00.SP11.LINKLIST LNKLST00 CURRENT LLA 32 LNKD01 APF SMS
SYSDEV.CAI.HCHECK.LINKLIST LNKLST00 CURRENT LLA 31 LNKD01 APF SMS
SYSDEV.CASORT72.SP03A.LINKLIST LNKLST00 CURRENT LLA 49 LNKD01 APF SMS
SYSDEV.CA31.LLEMPY.LINKLIST LNKLST00 CURRENT LLA 6 LNKD01 APF SMS
SYSDEV.CA31.Z03112.LINKLIST LNKLST00 CURRENT LLA 8 LNKD01 APF SMS
SYSDEV.CCSR14.SP0J.CCCLINK LNKLST00 CURRENT LLA 35 LNKD02 APF SMS
SYSDEV.CCSR14.SP0J.CCCLOAD LNKLST00 CURRENT LLA 36 LNKD02 APF SMS
SYSDEV.CCSR14.SP0J.CNSMLOAD LNKLST00 CURRENT LLA 37 LNKD02 APF SMS
SYSDEV.CCSR14.SP0L.CAWOLINK LNKLST00 CURRENT LLA 33 LNKD02 APF SMS
```

# cool things to do with CA SYSVIEW - 3

- Link List Manipulation

```
SYSVIEW 13.5a CA31 ----- LINKLIST.BASE, LINKLIST Libraries ----- 2011/10/10 11:02:42
Command ==> - ----- Scroll *==> PAGE
----- Lvl 2 Row 1-39/136
-----
Jobname CRAJA11D ASID 03DC Jobid JOB63224
Setname LNKLST00 Status CURRENT IPL CHK Allocations ACTIVE
LLAStat SEARCH AVAILABLE Extents 189 227
Libraries 136 Alloc 0 Open 0
-----
Cmd Dataset-Name Xtn Volser APP Org Message
---
SYS1.LINKLIB 1 MVRICA APP PC
SYS1.MIGLIB 1 MVRICA APP PC
SYS1.CSSLIB 1 MVRICA APP PC
SYS1.STEALNKE 1 MVRICA APP POE
SYS1.STEAMIGE 1 MVRICA APP POE
SYSDEV.CA31.LLEMPY.LINKLIST 1 LNKD01 APP PC
SYSDEV.JES2.STAGING.LINKLIST 1 LNKD01 APP PC
SYSDEV.CA31.ZOS112.LINKLIST 1 LNKD01 APP PC
SYSDEV.COMMON.ZOS112.LINKLIST 1 LNKD01 APP PC
SYSDEV.DATACOM.SVCS.LINKLIST 1 LNKD01 APP PC
SYS2.CA31.LINKLIB 1 MVCA31 APP PC
SYS2.MERGKE44.LINKLIB 1 MVCA31 APP PC
ISP.SISFLOAD 1 MVRICA APP PC
ISF.SISFLOAD 2 MVRICA APP PC
SYS1.CMDLIB 1 MVRICA APP PC
SYS1.SHASMIG 2 MVRICA APP PC
SYS1.SHASLNKE 6 MVRICA APP POE
SYS1.NFSLIBE 8 MVRICA APP POE
EUV.SEUVLINK 1 MVRICA APP PC
CAIPROD.MIM.R118S0A.CBTDLOAD 6 LNKD02 APP PC
CAIPROD.OPSMVS.R119SBA.LOAD 1 LNKD01 APP POE
CAIPROD.TSS.R150S0G.CALLKEY.CAKOLINK 1 LNKD01 APP PC
CAIPROD.TSS.R150S0G.CAKOLINK 1 LNKD02 APP PC
SYSDEV.CICSIPCS.LINKLIST 1 LNKD01 APP PC
SYSDEV.CTS420.GA.PD01127.LINKLIST 10 LNKD01 APP PC
SYS2.IXFP.V2R1M0.P9809 3 MVSP55 PC
SYS2.EDBC.LINKLIB 1 ING001 APP PC
SYS2.ASM241.P0004N 1 MVSP33 APP PC
CAIPROD.JCLCHECK.R110S1A.CAIOLOAD 2 LNKD01 APP PC
SYSDEV.EZTRIEVE.R11.SP01B.LINKLIST 1 LNKD01 POE
SYSDEV.CAI.HCHECK.LINKLIST 1 LNKD01 APP PC
SYSDEV.AUDITOR.R12L00.SP11.LINKLIST 1 LNKD01 APP PC
SYSDEV.CCSR14.SP0L.CAWOLINK 1 LNKD02 APP PC
SYSDEV.CCSR14.SP0L.CAWOLOAD 1 LNKD01 APP PC
SYSDEV.CCSR14.SP0J.CCCSLINK 1 LNKD02 APP PC
SYSDEV.CCSR14.SP0J.CCCSLOAD 1 LNKD02 APP PC
SYSDEV.CCSR14.SP0J.CNSMLOAD 1 LNKD02 APP PC
SYSDEV.CCSR14.SP0L.CAWOFLD 1 SDBD01 APP POE
SYSDEV.ZOSAGENT.SYSV116.LOADLIB 1 SDBD02 APP POE
```

# cool things to do with CA SYSVIEW - 3

- Secure function – Link List Manipulation
  - SV.CMND.*smfid*.LINKLIBS
  - SV.CMND.*smfid*.LINKLST
  - Secure use of this command on individual SMFIDs
  - User needs:
    - Read to FACILITY class profile SV.CMND.*smfid*.LINKLIBS
    - Read to FACILITY class profile SV.CMND.*smfid*.LINKLST
    - Update access to FACILITY class profile SV.SUBC.*smfid*.LINKLIBS.ADD



# cool things to do with CA SYSVIEW - 4

- CA SYSVIEW function – ECONFLIC
  - Display Enhanced Enqueue Conflicts
- Who's fighting over what and where
- Drill down for more details via the ENQUEUE display



# cool things to do with CA SYSDSN - 4

- ECONFLIC

```

SYSVIEW 13.5a CA31 ----- ECONFLIC, Enhanced Enqueue Conflicts ----- 2011/10/10 11:04:46
Command =====>                                           Scroll *====> PAGE
-----
Status  MASKFLD
GRS Configuration STAR
-----

```

Cmd	SysName	Jobname	Stat	Cnt	WaitTime	Type	Scope	Qname	Rname	Rnl	ASID	TCB	XSPlex	XSSystem
---	XE13	TAPE1	OWNS	1		EXCL	SYSTEM	SYSZVOLS	CA4000	6	0064	007FF890	AORPLX01	XE62
---	XE13	TAPE1	WAIT	1	00:53:28	EXCL	.	.	.	.	0067	007FF890	.	.
---	XE13	TAPE1	OWNS	1		EXCL	SYSTEM	SYSZVOLS	CA4000	6	0064	007FF890	AORPLX01	XE13
---	XE13	TAPE1	WAIT	1	00:53:28	EXCL	.	.	.	.	0067	007FF890	.	.
---	CA31	DMSAR	OWNS	1		EXCL	SYSTEM	DMSAUT2	IDI.SYSTEST.XCF1.D16.DATABASE.A00001.NEW	44	03FB	007CAA68	PLEXC1	XAD1
---	CA31	\$REST	WAIT	1	00:42:05	EXCL	.	.	.	.	007E	007E5E88	.	.
---	CA31	DMSAR	OWNS	1		EXCL	SYSTEM	DMSAUT2	IDI.SYSTEST.XCF1.D16.DATABASE.A00001.NEW	44	03FB	007CAA68	PLEXC1	XE61
---	CA31	\$REST	WAIT	1	00:42:05	EXCL	.	.	.	.	007E	007E5E88	.	.
---	CA31	DMSAR	OWNS	1		EXCL	SYSTEM	DMSAUT2	IDI.SYSTEST.XCF1.D16.DATABASE.A00001.NEW	44	03FB	007CAA68	PLEXC1	CA11
---	CA31	\$REST	WAIT	1	00:42:05	EXCL	.	.	.	.	007E	007E5E88	.	.
---	CA31	DMSAR	OWNS	1		EXCL	SYSTEM	DMSAUT2	IDI.SYSTEST.XCF1.D16.DATABASE.A00001.NEW	44	03FB	007CAA68	PLEXC1	CA31
---	CA31	\$REST	WAIT	1	00:42:05	EXCL	.	.	.	.	007E	007E5E88	PLEXC1	CA31
---	CA31	\$RESTORE	OWNS	2		SHRD	SYSTEM	SYSDSN	IDI.SYSTEST.XCF1.D16.DATABASE.A00001.NEW	40	0073	007E5E88	PLEXC1	XAD1
---	CA31	DMSAR	WAIT	2	00:42:04	EXCL	.	.	.	.	03FB	007FF988	.	.
---	CA31	CAMIMGR	WAIT	2	00:42:04	SHRD	.	.	.	.	000C	006EA7F8	.	.
---	CA31	\$RESTORE	OWNS	2		SHRD	SYSTEM	SYSDSN	IDI.SYSTEST.XCF1.D16.DATABASE.A00001.NEW	40	0073	007E5E88	PLEXC1	XE61
---	CA31	DMSAR	WAIT	2	00:42:04	EXCL	.	.	.	.	03FB	007FF988	.	.
---	CA31	CAMIMGR	WAIT	2	00:42:04	SHRD	.	.	.	.	000C	006EA7F8	.	.
---	CA31	\$RESTORE	OWNS	2		SHRD	SYSTEM	SYSDSN	IDI.SYSTEST.XCF1.D16.DATABASE.A00001.NEW	40	0073	007E5E88	PLEXC1	CA11
---	CA31	DMSAR	WAIT	2	00:42:04	EXCL	.	.	.	.	03FB	007FF988	.	.
---	CA31	CAMIMGR	WAIT	2	00:42:04	SHRD	.	.	.	.	000C	006EA7F8	.	.
---	CA31	\$RESTORE	OWNS	2		SHRD	SYSTEM	SYSDSN	IDI.SYSTEST.XCF1.D16.DATABASE.A00001.NEW	40	0073	007E5E88	PLEXC1	CA31
---	CA31	DMSAR	WAIT	2	00:42:04	EXCL	.	.	.	.	03FB	007FF988	PLEXC1	CA31
---	CA31	CAMIMGR	WAIT	2	00:42:04	SHRD	.	.	.	.	000C	006EA7F8	PLEXC1	CA31
---	XAD1	DMSAR	OWNS	1		EXCL	SYSTEM	DMSWVOLS	542136	6	01B9	008D0AA0	PLEXC1	XAD1
---	XAD1	DMSAR	WAIT	2	00:18:36	EXCL	.	.	.	.	0166	008D0AA0	.	.
---	XAD1	DMSAR	WAIT	2	00:18:12	EXCL	.	.	.	.	014B	008D0AA0	.	.
---	XAD1	DMSAR	OWNS	1		EXCL	SYSTEM	DMSWVOLS	542136	6	01B9	008D0AA0	PLEXC1	XE61
---	XAD1	DMSAR	WAIT	2	00:18:36	EXCL	.	.	.	.	0166	008D0AA0	.	.
---	XAD1	DMSAR	WAIT	2	00:18:12	EXCL	.	.	.	.	014B	008D0AA0	.	.
---	XAD1	DMSAR	OWNS	1		EXCL	SYSTEM	DMSWVOLS	542136	6	01B9	008D0AA0	PLEXC1	CA11
---	XAD1	DMSAR	WAIT	2	00:18:36	EXCL	.	.	.	.	0166	008D0AA0	.	.
---	XAD1	DMSAR	WAIT	2	00:18:12	EXCL	.	.	.	.	014B	008D0AA0	.	.
---	XAD1	DMSAR	OWNS	1		EXCL	SYSTEM	DMSWVOLS	542136	6	01B9	008D0AA0	PLEXC1	CA31
---	XAD1	DMSAR	WAIT	2	00:18:36	EXCL	.	.	.	.	0166	008D0AA0	PLEXC1	CA31
---	XAD1	DMSAR	WAIT	2	00:18:12	EXCL	.	.	.	.	014B	008D0AA0	PLEXC1	CA31
---	CA11	SHALY02H	OWNS	1		SHRD	SYSTEM	SYSDSN	BST.LBS2.JAKE.STG1.BASE	23	02B7	007FF358	PLEXC1	XAD1
---	CA11	DMSAR	WAIT	2	00:16:48	EXCL	.	.	.	.	021C	007FF890	.	.
---	CA11	CAMIMGR	WAIT	2	00:16:48	SHRD	.	.	.	.	000C	006EA7F8	.	.
---	CA11	SHALY02H	OWNS	1		SHRD	SYSTEM	SYSDSN	BST.LBS2.JAKE.STG1.BASE	23	02B7	007FF358	PLEXC1	XE61
---	CA11	DMSAR	WAIT	2	00:16:48	EXCL	.	.	.	.	021C	007FF890	.	.

# cool things to do with CA SYSVIEW - 4

- Secure function – CONFLICT / ECONFLIC
  - SV.CMND.*smfid*.ECONFLIC
  - Secure use of this command on individual SMFIDs
  - User needs:
    - Read to FACILITY class profile SV.CMND.*smfid*.ECONFLIC
    - SV.RESN.*smfid*.FIELD.ECONFLIC.*fieldname*
      - *e.g.:*
        - SV.RESN.\*.FIELD.ECONFLIC.CMD
        - SV.RESN.\*.FIELD.ECONFLIC.JOBNAME
        - *Etc.*





# cool things to do with CA SYSVIEW - 5

- CA SYSVIEW function – VTAM
  - Command interface with VTAM
    - Scrollable results, vastly better than using the syslog 😊
    - Customizable short commands to save remembering full VTAM commands
    - Doesn't flood the syslog with VTAM messages
- CA SYSVIEW function – IPUSERS
  - For troubleshooting those pesky TCP/IP users
  - One of the starting points for TCP/IP questions

# cool things to do with CA SYSVIEW - 5

- VTAM & IPUSERS

```
SYSVIEW 13.5a CA31 ----- XMVS, MVS Command Responses ----- 2011/10/10 11:10:26
Command =====> - Scroll *====> PAGE
----- Lvl 4 Row 1-42/105 -----
Command d net,majnodes
-----
Cmd      Response
-----
IST097I  DISPLAY ACCEPTED
IST350I  DISPLAY TYPE = MAJOR NODES
IST089I  VTAMSEG TYPE = APPL SEGMENT , ACTIV
IST089I  VTAMSG2 TYPE = APPL SEGMENT , ACTIV
IST089I  ISTRPUS TYPE = PU T4/5 , ACTIV
IST089I  ISTDILU TYPE = CDRSC SEGMENT , ACTIV
IST089I  ISTDJCP TYPE = ADJCP MAJOR NODE , ACTIV
IST089I  ISTDGRDY TYPE = CDRSC SEGMENT , ACTIV
IST089I  ISTRTPMN TYPE = RTP MAJOR NODE , ACTIV
IST089I  ISTRTRL TYPE = TRL MAJOR NODE , ACTIV
IST089I  A31TRLE TYPE = TRL MAJOR NODE , ACTIV
IST089I  COMNDB2 TYPE = APPL SEGMENT , ACTIV
IST089I  A31APPN TYPE = LCL SNA MAJ NODE , ACTIV
IST089I  A31AION TYPE = APPL SEGMENT , ACTIV
IST089I  A31IC9N TYPE = APPL SEGMENT , ACTIV
IST089I  A31IAPP TYPE = APPL SEGMENT , ACTIV
IST089I  A31SJES TYPE = APPL SEGMENT , ACTIV
IST089I  NMDNM TYPE = APPL SEGMENT , ACTIV
IST089I  APSCMMN1 TYPE = APPL SEGMENT , ACTIV
IST089I  A31IXCOM TYPE = APPL SEGMENT , ACTIV
IST089I  A31BNDL TYPE = APPL SEGMENT , ACTIV
IST089I  A31XCMQA TYPE = APPL SEGMENT , ACTIV
IST089I  A31XCMAU TYPE = APPL SEGMENT , ACTIV
IST089I  A31IVFY0 TYPE = APPL SEGMENT , ACTIV
IST089I  A31IX31 TYPE = APPL SEGMENT , ACTIV
IST089I  XCBAS31 TYPE = APPL SEGMENT , ACTIV
IST089I  CYBAPP31 TYPE = APPL SEGMENT , ACTIV
IST089I  A31DD TYPE = APPL SEGMENT , ACTIV
IST089I  APIMSS TYPE = APPL SEGMENT , ACTIV
IST089I  A31CASPL TYPE = APPL SEGMENT , ACTIV
IST089I  A31IDB2 TYPE = APPL SEGMENT , ACTIV
IST089I  NMCDACBS TYPE = APPL SEGMENT , ACTIV
IST089I  A31TVW TYPE = APPL SEGMENT , ACTIV
IST089I  A31ISVIM TYPE = APPL SEGMENT , ACTIV
IST089I  A31DVSPL TYPE = APPL SEGMENT , ACTIV
IST089I  A31CC TYPE = APPL SEGMENT , ACTIV
IST089I  A31CIC1 TYPE = APPL SEGMENT , ACTIV
IST089I  A31CIC2 TYPE = APPL SEGMENT , ACTIV
IST089I  A31CIC3 TYPE = APPL SEGMENT , ACTIV
IST089I  A31CIC4 TYPE = APPL SEGMENT , ACTIV
IST089I  A31CIC5 TYPE = APPL SEGMENT , ACTIV
IST089I  A31CIC6 TYPE = APPL SEGMENT , ACTIV
```

# cool things to do with CA SYSVIEW - 5

- Secure functions – VTAM & IPUSERS
  - SV.CMND.*smfid*.VTAM
  - SV.CMND.*smfid*.IPUSERS
  - Secure use of these commands on individual SMFIDs
- User needs:
  - Read to FACILITY class profile SV.CMND.*smfid*.VTAM
  - Read to FACILITY class profile SV.CMND.*smfid*.IPUSERS
  - Update to FACILITY class profile SV.CMND.*smfid*.IPLISTEN



# cool things to do with CA SYSVIEW – hands off!

- Using CA SYSVIEW without a Carbon-based Life-form - SYSVIEWE
  - CA SYSVIEW API Access to CA SYSVIEW functions from TSO/E REXX
    - ISPF
    - Batch
    - Define it to TSO/E REXX (IRXPARDS,IRXTSPRM,IRXISPRM)
- Provide interpretive layer for less technical staff
  - e.g., KILLUSER xyz TSO command for the helpdesk.
- Automate decisions based on information you would have gathered from CA SYSVIEW
- Work with the existing Automation Team

# cool things to do with CA SYSVIEW – hands off!

- Using CA SYSVIEW without a Carbon-based Life-form - SYSVIEWE

```
/* REXX */
ADDRESS 'LINK' 'GSVXRXAA'          /* Init SYSVIEW address env */
Address 'SYSVIEWE' 'C(ACTIVITY)'   /* Issue command */
Address 'SYSVIEWE' 'C(END)'        /* Close SYSVIEW Session */
Do While QUEUED() > 0              /* Display results */
  pull sysview_response_
  say sysview_response_
End
Exit
```

M

T|SYSVIEW | |C2 |ACTIVITY|03/05/08|06:40:06

I CPU 38% LCPU 36% Paging 5 SIO 138

H Cmd Jobname	Stepname	Procstep	Type	Jobnr	Cl	STATUS	CPU-Time	Limit
D   GLNREP	GLNREP	GLNREP	STC	12988	\$	OUT LW	0.49	86400
D   *MASTER*			SYS	12770	\$	NS	41.89	86400

# cool things to do with CA SYSVIEW – hands off!

- Using CA SYSVIEW without a Carbon-based Life-form - SYSVIEWE

```
/* REXX */  
ADDRESS 'LINK' 'GSVXRXAA'  
ADDRESS 'SYSVIEWE' 'COMMAND(ACTIVITY) STACK(NO)'  
ADDRESS 'SYSVIEWE' 'COMMAND(XVEXTRAC DATA JOBNAME JOBNAME.)'  
DO I = 1 TO JOBNAME.0  
  SAY "JOBNAME." || I JOBNAME.I  
END  
ADDRESS 'SYSVIEWE' 'COMMAND(END)'  
EXIT
```

# cool things to do with CA SYSVIEW – hands off!

- Using CA SYSVIEW without a Carbon-based Life-form - GSVXBAT
  - And finally for those that like to torture the next generation there is the batch-only GSVXBAT interface

```
//EXECBAT JOB ,pgmrname,USER=userid
//STEP0001 EXEC PGM=GSVXBAT,PARM='LINECNT=66,SHOWINP=NO'
//STEPLIB DD DISP=SHR,DSN=SYSVIEW.CNM4BLOD
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
*
COMMAND=(VTOC MVSRES) 1. Issue VTOC command
DATA=(1,DSI), 2. Select volume information line and... X
DATA=(2,DSI),DATA=(3,DSI) 3. Select first two datasets
COMMAND=RETURN 4. Return for volume DSINFO screen
COMMAND=RETURN 5. Return for first dataset DSINFO screen
COMMAND=RETURN 6. Return for second dataset DSINFO screen
SCROLL 7. Scroll through all of the datasets
COMMAND=END 8. End the batch session
/*
```

# cool things to do with CA SYSVIEW – hands off!

- Using CA SYSVIEW without a Carbon-based Life-form - IMODs
  - Include CA SYSVIEW in your GSS exploitation policy
    - What? You mean you don't have one?
    - Interface with other CA software
    - CA OPS/MVS, CA Jobtrac™, CA Workload Automation CA 7® Edition, CA Workload Automation Restart Option for z/OS Schedulers (formerly CA 11)
- IMODS – an enhanced REXX environment
  - Client – Server functionality
  - Address SYSVIEWE
  - Access VSAM and DB2 for z/OS
- Processes behind CA SYSVIEW System Condition Monitor
- Work with the existing Automation Team



# cool things to do with CA SYSVIEW – hands off!

```

SYSVIEW XSSI CA11 ----- SCMSYS, System Condition Monitor ----- 10/10/11 14:52:52
Command ===== Scroll *====> PAGE
Hop 1 Lvl 3 Row 1-17/17

(r) IFA% IIP% CP% ...50..100 -Condition- ---Ready--- --Paging-- -Storage-
CPU 0% 3% 33% NoENQ NoSMP ASIDs 3 Slots 3% ECQA 38%
LCPU 0% 3% 33% RES NoWTO Tasks 3 Rate 0 ESQA 70%
NoDMP TAB ----I/O---- AFQA 55462 SQA 96%
Spool 48% Rate 5706 UICA 54148 CSA 44%

Jobname SYSVUSER ASID 00DD Jobid STC44766
ISERVE ISRV Name * Type MVS

-----
Cmd Name Description Norm Warn Prob Status System Type Msgs Items LastUpdt Node SSID
-----
DASD DASD devices 6 3 PROBLEM CA11 MVS 9 14:39:34 S11ISRV ISRV
TAPE Tape and cartridge devices 2 PROBLEM . . 2 14:51:38 S11ISRV ISRV
HEALTH Health check status 61 1 PROBLEM . . 62 14:51:32 S11ISRV ISRV
OPERATOR Operations overview 10 2 ACTION . . 12 14:51:32 S11ISRV ISRV
ALERTS MVS system alerts 27 WARNING . . 27 14:52:38 S11ISRV ISRV
XSYSTEM XSystem Communications 9 WARNING . . 9 14:51:38 S11ISRV ISRV
PAGING Paging alerts and datasets 2 1 WARNING . . 3 14:51:32 S11ISRV ISRV
CHANNELS Channel status 22 INACTIVE . . 22 14:51:32 S11ISRV ISRV
DEVICES Devices and connections 22 INACTIVE . . 22 14:51:32 S11ISRV ISRV
ENQUEUES Enqueue Conflicts 1 NORMAL . . 1 14:52:38 S11ISRV ISRV
PRINTERS Printer devices 1 NORMAL . . 1 14:50:32 S11ISRV ISRV
SMS SMS storage groups 1 NORMAL . . 1 14:45:04 S11ISRV ISRV
STORAGE Common storage usage 0 NORMAL . . 0 14:52:42 S11ISRV ISRV
LXTABLE Linkage index allocation table 0 NORMAL . . 0 14:50:28 S11ISRV ISRV
PARTINFO Partition information 0 NORMAL . . 0 14:52:42 S11ISRV ISRV
VTAM VTAM alerts - Required applids 0 NORMAL . . 0 14:50:32 S11ISRV ISRV
WLM Workload Manager 0 NORMAL . . 0 14:50:32 S11ISRV ISRV
-----
***** End of Data *****

-----
1=HELP 2=SPLIT 3=RETURN 5=FOUND 7=UP 8=DOWN 9=SWAP 10=LEFT 11=RIGHT 12=RECALL

```

# cool things to do with CA SYSVIEW – hands off!

- Secure function – ADDRESS SYSVIEWE / IMODS
  - SV.ENV.\*.API
  - Likely to want to secure use of this command across all SMFIDs
  - User needs:
    - Read to FACILITY Class profile SV.ENV.smfid.API
  - Review security around access to IMOD datasets (ISETS) the IMOD Editor interface and GSS in general



# summary

**CA SYSVIEW is so much more than performance**



**My Top Five – what are yours?**



**Security is equally important**



**Who needs carbon based life forms – CA SYSVIEW doesn't**

# Thank you for listening



My contact details in case you think of any questions after the event:

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