

# Bit Bucket x'35'

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SHARE 128  
Session 20512  
San Jose, CA  
10 Mar 2017





Go Big or Go Home  
(Ed Jaffe)

# OSA-ICC Requirement SSMVSE11008

- Back in early 2011, the late Brad Carson (of Lab Corp) opened requirement SSMVSE11008 "Allow OSA-ICC Consoles to have larger than Mod 5 Screen Size."
- Brad had discovered that only mod-2 (24x80), mod-3 (32x80), mod-4 (43x80), and mod-5 (27x132) were supported. All other terminal sizes failed with a command reject.

SSMVSE11008,2.6,4/28/11

Allow OSA-ICC Consoles to have larger than Mod 5 Screen Size

Consoles connected via an OSA-ICC must use 3270 screen sizes 2 (24X80); 3 (32X80); 4 (43X80); or 5 (27X132) while SMCS consoles can use screen sizes up to 60X132. The OSA-ICC support needs to be updated to allow for larger screen sizes.

With newer 3270 terminal emulators and larger workstation screens; a larger console window can be setup and used. During issues on a system; like when a DS8000 or EMC DMX array are having problems; a flood of IOSxxxx can occur. A larger console screen will allow more to be kept on the display.

"... the issue is just with the OSA-ICC (since 2074's or 3x74's aren't available anymore). I run our consoles this way since that is the only way we can get NIP support (for z/OS) and CMS access (for z/VM) before the SNA and IP stacks are started. Since we actually let our operators IPL systems they use MCS consoles via OSA-ICC. With EMC SRDF-A here a sync error can put a large number of messages on a console (non deleteable of course) in a very short amount of time. Hence the [requirement] since console services already can support it."

# OSA-ICC Requirement SSMVSE11008

- IBM summarily rejected the requirement in July 2011 stating that OSA-ICC was stabilized and there were no plans to enhance it in any way.
- STABILIZED?!
- The Requirements Committee pushed back, "In general, the committee doesn't accept rejections that are simply based on resource constraints. The intention of voting on requirements is to identify those items where the community believes IBM SHOULD provide the resources. If this has truly been stabilized, is there any documentation to support that?"
- The SHARE membership ranked this requirement #21 on the SHARE Top 50 list sent to IBM in 2014.
- IBM confirmed OSA-ICC was stabilized and provided no further review. AFAIK to this day the requirement remains rejected, yet ranked #21.

# OSA-ICC Requirement SSMVSE11008

- Against this backdrop, in emailed conversations with Tom Conley, Bill Smith and Mark Zelden, I confirmed it still did not work on was unable to make it work on my z13s. Incredibly, Mark said it was working on his z13!
- Mark and I exhaustively compared our OSA and PCOMM configurations and could find no substantive differences. I even ran his PCOMM configuration directly on my PC.
- My mainframe patch levels were slightly higher and my PCOMM maintenance level was much higher, but we were doing exactly the same things.
- Despite everything, Mark had screen prints showing it working and I had screen prints (and system traces) showing it failing...

# Zelden Result

```
Session A - @M104_VTAM_TN10_CDC 62 x142.WS - [62 x142]
File Edit View Communication Actions Window Help

Host: 10.148.7.75 Port: 3270 LU Name: testa@f00 Disconnect

- 12.30.54 M104 M4 d a,l
12.30.54 M104 M4 IEE114I 12.30.54 2016.239 ACTIVITY 793 C
JOBS M/S TS USERS SYSAS INITS ACTIVE/MAX VTAM OAS
00005 00006 00003 00047 00006 00003/00150 00047
LLA LLA NSW S JES2 JES2 IEFPROC NSW S
VLF VLF NSW S RRS RRS RRS NSW S
HZR HZR IEFPROC NSW S OAM OAM IEFPROC NSW S
RACF RACF RACF NSW S SYSLOGD STEP1 OMVSKERN NSW AO
SMC SMC NSW S TM TM NSW S
MIA MIA MIMGR NSW S HIS HIS HIS NSW SO
PFA PFA NSW SO INETD6 STEP1 OMVSKERN OWT AO
CRON7 STEP1 OMVSKERN OWT AO NET NET NET NSW S
APPC APPC NSW S ASCH ASCH ASCH NSW S
EMCSCF EMCSCF EMCSCF NSW S TSO TSO STEP1 OWT S
SDSF SDSF NSW S TCPIP TCPIP TCPIP NSW SO
TADMON TADMON MONITOR NSW S SDSFAUX SDSFAUX SDSFAUX NSW S
IOASRV IOASRV SERVER OWT SO PORTMAP PORTMAP PMAP OWT SO
REXEC REXEC RXSERVE OWT SO SMTP SMTP SMTP NSW S
FTP1 STEP1 FTP OWT AO OMPROUTE OMPROUTE OMPROUTE NSW SO
TN3270 TN3270 TN3270 NSW SO CSF CSF CSF NSW S
CMSC CMSC CMSC00 NSW S HCHECKER HCHECKER HZSSTEP NSW SO
OMIICN OMIICN CNDL NSW S OMIIM2RC OMIIM2RC OMIIM2RC OWT S
OMIIM2 OMIIM2 NSW SO DSZ1MSTR DSZ1MSTR IEFPROC NSW S
MVRTCS RTCS OSZRTCS NSW S DSZ1IRLM DSZ1IRLM NSW S
DSZ1DBM1 DSZ1DBM1 IEFPROC NSW S DSZ1D1ST DSZ1D1ST IEFPROC NSW SO
MVCAS MVCAS CAS NSW SO MVCASRT MVCASRT CAS NSW SO
ITIAGNT ITIAGNT *OMYSEX OWT SO PSYNCH PSYNCH PSYNCH NSW SO
SYNCD SM SYNCD SM IEFPROC OWT S DFS DFS GO NSW SO
SILD SILD IEFPROC NSW S ITIAGNT1 STEP1 ITIAGNT IN AO
MVSPAS MVSPAS PAS NSW SO MVSPASRT MVSPASRT PAS NSW SO
ENFXMUF ENFXMUF ENFXMUF NSW S ENF ENF ENF NSW SO
EMCRDF EMCRDF EMCRDF NSW S EMCINIT EMCINIT NSW S
MVSNFS MVSNFS GFSA MAIN NSW SO CAL7MUF4 CAL7MUF4 AD14STRT NSW S
JOBTMUF JOBTMUF JTMUF NSW S CCITCPGW CCITCPGW CCITCPGW NSW SO
CCITCP CCITCP CCITCP NSW SO CAL7M4 CAL7M4 DBAS@30 NSW S
ISERVE ISERVE GSSA NSW S JOBTRAC3 JOBTRAC3 JOBTRACY NSW S
ABNDVWR ABNDVWR AAVIEW NSW S ABNDDBCS ABNDDBCS AABDCAS NSW S
IEESYSAS CWAASACTL IEFPROC NSW S SYSVIEW SYSVIEW SYSVIEW NSW SO
BETA02 BETA02 BETA02 NSW S BETA88 BETA88 BETA88 NSW S
PWXLSTNR PWXLSTNR STEP1 IN SO RMOSTC RMOSTC RMOSTC NSW S
SARSTC SARSTC SARSTC NSW S SARXMS SARXMS SARXMS NSW S
CADSDISP CADSDISP CADDC1A NSW S CADRAS CADRAS CADRAS NSW S
SOLVLESSI SOLVLESSI SOLVLESSI NSW S NETM NETM NETMASTR NSW SO
VAM VAM OWT S OMI102 OMI102 OMI102 NSW S
OMI102 OMI102 OMI102 NSW S OMI105 OMI105 OMI105 NSW SO
OMI1M0 OMI1M0 OMI1M0 NSW SO OMI10C0 OMI10C0 OMI10C0 NSW S
OMI1C20 OMI1C20 OMI1C20 NSW S OMI1C5 OMI1C5 OMI1C5 NSW SO
OMI1TOM OMI1TOM OMI1TOM NSW SO W51MGR W51MGR STEP1 NSW SO
W51DMN4 W51DMN4 BBODAEMN NSW SO W51NAG4 W51NAG4 STEP1 NSW SO
W51014 W51014 STEP1 NSW SO
USZ1870 OWT USZC270 OWT USZ3963 OWT

IEE612I CN=M104CON1 DEVNUM=0F00 SYS=M104 CMDSYS=M104
IEE169I MODE= RD
61/003
Connected to remote server/host 10.148.7.75 using lu/pool testa@f00 and port 3270
Client/MARK#/Canon MG8100 series Printer o
```

# Jaffe Result

```
ISZ0030I LU BA060A active
IOS000I 060A,00,CMD,11,0200,800000000003,,,VTAM
ISZ0284I LU BA060A starting D4B32XX3 - REBIND = NO
ISZ0283I LU BA060A signed off
ISZ0031I LU BA060A terminated
```

...

```
LOGON
IOS000I 060A,00,CMD,11,0200,800000000000C,,,VTAM
IKT112I SEND      ERROR DURING QUERY PROCESSING FOR ..... ,
RPLRTNCD=04, RPLFDB2=04,
$HASP100 EDJX1     ON TSOINRDR
$HASP373 EDJX1     STARTED
IEF125I EDJX1 - LOGGED ON - TIME=11.24.32
IOS000I 060A,00,CMD,11,0200,800000000001C,,,VTAM
```

...

```
IKT00405I SCREEN ERASURE CAUSED BY ERROR RECOVERY PROCEDURE
***
```

# SOLVED!!!



- I opened Hardware PMH 57018,227,000 directly from the Support Element (a nice capability) and requested IBM address this "bug" in our hardware. I sent them Mark's PCOMM WS file and all of the screen prints and configuration information.
- Incredibly, after just minimal back and forth, Product Engineering found an error in the code that caused a failure in some but not all configurations.
- They corrected the error in MCL P08440.004!
- So many lessons learned here. I'd say the main one is to never assume software fails by design. Try to get an APAR first. If the vendor's analysis confirms there is missing function, then by all means a requirement should be opened. Just don't go there out of the gate.



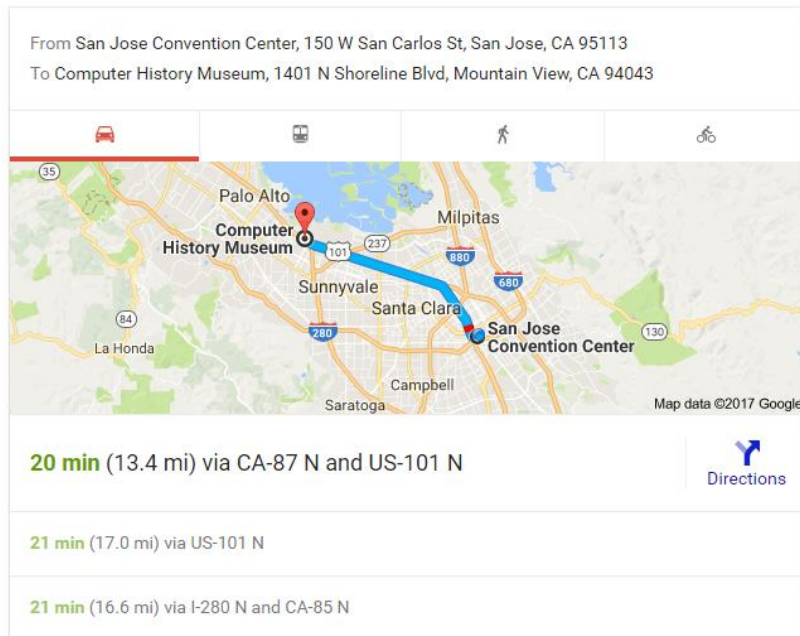


# Computer History Museum

(Sam Knutson)

# Computer History Museum

- Computer History Museum is less than an hour from here in Mountain View and is open till 8pm today
- If you have some time before leaving town you can get out of the hotel and go see some iconic mainframe and computing artifacts including 360, working 1401, 350 RAMAC, 1620, PDP-1, and more!



# Computer History Museum

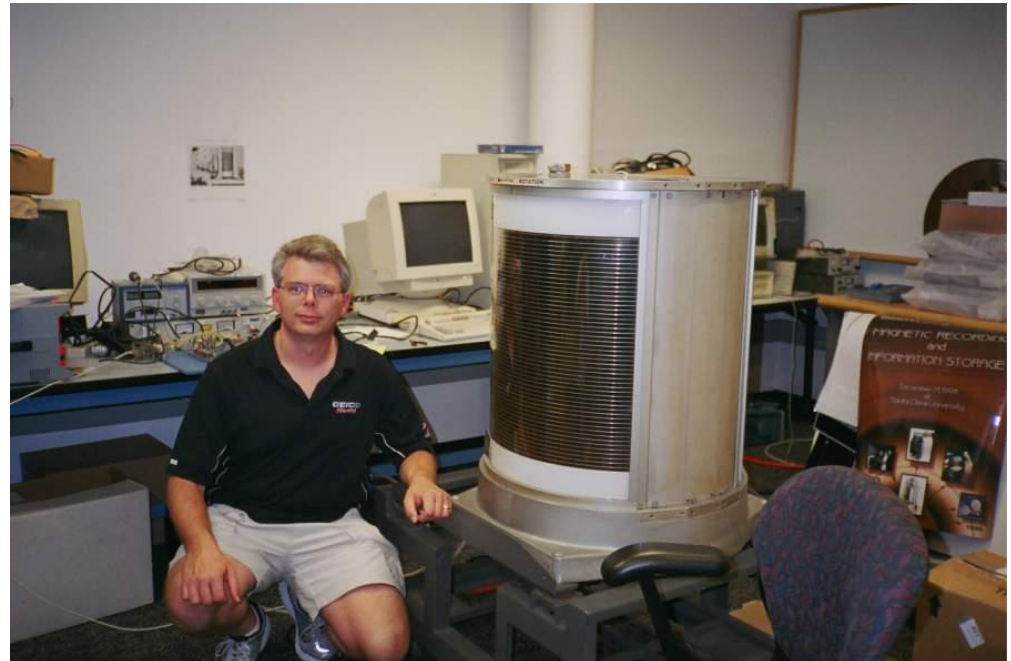




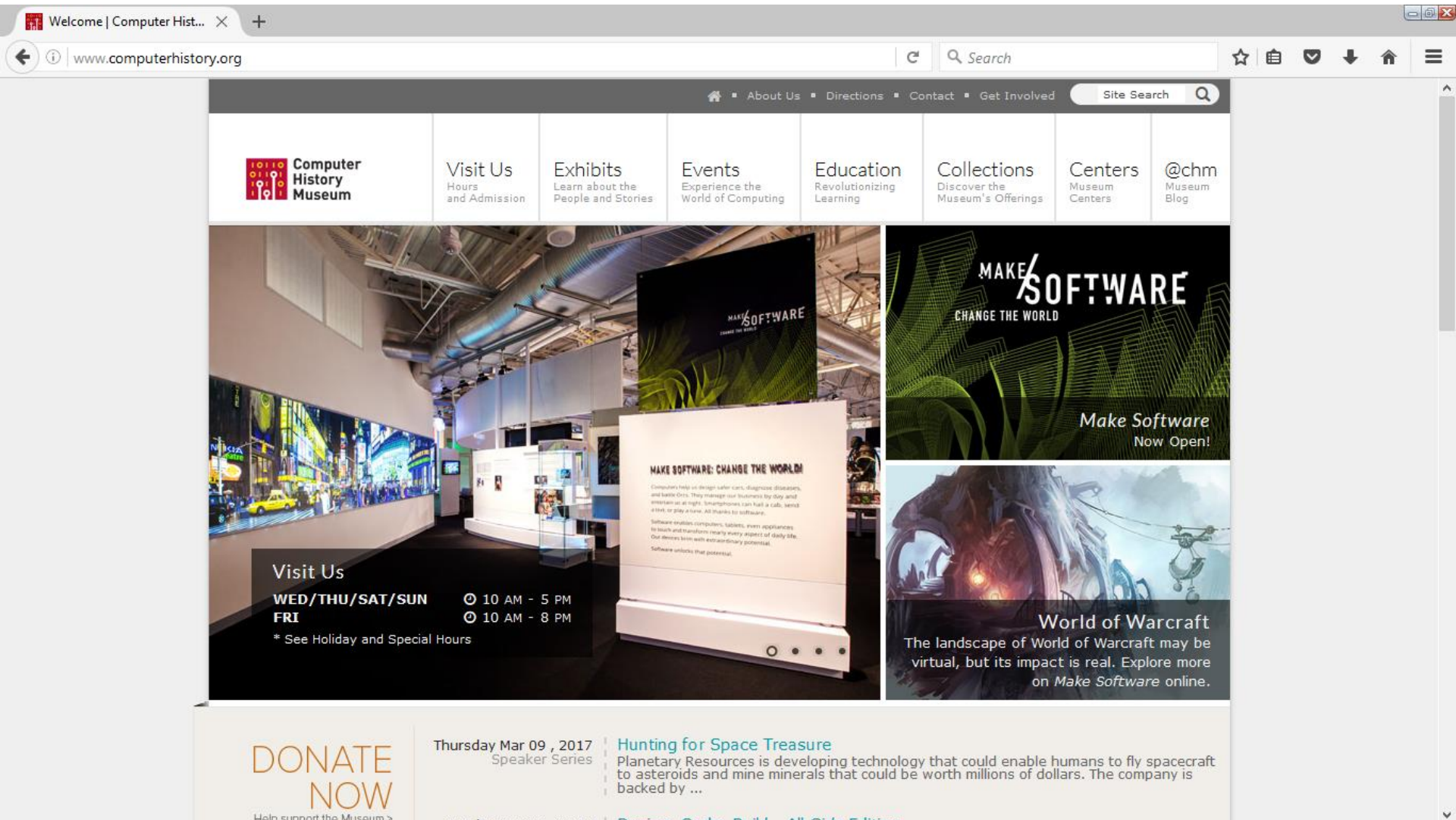
# Computer History Museum



- Docent lead tours mine was marvelous
- ← RAMAC
- Below RAMAC & ME



# Computer History Museum



- web site <http://www.computerhistory.org/>

# Computer History Museum

The screenshot shows the YouTube channel page for the Computer History Museum. The header features the YouTube logo with the '#HER VOICE IS MY VOICE' tagline, a search bar containing 'Computer history channel', and navigation icons for upload, notifications, and profile. The left sidebar includes a menu with 'Home', 'My channel', 'Trending', 'Subscriptions' (35), 'History', 'Watch Later', and 'Get YouTube Red'. Below this is a 'LIBRARY' section with 'Inspiration', 'Liked videos', and 'Mainframe Security', followed by a 'SUBSCRIPTIONS' list with channels like Movieclips Trailers, TEDx Talks, and The Minimalists. The main content area displays the channel banner with the 'Computer History Museum' logo and name, a 'Subscribed' button, and a subscriber count of 52,002. Below the banner are tabs for 'Home', 'Videos', 'Playlists', 'Channels', 'Discussion', and 'About'. The 'What to watch next' section features a large video thumbnail of a man speaking, with three smaller interview thumbnails on the right: 'Interview of Helen Bradley' (43:23), 'Interview of Chris Carlton' (36:46), and 'Interview of Geoff Ralston' (39:27). The right sidebar lists 'Related channels' including Computerphile, EEVblog, LinusTechTips, Techmoan, and AVE, each with a 'Subscribe' button.

Computer history channel

Computer History Museum

ComputerHistory

Subscribed 52,002

Home Videos Playlists Channels Discussion About

What to watch next

Computing In Your Pocket: The Prehistory of the iPhone in Silicon

Interview of Helen Bradley  
by ComputerHistory  
95 views 5 days ago

Interview of Chris Carlton  
by ComputerHistory  
45 views 5 days ago

Interview of Geoff Ralston  
by ComputerHistory  
77 views 5 days ago

Related channels

Computerphile  
Subscribed

EEVblog  
Subscribe

LinusTechTips  
Subscribe

Techmoan  
Subscribe

AVE  
Subscribe

- Videos on YouTube

<https://www.youtube.com/user/ComputerHistory>





A big bucket of history  
(Sam Knutson)

# Bit Bucket Archives

- BIT BUCKET first aired in 1991 presented by Bob Shannon and Carl Youngren as a collection of topics too small to make a full session
- Today we continue this z/OS Short subjects session
- Every Bit Bucket presentation from every SHARE! First shared archive in 2006 but SHARE keeps remodeling the web site
- SHARE.ORG : Volunteers : Program Information and Rosters : MVS : Now available in our file library: Every Bit Bucket from every SHARE!
- <http://www.share.org/p/co/ly/gid=1833&fid=167&req=load>

LOOK WHAT WE FOUND  
IN THE BIT BUCKET

SHARE 76  
SESSION 0321  
MARCH 1, 1991

BOB SHANNON  
AETNA LIFE AND CASUALTY COMPANY  
AETNA INFORMATION TECHNOLOGY  
151 FARMINGTON AVENUE C14F  
HARTFORD, CT 06156  
(203)273-6891

CARL YOUNGREN  
STATE OF CALIFORNIA  
HEALTH AND WELFARE DATA CENTER  
TECHNOLOGY DIVISION  
1651 ALHAMBRA BLVD  
SACRAMENTO, CA 95816  
(916)739-7660

LOOK WHAT WE FOUND IN THE BIT BUCKET

1



# Bit Bucket Archives

- **SHARE.ORG : Volunteers : Program Information and Rosters : MVS :** Now available in our file library: Every Bit Bucket from every SHARE!

The screenshot shows a web browser window with the URL [www.share.org/p/co/ly/gid=1833&fid=167&req=load](http://www.share.org/p/co/ly/gid=1833&fid=167&req=load). The page features a green banner with the text "Featuring 500+ Technical Sessions" and a "Learn More" button. Below the banner is a navigation menu with links: Home, About, Members Only, Events, Content Center, Blogs, Our Partners, zNextGen, Volunteers, and Store. A "More Options" button is also present. The main content area is titled "MVS Program" and includes a sub-header "All those years of the Bit Bucket!". A paragraph follows: "Hard to believe it's been so many years since Bob and Carl first dazzled us with their ability to dig up technical tidbits that we could take home and put to good use. We present for your viewing pleasure, every Bit Bucket presentation starting with the very first one from March, 1991. Sometimes obscure but always entertaining!". Below this is a list of ten Bit Buckets, each with a date and location in parentheses:

- Bit Bucket 1 - x'01' March 1991 (San Francisco)
- Bit Bucket 2 - x'02' August 1991 (Chicago)
- Bit Bucket 3 - x'03' March 1992 (Anaheim)
- Bit Bucket 4 - x'04' August 1992 (Atlanta)
- Bit Bucket 5 - x'05' March 1993 (San Francisco)
- Bit Bucket 6 - x'06' August 1993 (Washington)
- Bit Bucket 7 - x'07' February 1994 (Anaheim)
- Bit Bucket 8 - x'08' August 1994 (Boston)
- Bit Bucket 9 - x'09' March 1995 (Los Angeles)
- Bit Bucket 10 - x'0A' August 1995 (Orlando)

The browser's address bar shows the URL, and the page header includes the text "SHARE : MVS Program :". The browser's taskbar at the bottom shows various application icons and the system clock indicating 1:29 PM on 3/10/2017.



We don't need no stinking JAVA  
(Mary Anne Matyaz)

# The Problem



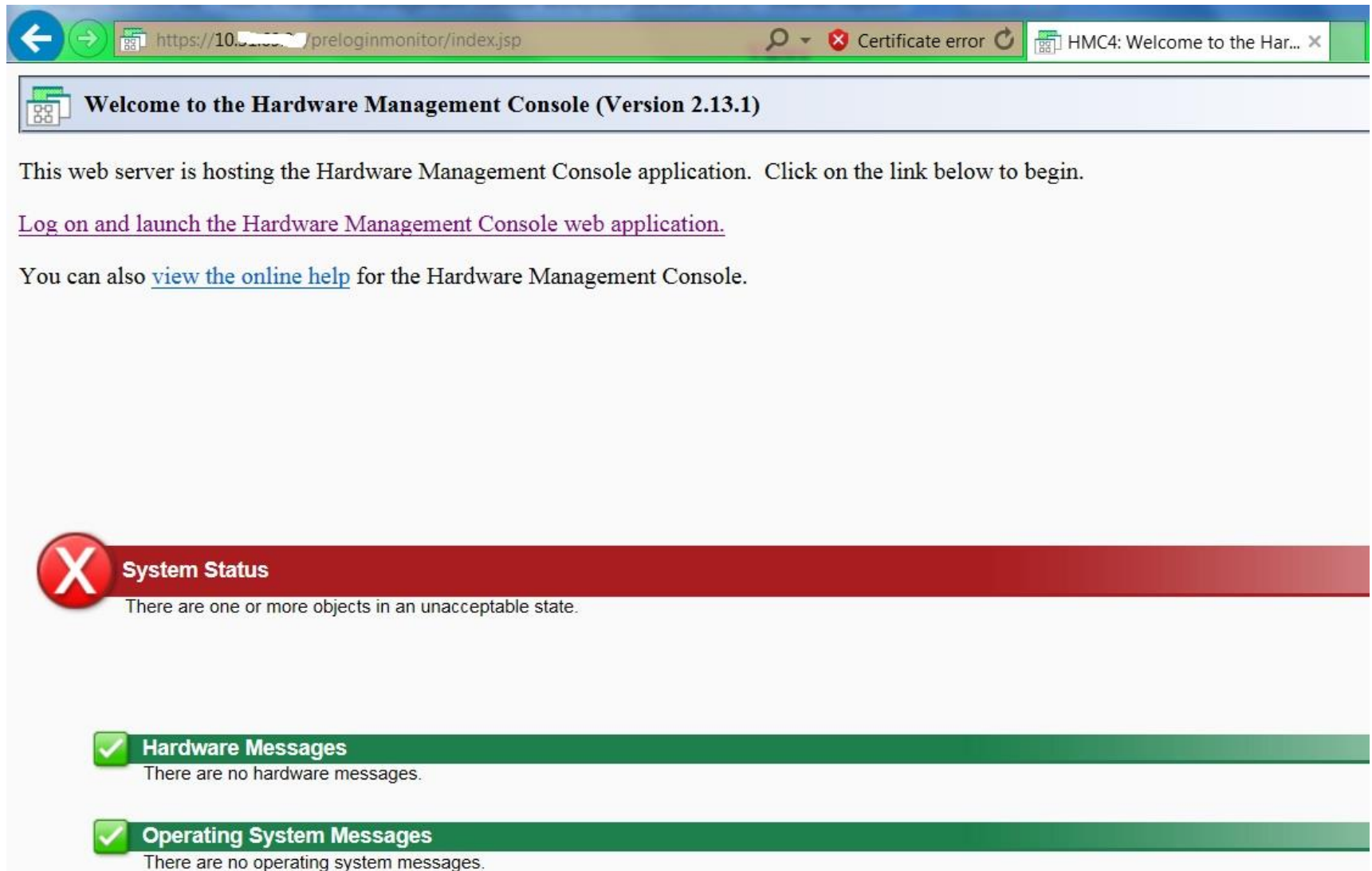
- On any given day, you never know if you'll be able to use HMC OS Messages, or Integrated 3270 Console successfully
- Desktop Services changes your browser, your java, and/or your security settings at nite
- Next morning you come in and things are wacky
- Java applets seemed to be a particularly aggravating problem
- Different sites need their own java level
- Upgrade your java, these three things now work, but four other things are now broken
- The Hardware:
  - One EC12
  - One z13
  - HMC for the EC12 is at 2.13.0. It was upgraded to match the z13 when it came in.

## Can we upgrade to 2.13.1?

---

- Sure!
- MCL's are added to 2.13.0 to bring it to...
  - 2.13.0 ☹
- I wanted 2.13.1. Oh, I need to order that.
- K, thanks.
- Driver 27, btw

# Success



← →  https://10.10.10.10/preloginmonitor/index.jsp   Certificate error   HMC4: Welcome to the Har... ×

---

 **Welcome to the Hardware Management Console (Version 2.13.1)**

This web server is hosting the Hardware Management Console application. Click on the link below to begin.

[Log on and launch the Hardware Management Console web application.](#)

You can also [view the online help](#) for the Hardware Management Console.

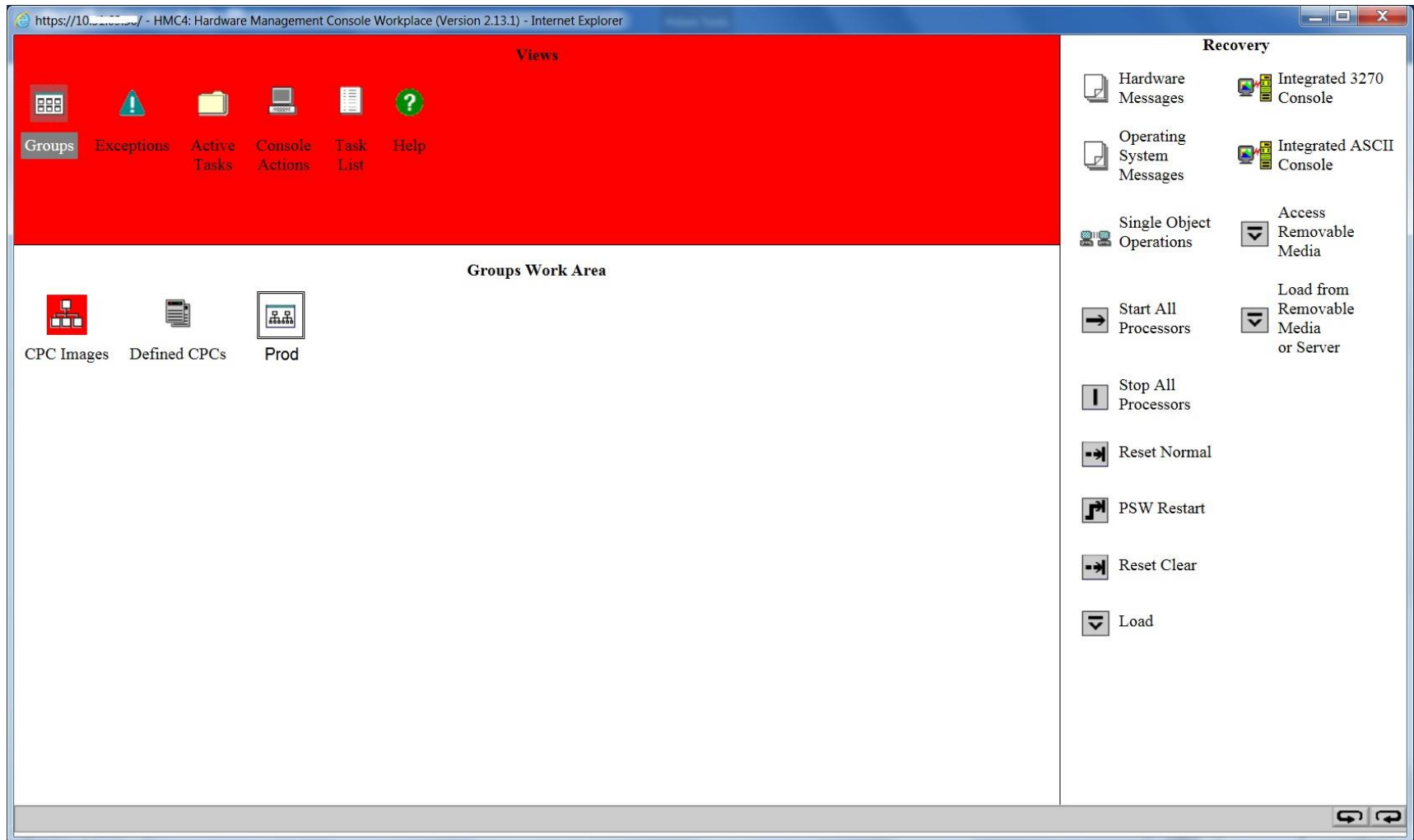
---

 **System Status**  
There are one or more objects in an unacceptable state.

 **Hardware Messages**  
There are no hardware messages.

 **Operating System Messages**  
There are no operating system messages.

# It mostly looks the same...





# Books/Help/What's New

The screenshot shows a web browser window displaying the IBM Hardware Management Console Version 2.13.1 help page. The browser's address bar shows a URL with a certificate error. The page header includes the IBM logo, the product name, and a language selector set to English. A search bar is located below the header. The left sidebar contains a 'Table of Contents' with a tree view of the help topics. The main content area displays the 'What's new in version 2.13.1' section, which includes a brief overview of the new features and a list of links to detailed information about specific enhancements.

Hardware Management Console Version 2.13.1

Search

Table of Contents

Hardware Management Console Version 2.13.1

- Introduction
  - What's new in version 2.13.1
  - Introduction to the Hardware Management Console
  - Introduction to the IBM z Unified Resource Manager
  - Introduction to the IBM Dynamic Partition Manager
  - User Interface (UI) styles for the Hardware Management Console
  - Changing your time-of-day clock
  - User Management task
  - Remote operations
  - Remote support facility
  - LDAP support for user authentication
  - IPv6 support
  - Context sensitive help
  - Disruptive tasks
  - About activation profiles
  - USB flash memory drive
  - Coupling Facility Control Code (CFCC) commands
  - Coupling Facility Control Code (CFCC) messages
  - Audit, Event, and Security Log Messages
  - Tree Style User Interface

Search Results

Introduction > What's new in version 2.13.1

## What's new in version 2.13.1

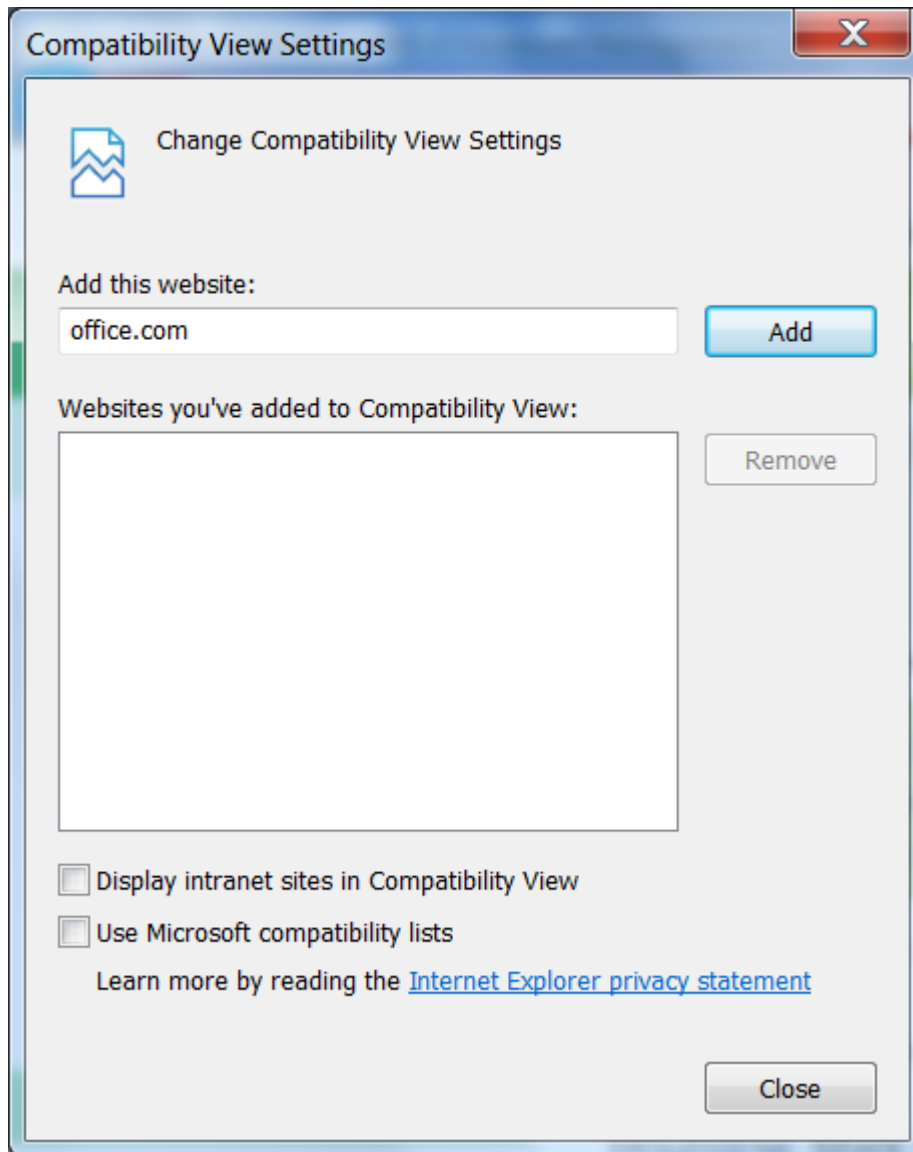
This information reflects the licensed internal code for the Hardware Management Console Application, Version 2.13.1. You can tell if your Hardware Management Console has this version installed from the title bar on the Hardware Management Console workplace window or by pointing your mouse over **HMC Version** in the top of the work pane window from the tree style user interface. New enhancements to the version code are described in this section.

There might be other changes to the licensed internal code that are not described here. For more information, see the PDF files available on Resource Link® (<http://www.ibm.com/servers/resourcelink>).

The following information summarizes the new and changed features for Version 2.13.1.

- [Introduction to the IBM Dynamic Partition Manager \(DPM\)](#)
- [IBM Secure Service Container \(Secure Service Container\)](#)
- [Absolute capping of LPAR groups](#)
- [Audit, Event, and Security Log Messages](#)
- [New field in HMC certificates](#)
- [Updated STP configuration](#)
- [FTP server support for upgrade data](#)
- [Replace Java applets with browser interface](#)
- [CPUMF Diagnostic Sampling](#)
- [CFCC information](#)
- [Miscellaneous enhancements](#)

# Had to turn off compatibility view



# Compatibilty View

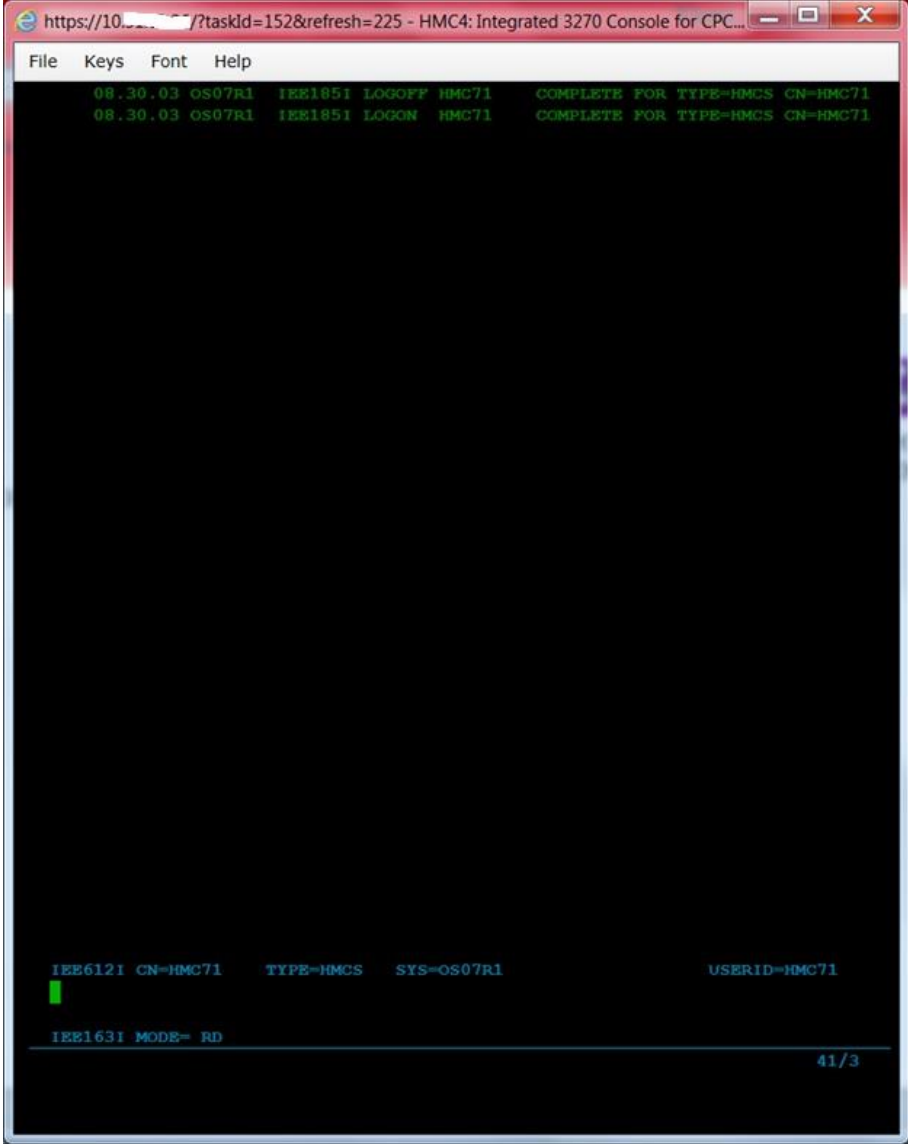


[http://www.ibm.com/support/knowledgecenter/en/HW11R/com.ibm.hwmca.kc\\_hmc.doc/introductiontotheconsole/appendixcwebbrowserrequirements.html](http://www.ibm.com/support/knowledgecenter/en/HW11R/com.ibm.hwmca.kc_hmc.doc/introductiontotheconsole/appendixcwebbrowserrequirements.html)

## Note

The **Compatibility View** option must be disabled. (Select **Tools** from the menu bar, then select **Compatibility View settings**.)

# Green Screen Success!



The screenshot shows a web browser window with the address bar displaying `https://10.../?taskId=152&refresh=225 - HMC4: Integrated 3270 Console for CPC...`. The browser window contains a console application with a menu bar (File, Keys, Font, Help) and a black background with green text. The text displays system logs and user information.

```
08.30.03 OS07R1 IEE185I LOGOFF HMC71 COMPLETE FOR TYPE=HMCS CN=HMC71
08.30.03 OS07R1 IEE185I LOGON HMC71 COMPLETE FOR TYPE=HMCS CN=HMC71

IEE612I CN=HMC71 TYPE=HMCS SYS=OS07R1 USERID=HMC71
IEE163I MODE= RD
```

41/3

# Classic San Jose





Edge of (3.) 17  
(Tom Conley)

## • ISPF 3.17 File\_Systems Menu

- z/OS V2R2 added File\_Systems Menu to ISPF 3.17
- Expandable/collapsible tree view of USS filesystems
- Patterned after FIXCAT Explorer feature of SMP/E
- Provides both filesystem and mount point perspectives
- Provides ability to mount filesystems
- Provides ability to allocate zFS filesystems
- Provides display of zFS Aggregates with free/total space
- ISPF 3.17 now provides nearly all usable ISHELL function
- Last remaining item is "caseless" sort for directory list
- ISHELL author confirmed 3.17 has all ISHELL function
- ISHELL author wasn't even aware of caseless sort issue
- ISHELL deprecated by IBM, so use ISPF 3.17 instead



# ISPF 3.17 File\_Systems Menu



Menu RefList RefMode Utilities Options **File\_Systems** Help

z/OS UNIX Direct

Option ==>

blank Display directory list

Pathname . . . /S0W1/etc

- 1. Mount Table by File System...
- 2. Mount Table by Mount Point...
- 3. Mount...
- 4. New zFS...
- 5. zFS aggregates...

Enter "/" to select option

/ Confirm File Delete

/ Confirm Non-empty Directory Delete

When the directory list is displayed, enter either:

"/" on the directory list line command field for the command prompt pop-up,  
an ISPF line command, the name of a TSO command, CLIST, or REXX exec, or  
"=" to execute the previous command.

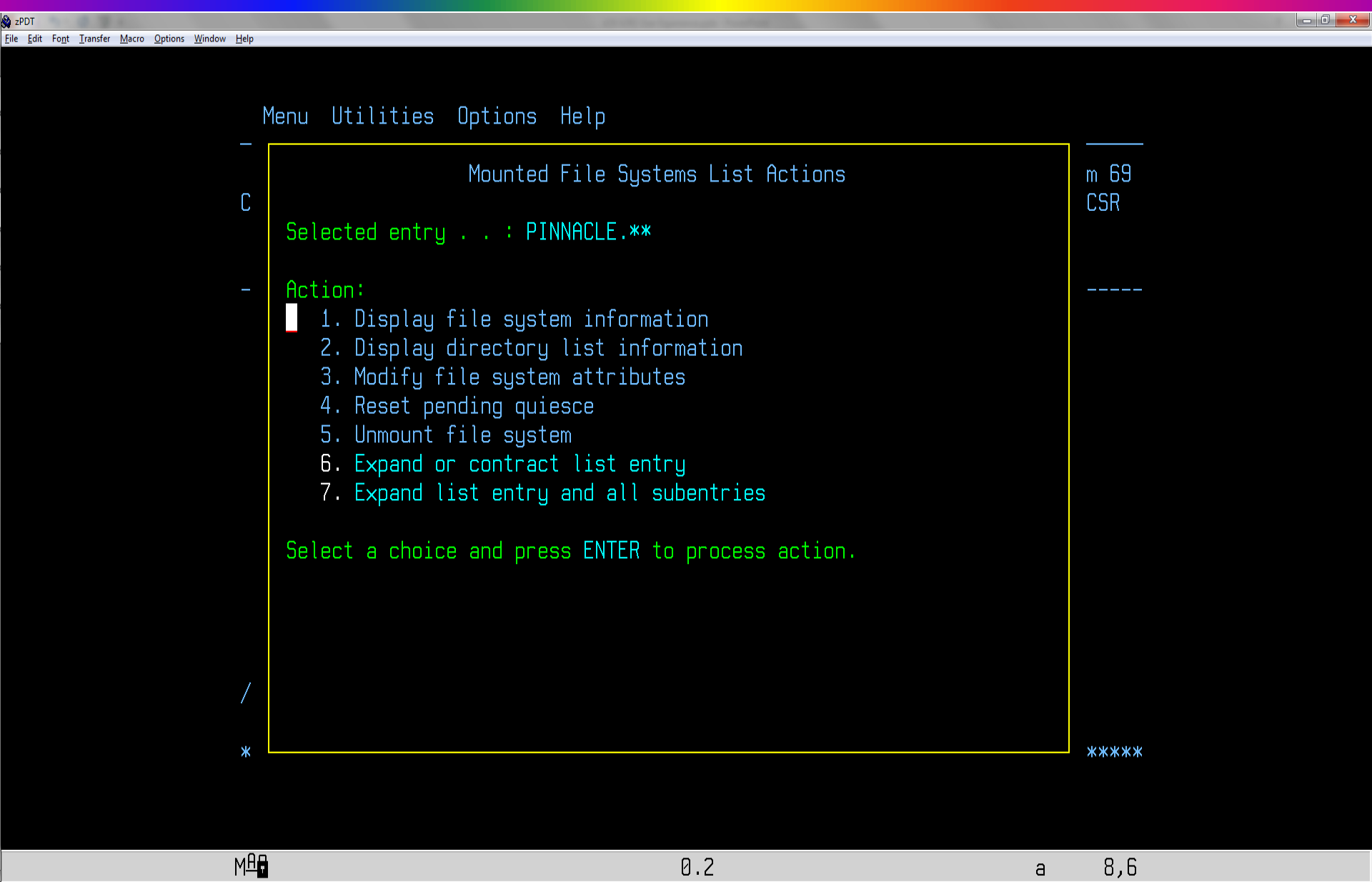
# ISPF 3.17 File\_Systems Menu

```
zPDT
File Edit Font Transfer Macro Options Window Help

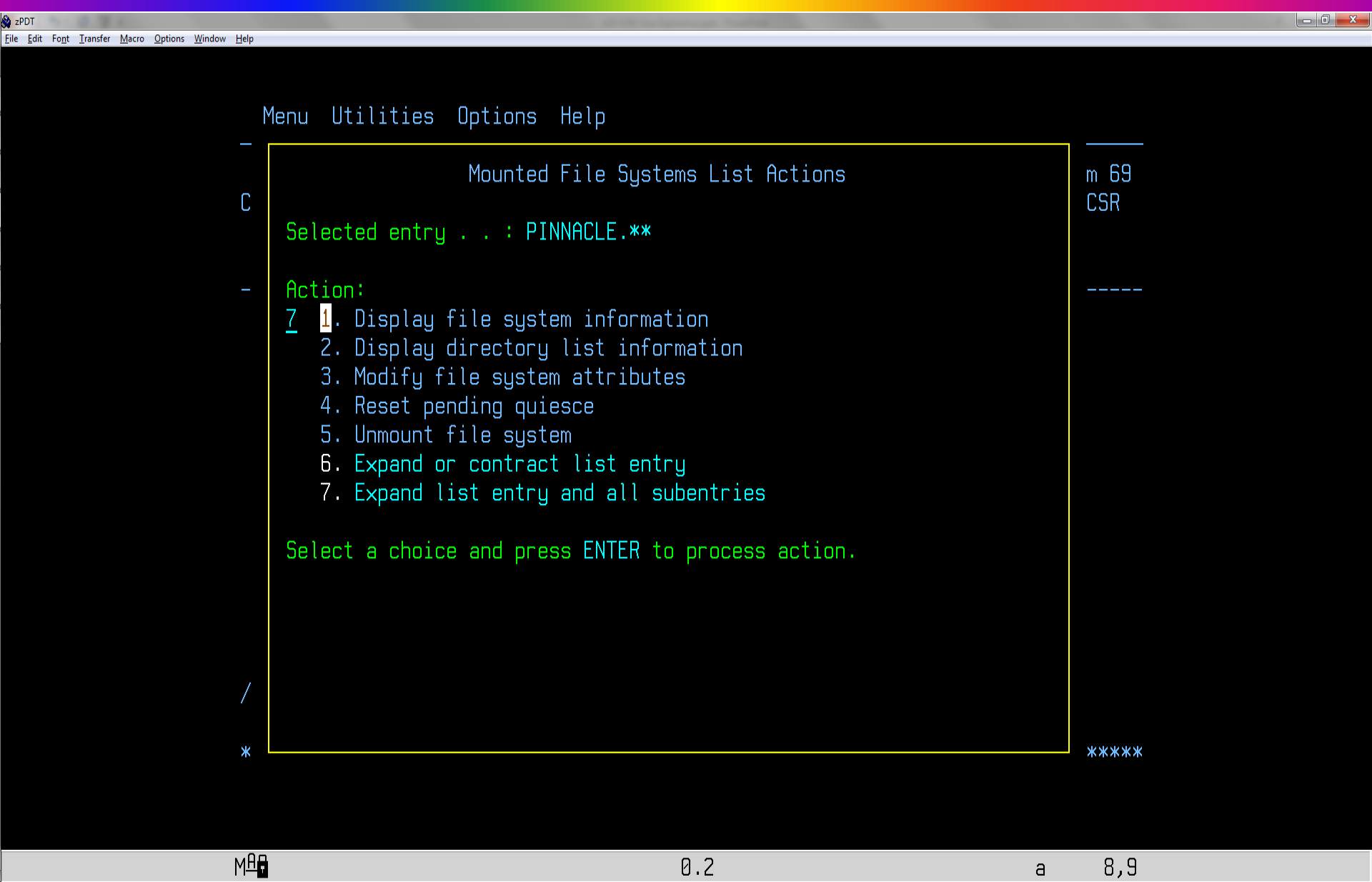
Menu Utilities Options Help
-----
z/OS UNIX Mounted File Systems Row 1 from 69
Command ==>  Scroll ==> PAGE

File System Name      Mount Point      Type
-----
+BAQ200.**
+BLZ601.**
+BUZ620.**
+CSQ800.**
+FEL951.**
+HAP850.**
+IEL450.**
+IGY520.**
+IZU.**
+JVA710.**
+JVA800.**
+JVB710.**
+JVB800.**
+PINNACLE.**
+ZFS.**
***** Bottom of data *****
```

# ISPF 3.17 File\_Systems Menu



# ISPF 3.17 File\_Systems Menu



# ISPF 3.17 File\_Systems Menu

```
zPDT
File Edit Font Transfer Macro Options Window Help

Menu Utilities Options Help
-----
z/OS UNIX Mounted File Systems Row 1 from 69
Command ==> Scroll ==> CSR

File System Name      Mount Point      Type
-----
+BAQ200.**
+BLZ601.**
+BUZ620.**
+CSQ800.**
+FEL951.**
+HAP850.**
+IEL450.**
+IGY520.**
+IZU.**
+JVA710.**
+JVA800.**
+JVB710.**
+JVB800.**
-PINNACLE.**
-PINNACLE.VAR.**
-PINNACLE.VAR.PRINTSRV.**
  PINNACLE.VAR.PRINTSRV.ZFS /S0W1/var/Printsrv ZFS
```

MA 0.1 a 4,15

# ISPF 3.17 File\_Systems Menu

zPDT

File Edit Font Transfer Macro Options Window Help

Menu Utilities Options Help

z/OS UNIX Mounted File Systems Row 1 from 69

Command ==> Scroll ==> CSR

| File System Name          | Mount Point        | Type |
|---------------------------|--------------------|------|
| +BAQ200.**                |                    |      |
| +BLZ601.**                |                    |      |
| +BUZ620.**                |                    |      |
| +CSQ800.**                |                    |      |
| +FEL951.**                |                    |      |
| +HAP850.**                |                    |      |
| +IEL450.**                |                    |      |
| +IGY520.**                |                    |      |
| +IZU.**                   |                    |      |
| +JVA710.**                |                    |      |
| +JVA800.**                |                    |      |
| +JVB710.**                |                    |      |
| +JVB800.**                |                    |      |
| -PINNACLE.**              |                    |      |
| -PINNACLE.VAR.**          |                    |      |
| -PINNACLE.VAR.PRINTSRV.** |                    |      |
| PINNACLE.VAR.PRINTSRV.ZFS | /S0W1/var/Printsrv | ZFS  |

MA 0.1 a 21,6

# ISPF 3.17 File\_Systems Menu

```
zPDT
File Edit Font Transfer Macro Options Window Help

Menu Utilities Options Help
-----
z/OS UNIX Mounted File Systems Row 1 from 69
Command ==>  Scroll ==> PAGE

File System Name      Mount Point      Type
-----
+BAQ200.**
+BLZ601.**
+BUZ620.**
+CSQ800.**
+FEL951.**
+HAP850.**
+IEL450.**
+IGY520.**
+IZU.**
+JVA710.**
+JVA800.**
+JVB710.**
+JVB800.**
+PINNACLE.**
+ZFS.**
***** Bottom of data *****

MAB 0.2 a 4,15
```



# ISPF 3.17 File\_Systems Menu

```
zPDT
File Edit Font Transfer Macro Options Window Help

Menu Utilities Options Help
-----
z/OS UNIX Mounted File Systems Row 1 from 69
Command ==> _____ Scroll ==> CSR

File System Name          Mount Point          Type
-----
+BAQ200.**
+BLZ601.**
+BUZ620.**
+CSQ800.**
+FEL951.**
+HAP850.**
+IEL450.**
+IGY520.**
+IZU.**
+JVA710.**
+JVA800.**
+JVB710.**
+JVB800.**
xa +PINNACLE.**
+ZFS.**
***** Bottom of data *****
```

# ISPF 3.17 File\_Systems Menu

zPDT

File Edit Font Transfer Macro Options Window Help

Menu Utilities Options Help

---

z/OS UNIX Mounted File Systems Row 1 from 69

Command ==> \_\_\_\_\_ Scroll ==> CSR

| File System Name          | Mount Point        | Type |
|---------------------------|--------------------|------|
| +BAQ200.**                |                    |      |
| +BLZ601.**                |                    |      |
| +BUZ620.**                |                    |      |
| +CSQ800.**                |                    |      |
| +FEL951.**                |                    |      |
| +HAP850.**                |                    |      |
| +IEL450.**                |                    |      |
| +IGY520.**                |                    |      |
| +IZU.**                   |                    |      |
| +JVA710.**                |                    |      |
| +JVA800.**                |                    |      |
| +JVB710.**                |                    |      |
| +JVB800.**                |                    |      |
| -PINNACLE.**              |                    |      |
| -PINNACLE.VAR.**          |                    |      |
| -PINNACLE.VAR.PRINTSRV.** |                    |      |
| PINNACLE.VAR.PRINTSRV.ZFS | /S0W1/var/Printsrv | ZFS  |

MA 0.1 a 21,6

# ISPF 3.17 File\_Systems Menu

```
zPDT
File Edit Font Transfer Macro Options Window Help

Menu Utilities Options Help

z/OS UNIX Mounted File Systems Row 1 from 48
Command ==> Scroll ==> CSR

Mount Point      File System Name      Type
-----
- /              ZFS.ADCDPL.ROOT       ZFS
+ /apps/*
+ /pinnacle      PINNACLE.ZFS          ZFS
+ /u              ZFS.ADCD22B.USERS     ZFS
+ /web            ZFS.ADCD22B.WEB       ZFS
+ /S0W1           ZFS.ADCD22B.SYSTEM    ZFS
+ /Z22B           ZFS.Z22B.VERSION      ZFS
***** Bottom of data *****
```

MA 0.1 a 4,15

# ISPF 3.17 File\_Systems Menu

zPDT

File Edit Font Transfer Macro Options Window Help

Mount z/OS UNIX File System

Command ==>

Mount Point . . . /var  +

File System Name

File System Type  New Owner . . . . .

Owning System . .  Character Set ID . .

Additional Mount Options

|                                                   |                                                    |
|---------------------------------------------------|----------------------------------------------------|
| <input type="checkbox"/> Read-only file system    | <input type="checkbox"/> Set automove attribute... |
| <input type="checkbox"/> Ignore SETUID and SETGID | <input type="checkbox"/> Enable text conversion    |
| <input type="checkbox"/> Bypass security          |                                                    |

Mount Parameter  +

MBA 0.2 a 2,15

# ISPF 3.17 File\_Systems Menu



Menu RefList RefMode Utilities Options File\_Systems Help

Create a zFS Aggregate and File System

Command ==> \_\_\_\_\_

Enter the fields as required then press Enter.

Aggregate name . . . . . \_\_\_\_\_  
Owning user . . . . . \_\_\_\_\_ (Number or user name)  
Owning group . . . . . \_\_\_\_\_ (Number or group name)  
Permissions . . . . . 750 (3 digits, each 0-7)  
Primary cylinders . . . . . \_\_\_\_\_  
Secondary cylinders . . . . . \_\_\_\_\_  
Storage class . . . . . \_\_\_\_\_  
Management class . . . . . \_\_\_\_\_  
Data class . . . . . \_\_\_\_\_  
Volume names . . . . . \_\_\_\_\_  
                                  \_\_\_\_\_  
                                  \_\_\_\_\_  
                                  \_\_\_\_\_

# ISPF 3.17 File\_Systems Menu



Attached zFS Aggregates

Row 1 to 17 of 37

Command ==>  Scroll ==> PAGE

Select an aggregate with a line command.  
A=Attributes L=List file systems E=Extend

| S | Aggregate Name    | Free Space | Total Space |
|---|-------------------|------------|-------------|
| - | BAQ200.BASE.ZFS   | 38415      | 38880       |
| - | BAQ200.CONFIG.ZFS | 58855      | 72000       |
| - | BAQ200.REL.ZFS    | 1823       | 581760      |
| - | BLZ601.CONFIG.ZFS | 566519     | 576000      |
| - | BLZ601.ZFS        | 3172951    | 3654720     |
| - | BUZ620.CONFIG.ZFS | 28679      | 115200      |
| - | BUZ620.ZFS        | 121087     | 216000      |
| - | CSQ800.ZFS        | 24471      | 195120      |
| - | FEL951.ETC.ZFS    | 35463      | 36000       |
| - | FEL951.RDZ.ZFS    | 1071       | 4320        |
| - | FEL951.UTIL.ZFS   | 558087     | 1994400     |
| - | FEL951.VAR.ZFS    | 34239      | 36000       |
| - | FEL951.ZEXPL.ZFS  | 68951      | 252000      |
| - | HAP850.ZFS        | 87319      | 144000      |
| - | IEL450.ZFS        | 863        | 2160        |
| - | IGY520.ZFS        | 1023       | 1440        |
| - | IZU.SIZUUSR       | 56284      | 90000       |



TIME for POR  
(Skip Robinson)

# TIME for POR

- P(ower) O(n) R(eset) used to be a regular activity
- Before dynamic IODF Activation, POR was required for the smallest change to hardware configuration
- Add, remove, or redefine DASD or tape
- POR is highly disruptive
- All LPARs on a CEC must be shut down
- z/OS, z/VM, Linux, Coupling Facility, ...
- Dynamic IODF Activation has almost eliminated POR
- Nonetheless, sometimes POR is still required
- Still, all LPARs must be shut down
- Still, the process is maximally disruptive
- S(ysplex) T(ime) P(rotocol) has introduced a new wrinkle
- If more than one CEC is configured in an STP network, a CEC needing POR must be deconfigured first



# TIME for POR

- Each CEC in an STP network has a defined role
- One CEC is 'preferred'
- One CEC is 'backup'
- A third CEC, if there is one, is 'arbiter'
- In order to POR a CEC, it must 'deconfigured'
- That is, neither preferred nor backup nor arbiter
- Otherwise POR is denied (with a message)
- To configure STP, logon to CEC Service Element (SOO)
- Locate Sysplex Time function
- A CEC must be 'unlocked' even to examine configuration
- To POR backup CEC, simply deconfigure it
- To POR preferred CEC, first reconfigure backup to preferred, then deconfigure the POR CEC
- Note: these changes must be made from each CEC SE

# Normal STP Network Configuration, Two CECs

| Timing Network                                                                                                                    | <b>Network Configuration</b> | STP Configuration                 | STP Status | ETS Configuration |
|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------|------------|-------------------|
| <i>Current Network Configuration</i>                                                                                              |                              |                                   |            |                   |
| Configured at (UTC):                                                                                                              |                              | 5/15/16 11:55:46 AM               |            |                   |
| Preferred time server (CPC)                                                                                                       |                              | ADCPRIM (STP ID: ADCCTN)          |            | ▼                 |
| Backup time server (CPC)                                                                                                          |                              | ADCSUPP (STP ID: ADCCTN)          |            | ▼                 |
| Arbiter                                                                                                                           |                              | Not configured                    |            | ▼                 |
| <input checked="" type="checkbox"/> <u>O</u> nly allow the server(s) specified above to be in the CTN                             |                              |                                   |            |                   |
| <input type="checkbox"/> <u>F</u> orce configuration                                                                              |                              |                                   |            |                   |
| <i>Current Time Server (CPC)</i>                                                                                                  |                              |                                   |            |                   |
| <input checked="" type="radio"/> <u>P</u> referred time server (CPC)                                                              |                              |                                   |            |                   |
| <input type="radio"/> <u>B</u> ackup time server (CPC)                                                                            |                              |                                   |            |                   |
| Coordinated timing network ID                                                                                                     |                              | ADCCTN - <input type="checkbox"/> |            |                   |
| <input type="button" value="Apply"/> <input type="button" value="Initialize Time..."/> <input type="button" value="Deconfigure"/> |                              |                                   |            |                   |

# Normal STP Network Configuration, Two CECs

 **System (Sysplex) Time - ADCPRIM** 

Timing Network

**Network Configuration**

STP Configuration

STP Status

ETS Configuration

*Current Network Configuration*

Configured at (UTC): 5/15/16 11:55:46 AM

Preferred time server (CPC) ADCPRIM (STP ID: ADCCTN) 

Backup time server (CPC) 

Not configured  
ADCPRIM (STP ID: ADCCTN)  
IOCSUPP  
ADCSUPP (STP ID: ADCCTN)

Arbiter

☒ Only allow the server(s) specified

☐ Force configuration

*Current Time Server (CPC)*

☒ Preferred time server (CPC)

☐ Backup time server (CPC)

Coordinated timing network ID ADCCTN 

Apply

Initialize Time...

Deconfigure

# Normal STP Network Configuration, Two CECs

- Once a CEC is deconfigured to STP, it can be PORED
  - After POR, reverse steps above to reestablish network
  - When you're done, all CECs should have original roles
  - To do all this, only SYSPROG authority is required
  - That is, SERVICE authority is not needed
  - CEC does not need to be put in Service mode
- 
- A note on who does what in your shop
  - IBM 'CE' may be tasked with this activity
  - Many shops do not have regular CE support
  - May not want to contract CE for simple POR activity
  - This can all be done by regular staff
  - Yes, it's safe to do this at (from) home



# Automating JES2 NJE

## (Skip Robinson)

# JES2 Network Resource Monitor

- This pitch was inspired by Tom Wasik 'What You May Have Missed'
- NJE is a cornerstone of mainframe enterprise systems
- Even within a single CEC, NJE connects multiple sysplexes/JESplexes
- Jobs and output move from one MAS to another over an NJE network
- NJE connections are built using various components or 'devices'
- These are controlled by manual JES2 console commands
- Or by automation products issuing commands directly to the system
- All automation products contain logic to manage NJE
- NJE components often stumble especially when a system gets IPLed

# JES2 Network Resource Monitor

- JES2 console commands are used to
  - start/stop individual 'devices' and connections (\$S, \$P)
  - monitor 'devices'/connections (\$DU)
- But JES2 itself provides a native facility to manage NJE:
- Network Resource Monitor
- Requires no other product or user-written application
- Each 'device' and connection can be (re)started automatically

# JES2 Network Resource Monitor

- NJE related parms include keywords to (re)start or (re)connect automatically
  - NJEDEF CONNECT=YES|NO
  - NODE(nn) CONNECT=YES|NO
  - LOGON(n) RESTART=YES|NO
  - APPL(xxx) CONNECT=YES|NO
  - LINE(nn) RESTART=YES|NO



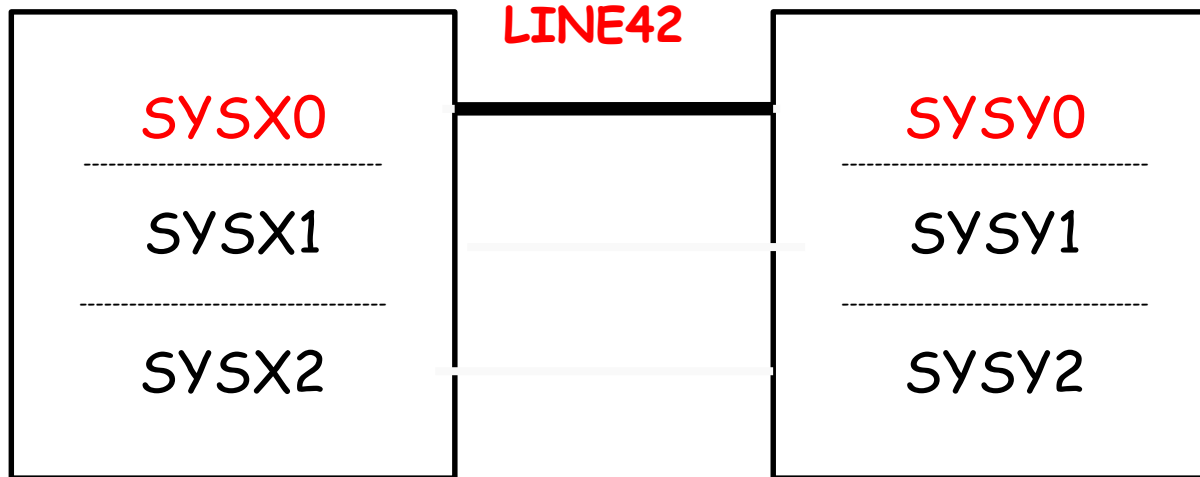
# JES2 Network Resource Monitor

- In NJE, every system in the enterprise can connect to every other system
- Simply define all resources as connectable and restartable
- However some shops may want to limit/control connections
- For example, only one designated system in a MAS should connect to another via NJE
- If connect/restart options are specified everywhere, errors will occur: messages, wrong results
- Every system tries to interconnect but resources not available
- Here is an example for connecting one node to another
- Single member to single member via one line
- (Don't ask why)

# NJE Network Example

JESplexX (Node22)

JESplexY (Node33)



# Enterprise-wide definitions

/\* Enterprise-wide common section, define all NJE resources in all JESplexes \*/

APPL(JESNJEX0) NODE=22,CONNECT=NO

APPL(JESNJEX1) NODE=22,CONNECT=NO

APPL(JESNJHEY0) NODE=33,CONNECT=NO

APPL(JESNJHEY1) NODE=33,CONNECT=NO

...

LINE(nn) UNIT=SNA,RESTART=NO

LINE(42) UNIT=SNA,RESTART=NO

LINE(nn) UNIT=SNA,RESTART=NO

...

Note that all 'devices'/connections specify 'NO'

# JESplex/MAS definitions

---

/\* JESplex/MAS common section \*/

/\* Defined for all systems in one JESplex \*/

LOGON(1) APPLID=JESNJE&SYSCLONE /\* Defined for  
all members \*/

NJEDEF ...OWNNODE=22...

# Member specific definitions

/\* MEMBER UNIQUE SECTION FOR NJE \*/

/\* Only this MAS member performs NJE functions for this node \*/

/\* Other MAS members contain no NJE definitions \*/

/\* This parm is concatenated last \*/

NJEDEF CONNECT=(YES,ss) /\* Retry interval \*/

LOGON(1) RESTART=YES

**NODE(33)** CONNECT=YES /\* Defined target for NJE \*/

**LINE(42)** RESTART=YES /\* Defined line for NJE \*/

**APPL(JESNJEO)** **LINE=42**,CONNECT=YES /\* Target system via this line \*/

# Acknowledgments Both Knowing and Unknowing

---

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- Steve McGarrill (IBM)
- Sam Reynolds (IBM)
- Bill Schoen (IBM)
- Bob Shannon (Rocket)
- Carl Youngren (Ret)



See You in  
Providence

(The one in Rhode Island)