

# *Bit Bucket x'31'*

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SHARE 124  
Session 16458  
Seattle, WA  
6 March 2015





Secure Socket to Me  
(Tom Conley)

# SSL for TN3270

- Don't assume that your internal network is friendly
- You should encrypt traffic on your internal network to prevent passwords from going out in the clear
- A robust implementation would use IPSec, AT/TLS to encrypt all traffic on your internal network, but that implementation is time-consuming
- You can easily encrypt TN3270 traffic by enabling SSL, ensuring passwords are not in the clear
- While not the only way in, TN3270 is a significant percentage of mainframe network traffic, and used by most trusted users on the system

# SSL for TN3270

- Setting up SSL for TN3270 using self-signed certificate and key database takes about 10 minutes
- <http://www.tombrennansoftware.com/bb/viewtopic.php?f=3&t=51> shows how to create key database with self-signed certificate, but steps missing due to updates in gskkyman
- <http://www.tombrennansoftware.com/bb/viewtopic.php?f=3&t=50> shows how to create a RACF keyring with a self-signed certificate
- If your company has their own Certificate Authority (CA), you can sign certificate with that CA
- Self-signed cert gets you encrypted quickly, you can upgrade to a CA cert later

IBMUSER:/u/ibmuser: >gskkyman

Database Menu

- 1 - Create new database
- 2 - Open database
- 3 - Change database password
- 4 - Change database record length
- 5 - Delete database
- 6 - Create key parameter file
- 7 - Display certificate file (Binary or Base64 ASN.1 DER)

- 11 - Create new token
- 12 - Delete token
- 13 - Manage token
- 14 - Manage token from list of tokens

0 - Exit program

Enter option number:

===> 1

RUNNING

ESC=¢    1=Help    2=SubCmd    3=HlpRetrn    4=Top    5=Bottom    6=TSO  
          7=BackScr    8=Scroll    9=NextSess    10=Refresh    11=FwdRetr    12=Retrieve

- 11 - Create new token
- 12 - Delete token
- 13 - Manage token
- 14 - Manage token from list of tokens

0 - Exit program

Enter option number: 1

Enter key database name (press ENTER to return to menu): pinnacle.kdb

Enter database password (press ENTER to return to menu):

Re-enter database password:

Enter password expiration in days (press ENTER for no expiration):

Enter database record length (press ENTER to use 5000):

Enter 1 for FIPS mode database or 0 to continue: 0

Key database /u/ibmuser/pinnacle.kdb created.

Press ENTER to continue.

===> █

INPUT

ESC=␣	1=Help	2=SubCmd	3=HlpRetrn	4=Top	5=Bottom	6=TSO
	7=BackScr	8=Scroll	9=NextSess	10=Refresh	11=FwdRetr	12=Retrieve

## Key Management Menu

Database: /u/ibmuser/pinnacle.kdb

Expiration: None

- 1 - Manage keys and certificates
- 2 - Manage certificates
- 3 - Manage certificate requests
- 4 - Create new certificate request
- 5 - Receive requested certificate or a renewal certificate
- 6 - Create a self-signed certificate
- 7 - Import a certificate
- 8 - Import a certificate and a private key
- 9 - Show the default key
- 10 - Store database password
- 11 - Show database record length
  
- 0 - Exit program

Enter option number (press ENTER to return to previous menu):

===&gt; 6

RUNNING

ESC=␣	1=Help	2=SubCmd	3=HlpRetrn	4=Top	5=Bottom	6=TSO
	7=BackScr	8=Scroll	9=NextSess	10=Refresh	11=FwdRetr	12=Retrieve

- 1 - CA certificate
- 2 - User or server certificate

Select certificate usage (press ENTER to return to menu): 1

### Certificate Key Algorithm

- 1 - Certificate with an RSA key
- 2 - Certificate with a DSA key
- 3 - Certificate with an ECC key

Select certificate key algorithm (press ENTER to return to menu): 1

### RSA Key Size

- 1 - 1024-bit key
- 2 - 2048-bit key
- 3 - 4096-bit key

Select RSA key size (press ENTER to return to menu):

===> █

RUNNING

ESC=⌘ 1=Help 2=SubCmd 3=HlpRetrn 4=Top 5=Bottom 6=TSO  
7=BackScr 8=Scroll 9=NextSess 10=Refresh 11=FwdRetr 12=Retrieve



RSA Key Size

- 1 - 1024-bit key
- 2 - 2048-bit key
- 3 - 4096-bit key

Select RSA key size (press ENTER to return to menu): 3

Signature Digest Type

- 1 - SHA-1
- 2 - SHA-224
- 3 - SHA-256
- 4 - SHA-384
- 5 - SHA-512

Select digest type (press ENTER to return to menu): 5

Enter label (press ENTER to return to menu): pinnacle.cert

Enter subject name for certificate

Common name (required):

===> █

RUNNING

ESC=⌘    1=Help    2=SubCmd    3=HlpRetrn    4=Top    5=Bottom    6=TSO  
           7=BackScr    8=Scroll    9=NextSess    10=Refresh    11=FwdRetr    12=Retrieve

- 1 - SHA-1
- 2 - SHA-224
- 3 - SHA-256
- 4 - SHA-384
- 5 - SHA-512

Select digest type (press ENTER to return to menu): 5

Enter label (press ENTER to return to menu): pinnacle.cert

Enter subject name for certificate

Common name (required): pinnacle.tn3270

Organizational unit (optional):

Organization (required): Pinnacle Consulting Group, Inc.

City/Locality (optional):

State/Province (optional):

Country/Region (2 characters - required): US

Enter number of days certificate will be valid (default 365): 9999

Enter 1 to specify subject alternate names or 0 to continue: 0

Please wait .....

===> █

RUNNING

ESC=␣ 1=Help 2=SubCmd 3=HlpRetrn 4=Top 5=Bottom 6=TSO  
7=BackScr 8=Scroll 9=NextSess 10=Refresh 11=FwdRetr 12=Retrieve

5 - SHA-512

Select digest type (press ENTER to return to menu): 5

Enter label (press ENTER to return to menu): pinnacle.cert

Enter subject name for certificate

Common name (required): pinnacle.tn3270

Organizational unit (optional):

Organization (required): Pinnacle Consulting Group, Inc.

City/Locality (optional):

State/Province (optional):

Country/Region (2 characters - required): US

Enter number of days certificate will be valid (default 365): 9999

Enter 1 to specify subject alternate names or 0 to continue: 0

Please wait .....

Certificate created.

Press ENTER to continue.

===> █

RUNNING

ESC=⌘ 1=Help 2=SubCmd 3=HlpRetrn 4=Top 5=Bottom 6=TSO  
7=BackScr 8=Scroll 9=NextSess 10=Refresh 11=FwdRetr 12=Retrieve

# SSL for TN3270

- Key database and certificate now created
- Specify key database in TN3270 parmlib member

```
TelnetParms          ; Standard TN3270E Telnet server port
  Secureport 1234
  KEYRING HFS /u/ibmuser/pinnacle.kdb
  Conntype secure
  ClientAuth None
  SSLtimeout 10
  SSLv2
```

- Recycle TN3270 server, OBEYFILE usually fails
- Attempt connection with TN3270 SSL client



# Hardware Management Heaven

(Ed Jaffe)

## A Blast from the Past!



- In providing support for a customer, we got a look at their HMC.
- It looked very much like the one that first arrived with the original 9672-Rx1 back in 1994!
- In discussing this, we learned that the customer was unaware that newer, more functional HMC interfaces have been implemented in recent years. The customer was happy to learn about this.
- This episode reminded me of my HMC Bit Bucket presentation from Atlanta (six SHAREs ago) called "View from the Topo" in which I described the HMC's topology view (subset of the Tree Style interface).
- This is a re-visitation of that discussion...

# HMC Classic Style - A Blast from the Past!

HMC: Hardware Management Console Workplace (Version 2.12.1) - Mozilla Firefox

https://192.168.10.239/hmc/connects/mainuiFrameset.jsp

### Views

Groups Exceptions Active Tasks Console Actions Task List Books Help

### Groups Work Area

CPC Images Defined CPCs HMC Optical Network and System I/O Undefined CPCs

Undefined Directors/Timers Undefined Fiber Savers

### Daily

Hardware Messages

Operating System Messages

Grouping

1. Sequentially loop through task lists until you find the right one or randomly choose from "Task Lists"
2. Select the object or group upon which the action is to be performed
3. Drag & drop or select and double-click

Transferring data from 192.168.10.239...

# HMC Tree Style - Much Easier to Use and a Necessity for Some Configuration Options

**Hardware Management Console** IBM. edjx | Help | Logoff

← → Home Refresh Print

- Welcome
- Systems Management
  - Systems
    - P00C9632
- Ensemble Management
- HMC Management
- Service Management
- Tasks Index

**Welcome** ( [HMC Version](#) )

Welcome to the Hardware Management Console (HMC). From here you can manage this HMC as well as servers, images, ESCON directors, Sysplex timers, fiber savers, and other resources. Available with the appropriate code level, the Unified Resource Manager can also manage ensembles. Click on the links in the navigation pane at the left to begin.

	<b>Systems Management</b>	Manage systems (CPCs), images, ESCON directors, Sysplex timers, fiber savers, and custom groups. Set up, configure, view current status, troubleshoot, and apply solutions.
	<b>Ensemble Management</b>	Manage systems (CPCs) in an Ensemble and its workloads, hypervisors, virtual servers, storage, and networks.
	<b>HMC Management</b>	Perform tasks associated with the management of this HMC.
	<b>Service Management</b>	Perform tasks associated with servicing this HMC.
	<b>Tasks Index</b>	Perform tasks by selecting them from a list including task name, description, permitted objects, and execution frequency.
	<b>Status Bar</b>	Click on the icons in the status bar to display details of status and messages.

**Additional Resources**

- What's New** Introduces the latest features of the console.
- Online Information** Additional related online information.
- Library** Additional documents.

Status: Hardware Messages

Transferring data from 192.168.10.239...



# HMC Tree Style with a CPC Selected

Hardware Management Console

Systems Management > **Systems**

Systems Images Topology

Topology tab opens an easy-to-use view

S ^	Name ^	Status ^	Activation Profile ^	Last Used Profile ^	Machine Type - Model ^	Machine Serial ^
<input checked="" type="radio"/>	P00C9632	Operating	STANDARD	STANDARD	2828 - H06	0000200C9632

Max Page Size: 10 Total: 1 Filtered: 1 Selected: 1

Tasks: P00C9632

- CPC Details
- Toggle Lock
- Daily**
  - Activate
  - Deactivate
  - Grouping
  - Hardware Messages
  - Operating System Messages
- Recovery**
  - Single Object Operations

- Service**
  - Archive Security Logs
  - Backup Critical Data
  - Perform Problem Analysis
  - Report a Problem
  - Service Status
  - Transmit Service Data
  - View PMV Records
  - View Service History
- Change Management**
  - Alternate Support Element
  - Change Internal Code
  - Concurrent Upgrade Engineering Changes (ECs)
  - Retrieve Internal Code
  - Single Step Internal Code Changes
  - System Information
- Remote Customization**
  - Customer Information
  - Remote Service
- Operational Customization**
  - Automatic Activation
  - Change LPAR Controls
  - Change LPAR Group Controls
  - Change LPAR I/O Priority Queuing
  - Customize/Delete Activation Profiles
  - Customize Scheduled Operations
  - Customize Support Element Date/Time

- Configuration**
  - Manage Flash Allocation
  - System (Sysplex) Time
  - System Input/Output Configuration Analyzer
  - Transmit Vital Product Data
  - View Frame Layout
- Energy Management**
  - Set Power Cap
  - Set Power Saving
- Monitor**
  - Environmental Efficiency Statistics
  - Monitors Dashboard

Tasks automatically adapt as needed for selected object and all choices can be expanded with a single click!

Status: Hardware Messages

Transferring data from 192.168.10.239...

# HMC Topology View

## Hardware Management Console



edjx | Help | Logoff

Systems Management > **Systems**

Systems Images Topology

Click to expand

- Tree
- Hierarchical
- Circular
- Uniform Length
- Grid
- Refresh

**P00C9632**

Total: 1 Selected: 0

Status: Hardware Messages

Transferring data from 192.168.10.239...

# HMC Topology - Tree Layout

The screenshot displays the IBM Hardware Management Console interface. The main window shows a tree topology layout for the system **P00C9632**. The central node is **P00C9632**, which is connected to several child nodes: **VM80**, **MVSA0**, **MVS70**, **MVS60**, **VSEB0**, **LINUX**, **CF01**, and **CF02**. Each node is represented by a small tree icon. The interface includes a left-hand navigation pane with sections like **Welcome**, **Systems Management**, **Ensemble Management**, **HMC Management**, **Service Management**, and **Tasks Index**. The top right corner shows the user **edjx** and options for **Help** and **Logoff**. The bottom status bar indicates **Total: 9 Selected: 0** and shows a progress bar for **Transferring data from 192.168.10.239...**

# HMC Topology - Hierarchical Layout

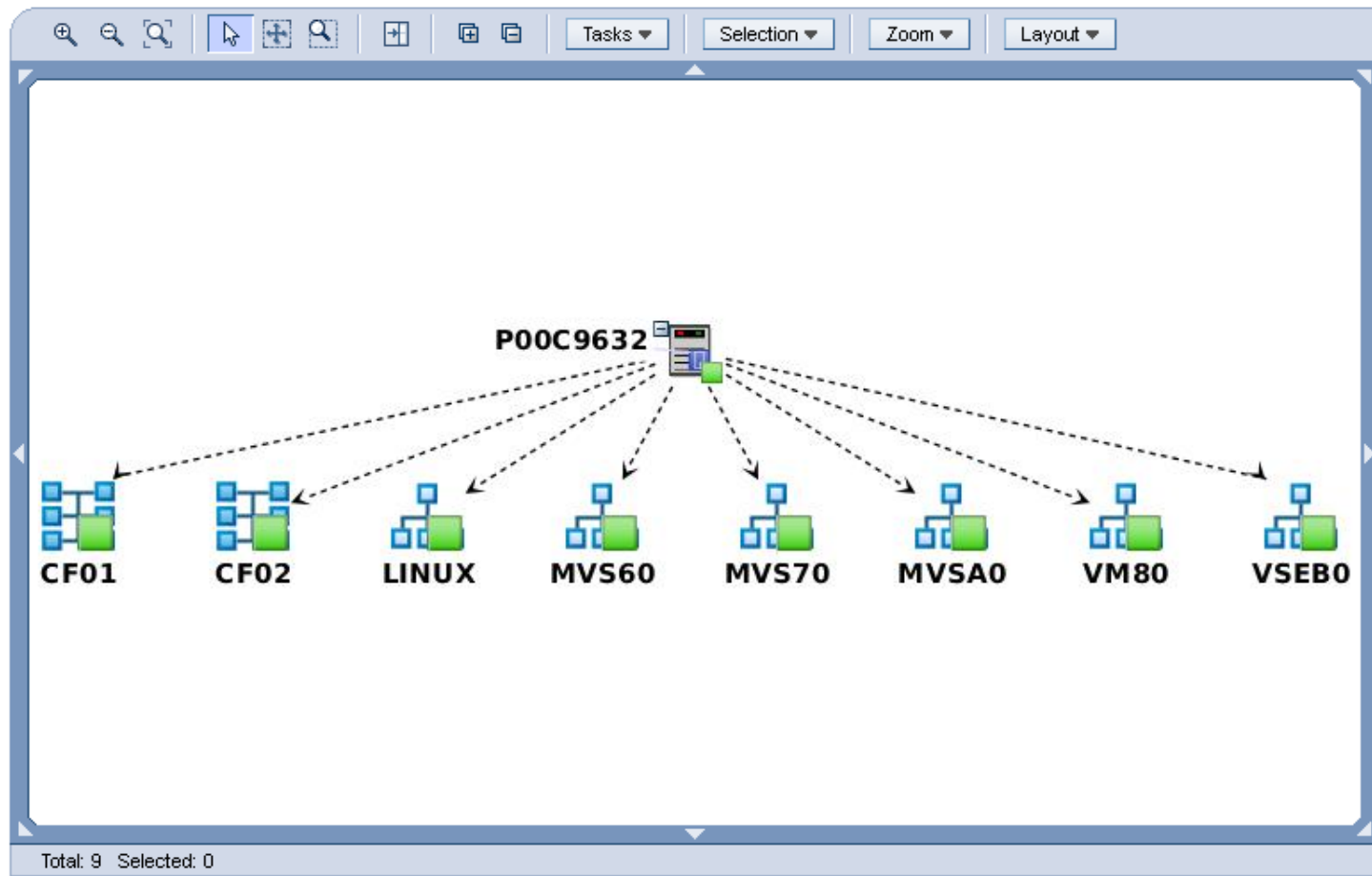
Hardware Management Console

IBM

edjx | Help | Logoff

Systems Management > **Systems**

Systems Images Topology



Status: Hardware Messages

Transferring data from 192.168.10.239...

# HMC Topology - Circular Layout

Hardware Management Console

IBM

edjx | Help | Logoff

Systems Management > **Systems**

Systems Images Topology

Welcome

Systems Management

Systems

P00C9632

Ensemble Management

HMC Management

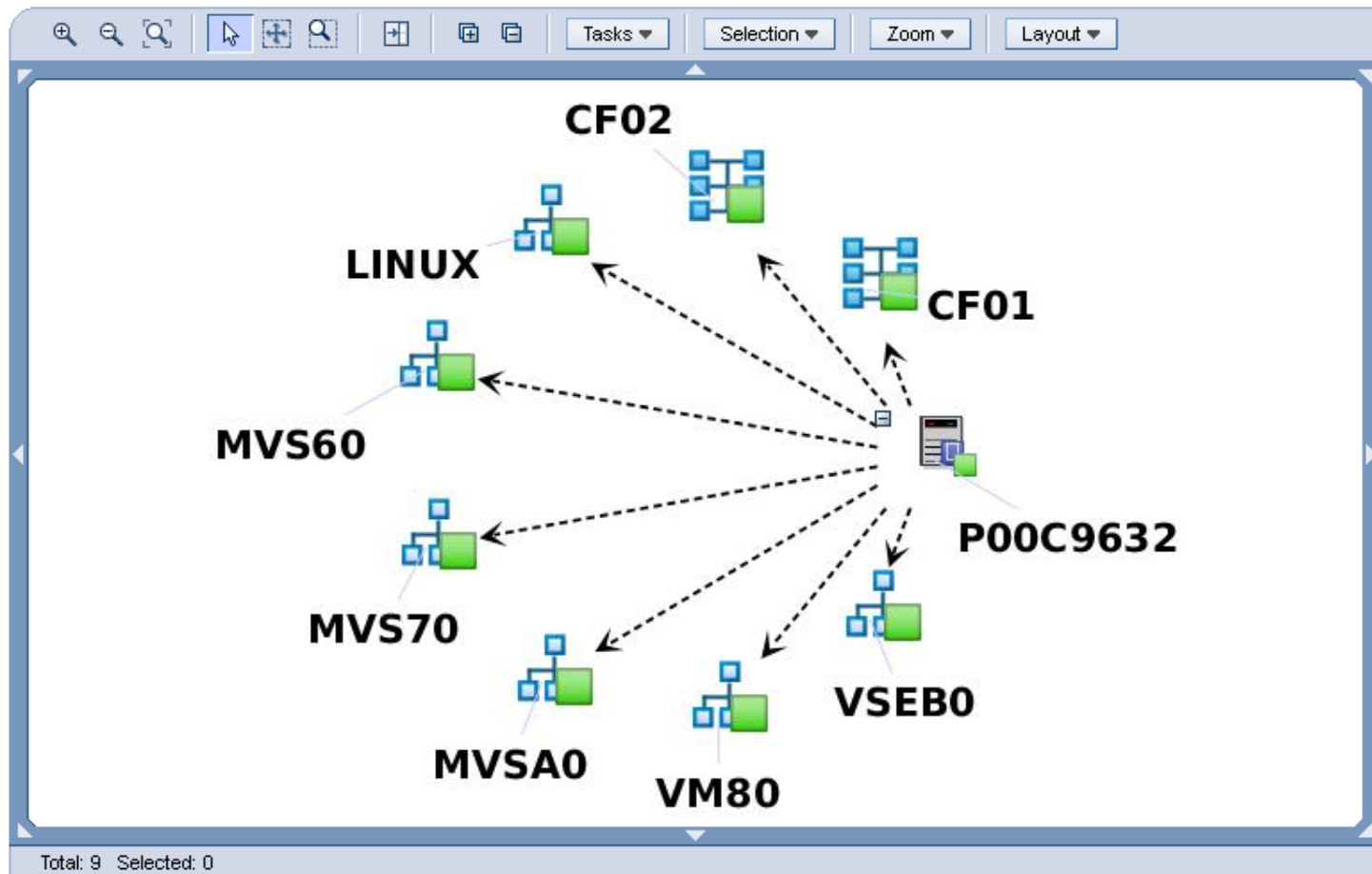
Service Management

Tasks Index

Status: Hardware Messages



Transferring data from 192.168.10.239...



# HMC Topology - Uniform Length Layout

The screenshot displays the IBM Hardware Management Console interface. The main window shows a topology diagram for system **P00C9632**. The diagram is a uniform length layout where the central system is connected to eight other systems: **VM80**, **MVSA0**, **MVS70**, **MVS60**, **LINUX**, **CF02**, **CF01**, and **VSEB0**. Each connection is represented by a dashed arrow pointing from the central system to the peripheral system. The interface includes a left-hand navigation pane with sections like **Welcome**, **Systems Management**, **Ensemble Management**, **HMC Management**, **Service Management**, and **Tasks Index**. The top right corner shows the user **edjx** and options for **Help** and **Logoff**. The bottom status bar indicates **Total: 9 Selected: 0** and shows a progress bar for **Transferring data from 192.168.10.239...**

# HMC Topology - Grid Layout

## Hardware Management Console

IBM

edjx | Help | Logoff

Systems Management > **Systems**

Systems Images Topology

Tasks Selection Zoom Layout



Total: 9 Selected: 0

Status: Hardware Messages

Transferring data from 192.168.10.239...

# HMC Topology - All Layouts Support Zoom In/Out

The screenshot displays the IBM Hardware Management Console (HMC) interface. The main window is titled "Systems Management > Systems" and shows a topology diagram. The diagram consists of three system nodes: 1VS60, MVS70, and MVSA0, connected by a dashed line. The MVS70 node is highlighted in green. The interface includes a navigation pane on the left with sections for Welcome, Systems Management, Ensemble Management, HMC Management, Service Management, and Tasks Index. The top right corner shows the user name "edix" and options for Help and Logoff. The main window has a toolbar with icons for zooming and cursors, and a menu bar with options for Tasks, Selection, Zoom, and Layout. Red arrows point to the zoom and cursor controls in the toolbar. A text box labeled "zoom controls" and another labeled "cursor controls" are positioned below the toolbar. A right-click menu is shown over the MVS70 node, with a text box indicating "right-click menu supports zoom-to and center-here". The status bar at the bottom shows "Total: 9 Selected: 0" and a progress indicator "Transferring data from 192.168.10.239...".

Hardware Management Console

Systems Management > Systems

Systems Images Topology

zoom controls cursor controls

1VS60 MVS70 MVSA0

Zoom To Center here

right-click menu supports zoom-to and center-here

Status: Hardware Messages

Total: 9 Selected: 0

Transferring data from 192.168.10.239...



# HMC Topology - Zoomed Grid Layout with Overview

The screenshot displays the IBM Hardware Management Console (HMC) interface. The main window shows a zoomed-in grid layout of system topology. A central green square represents the system **MVS70**, with several blue squares representing other systems connected to it. A dashed double-headed arrow indicates the zoomed area. A red box labeled "overview control" points to a small icon in the toolbar. On the right, an "Overview" window shows a smaller version of the topology with a blue box highlighting the zoomed area. The interface includes a left sidebar with navigation options like "Systems Management", "Ensemble Management", and "HMC Management". The top right corner shows the IBM logo and user information "edjx | Help | Logoff". The bottom status bar indicates "Status: Hardware Messages" and "Total: 9 Selected: 0". A system message at the bottom reads "Transferring data from 192.168.10.239..."

# HMC Topology - Select Object to Activate its Menu

The screenshot displays the IBM Hardware Management Console (HMC) interface. The main window is titled "Systems Management > Systems" and shows the "Topology" view. A tree diagram is visible, with a green square object selected. A blue box highlights this object, and a dashed arrow points from it to the right. The interface includes a navigation pane on the left, a toolbar at the top, and an overview window on the right. The status bar at the bottom indicates "Total: 9 Selected: 1".

Hardware Management Console

Systems Management > Systems

Systems Images Topology

Welcome

Systems Management

Systems

P00C9632

Ensemble Management

HMC Management

Service Management

Tasks Index

Status: Hardware Messages

Transferring data from 192.168.10.239...

Overview

Total: 9 Selected: 1

# HMC Topology - Click >> to Expose Menu for Object

## Hardware Management Console

edjx | Help | Logoff

Systems Management > **Systems**

Systems Images Topology

Tasks Selection Zoom Layout

Overview

MVS70

- Image Details
- Toggle Lock
- Daily
- Recovery
- Operational Customization
- Zoom To
- Center here
- Access Removable Media
- Integrated 3270 Console
- Integrated ASCII Console
- Load
- Load from Removable Media or Server
- PSW Restart
- Reset Clear
- Start All
- Stop All

Status: Hardware Messages

Total: 9 Selected: 1

javascript:menuItemLaunchAction();



zPotpourri  
(Sam Knutson)

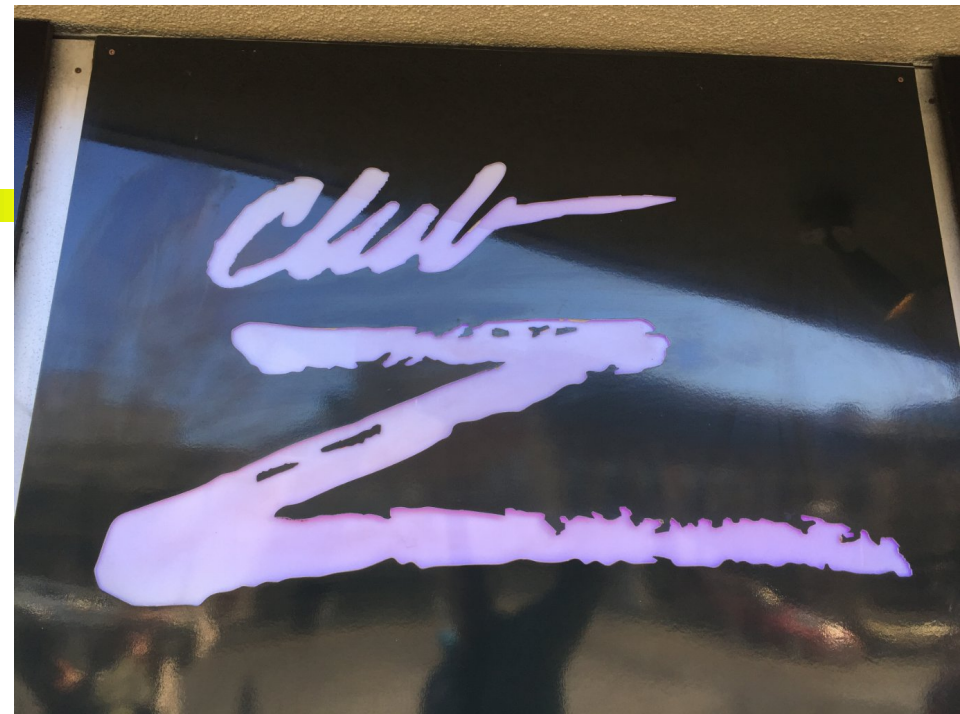
# Seattle all about the z



- Why IBM  
Z  
Systems?



## Seattle all about the z



- the "z" stands for "zero down time."
- With a MTTF of over 40 years it's all about the z

# FOIL

- foil n. Viewgraph, transparency, viewfoil - a thin sheet or leaf of transparent plastic material used for "overhead" projection of illustrations (visual aids).
- the term "Foil" was widely used in IBM and SHARE...
- the acronym originally stood for "Foil Over Incandescent Light".
- This therefore seems to be IBM's first attempt at a recursive language.
- FOILS5 program gave us a style of presentations and printed handouts that is burned into our collective memory

## SHARE 86 - Interesting MVS APARs More Cancel Enhancement

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### APAR OW14392

- Release - MVS/SP 5.1.0 and up
- Function - Cancel Enhancement (also known as Parallel Detach) was shipped with MVS/SP 5.1.0 to resolve deadlock situations during termination (such as CANCEL) of an address space. This APAR provides further enhancement to relieve the situation as described in SUG APAR OW13452.
- PTFs - UW21981, UW21982, UW21983

# Some Assembly Required

- Dr. John Erhman Old books and presentations
  - <http://www-01.ibm.com/software/awdtools/hlasm/share.html>
  - To get a deeper understanding of IBM's High Level Assembler and Toolkit Feature, view or download these SHARE presentations (written by John Ehrman of the IBM Silicon Valley Laboratory)
  - Extending the Life Cycle of Legacy Applications: Specific to Assembler Language
  - Finding and Fixing Assembler Language Problems: How High Level Assembler Can Help
  - Assembler Language as a Higher Level Language: Macros and Conditional Assembly Techniques
  - Continuing to profit from legacy Assembler code
  - More...

## Overview

Overview: How HLASM Can Help
<ul style="list-style-type: none"><li>- Things HLASM can help with:<ul style="list-style-type: none"><li>- Information available in the listing<ul style="list-style-type: none"><li>- The program being assembled</li><li>- The assembly environment</li><li>- How to reveal possibly-hidden information</li></ul></li><li>- Useful options</li><li>- Optional diagnostics</li><li>- Macro-related information and problem solving</li><li>- Other things worth noting</li></ul></li><li>- Things HLASM can't help with: (Sorry!)</li><li>- Problems with program structure, logic, or style<ul style="list-style-type: none"><li>- HLASM Toolkit components can help with these</li></ul></li><li>- Problems with using the wrong files (such as libraries)</li><li>- Resource constraints (but HLASM can sometimes cope)</li></ul>

The High Level Assembler for MVS & VM & VSE provides extensive information about the programs it assembles and the assembly environment, and supports flexible controls over both the displayed information and diagnostics to be applied to the program.

This document summarizes many ways to benefit from the capabilities of the High Level Assembler, particularly for locating problems with Assembler Language programs.

High Level Assembler is designed to assemble programs efficiently, but it does not try to create an "overview" or comprehensive analysis of the program as a whole. Thus, matters such as coding style, program structure and organization, and logic are largely invisible to the assembler. Certain statements with wide-ranging effects, such as USING instructions, are analyzed with care, but this analysis is based only on the information known at the time the statement is processed.

The High Level Assembler for MVS & VM & VSE Toolkit Feature provides several components that can help with understanding and managing programs "in the large" such as the Interactive Debug Facility, the Program Understanding Tool, and the Source Cross-Reference Utility.



# Some Assembly Required

- Long awaited a NEW Assembler book from Dr. John Erhman released this year
- Assembler Language Programming for IBM z System™ Servers Version 1.00
- 1279 pages, How & Why, Exercises
- \$0 == Priceless!
- Marist College web site:
- <http://idcp.marist.edu/enterprisesystemseducation/Assembler%20Language%20Programming%20for%20IBM%20z%20System%20Servers.pdf>
- Or <http://tinyurl.com/qcnzrwc>





MVS is a Tur(n)key  
(Sam Knutson)

# Hercules - What is it?



- Hercules is a System/370, ESA/390 and z/Architecture emulator which can IPL and execute most of the instructions defined for these architectures. It can also emulate CKD and FBA DASD, printer, card reader, tape, channel-to-channel adapter, and local non-SNA 3270 devices.
- Currently runs under Linux, Windows, Mac OS X
- Capable of running nearly all software written for S/370, ESA/390 and z/Architecture
- Hercules Home Page <http://www.hercules-390.org>
- Active User Community on Yahoo Groups include hercules-390, H390-MVS, turnkey-mvs, H390-VM, more!
- <http://groups.yahoo.com/group/hercules-390>

## MVS 3.8j Tur(n)key 4- System



- MVS 3.8j Tur(n)key 4- ("TK4-") is a ready to use OS/VS2 MVS 3.8j system built specifically to run under the Hercules System/370, ESA/390, and z/Architecture Emulator. It is an extension of the original MVS Tur(n)key Version 3 System ("TK3") created by Volker Bandke in 2002. See the User's Manual for credits and copyrights.
- TK4- update created by Juergen Winkelmann
- <http://wotho.ethz.ch/tk4-/> provides the downloads includes a user guide, optional source code, optional CBT DASD, and the most current copy of TK- along with incremental updates if you have downloaded it previously.
- TK4- is a personal preference of the author on how to operate and maintain a vintage MVS system.

## MVS 3.8j Tur(n)key 4- System



- Downloaded in about 10 minutes
- Unzip everything takes about 500M
- Double click MVS.BAT
- TN3270 to localhost port 3270
- At this point everything works but you may now want to read the user manual 😊
- You will find the USERID and Password to logon which is HERCO1 CUL8TR

# MVS 3.8j Tur(n)key 4- System



Vista TN3270 Session A

File Edit Font Transfer Macro Options Window Help

Hercules Version : 4.00  
Host name : DTW127512N01  
Host OS : Windows-6.1.7601 7 Professional 64-bit  
Host Architecture : Intel(R) x64  
Processors : LP=4, Cores=2, CPUs=1  
LPAR Name : HERCULES  
Device number : 0:00C0

```

*****
**  **  **  **  **
**  **  **  **  **
      **  **
**  **  **  **
**  **  **  **
**  **  **  **
**  **  **  **
**  **  **  **
**  **  **  **
*****

```

77777 /, .-.-.-.-.-, -  
|,4- ) )-.-.-.-.- ( ( )  
-.-.-.-.- ( /-.-.-.-.- ) \_

The MVS 3.8j  
Tur(n)key System

TK3 created by Volker Bandke vbandke@bsp-gmbh.com  
TK4- update by Juergen Winkelmann winkelmann@id.ethz.ch  
see TK4-.CREDITS for complete credits

M 0.0 03/05/15.064 04:50PM localhost a 1,1

# MVS 3.8j Tur(n)key 4- System



- System is ready to use with many tools that you might also find work and would be useful on z/OS
- REVIEW (RFE) & IMON  
<http://www.prycroft6.com.au/software.html>
- RPF [http://members.quicknet.nl/rn.prins/Rpf\\_En.htm](http://members.quicknet.nl/rn.prins/Rpf_En.htm)

```
Terminal CUU0C0                               Date 23.11.13
System   TK4-                                 Time 16:30:35
TSO User HERC01

Option ==> 1

                The MVS 3.8j Tur(n)key System
                TK Level 4- PUT 8505

                TSO Applications

1  RFE           "SPF like" productivity tool
2  RPF           "SPF like" productivity tool
3  IM            IMON/370 system monitor
4  QUEUE        spool browser
5  HELP         general TSO help
6  UTILS        information on utilities and commands available
7  TERMTEST     verify 3270 terminal capabilities

PF3=Exit
```

TK4-

# MVS 3.8j Tur(n)key 4- System



- HTTP Console for Hercules is below which you access using a Web browser on your PC <http://localhost:8038/>

**Hercules System Log**

```
02.13.19          $HASP160 PRINTER2 INACTIVE - CLASS=Z
02.13.19 TSU      1 $HASP250 HERC01 IS PURGED
02.13.24          LGN001I TSO logon in progress at VTAM terminal CUU0C0
02.13.33          RAKF0004 INVALID ATTEMPT TO ACCESS SYSTEM: USER:HERC01
02.13.37 TSU      2 $HASP100 HERC01 ON TSOINRDR
02.13.37 TSU      2 $HASP273 HERC01 STARTED
02.13.37 TSU      2 IEF125I HERC01 - LOGGED ON - TIME=02.13.37
02.28.05 STC     21 $HASP150 MF1 ON PRINTER1 216 LINES
02.28.05          $HASP160 PRINTER1 INACTIVE - CLASS=A
02.28.05 SIC     21 IRB101I MF/1 REPORT AVAILABLE FOR PRINTING
02.28.09          $HASP000 OK
13.40.49          $HASP000 OK
13.40.49 STC     21 $HASP150 MF1 ON PRINTER1 216 LINES
13.40.49          $HASP160 PRINTER1 INACTIVE - CLASS=A
13.40.49 STC     21 IRB101I MF/1 REPORT AVAILABLE FOR PRINTING
13.40.49 TSU      2 IEF450I HERC01 IKJACCNT TSOLOGON - ABEND S522 U0000 - TIME=13.40.49
13.40.49 TSU      2 IEF126I HERC01 - LOGGED OFF - TIME=13.40.49
13.40.49 TSU      2 $HASP395 HERC01 ENDED
13.40.49 TSU      2 $HASP150 HERC01 ON PRINTER2 169 LINES
13.40.49          $HASP160 PRINTER2 INACTIVE - CLASS=Z
13.40.49 TSU      2 $HASP250 HERC01 IS PURGED
HHC01018I 0:00C1 COMM: client 127.0.0.1 devtype 3270: connected
```

Command:  Send

Auto Refresh Refresh Interval:



# MVS 3.8j Tur(n)key 4- System



- If you want an MVS console on HTTP Console for Hercules issue attach 010 3270 CONS
- Connect a TN3270 to Hercules with LUNAME CONS. I like Vista 3270 from Tom Brennan <http://www.tombrennansoftware.com/>
- Then issue /v 010,console,auth=all at the HTTP Console

```
Vista TN3270 Session B
File Edit Font Transfer Macro Options Window Help
[Toolbar icons]
STC 21 $HASP150 MF1 ON PRINTER1 214 LINES
$HASP160 PRINTER1 INACTIVE - CLASS=A
STC 21 IRB101I MF/1 REPORT AVAILABLE FOR PRINTING
STC 21 $HASP150 MF1 ON PRINTER1 214 LINES
$HASP160 PRINTER1 INACTIVE - CLASS=A
STC 21 IRB101I MF/1 REPORT AVAILABLE FOR PRINTING
STC 21 $HASP150 MF1 ON PRINTER1 214 LINES
STC 21 IRB101I MF/1 REPORT AVAILABLE FOR PRINTING
$HASP160 PRINTER1 INACTIVE - CLASS=A
STC 21 $HASP150 MF1 ON PRINTER1 214 LINES
$HASP160 PRINTER1 INACTIVE - CLASS=A
STC 21 IRB101I MF/1 REPORT AVAILABLE FOR PRINTING
00 STC 21 $HASP150 MF1 ON PRINTER1 214 LINES
$HASP160 PRINTER1 INACTIVE - CLASS=A
STC 21 IRB101I MF/1 REPORT AVAILABLE FOR PRINTING
IEE102I 14.05.53 15.065 ACTIVITY FRAME LAST F E 1A
00009 JOBS 00006 INITIATORS
00001 TIME SHARING USERS
00001 ACTIVE 00040 MAX VTAM TSO USERS

IEE152I ENTER CANCEL D C,K
-
IEE163I MODE= RD

M 0.0 03/06/15.065 08:19AM localhost a 22,3
[Windows taskbar]
```



# Irreconciled Differences (Skip Robinson)

# Irreconciled Differences

- We use Netview System Automation (SA)
- We depend heavily on it for
  - Startup and shutdown
  - Task restart
  - Message handling
    - To respond to WTOR
    - To take some other action
- Our first z/OS V2.1 was IPLed on a sandbox system
- Member of a small, fully functional parallel sysplex
- Like all our sysplexes, 'everything is shared'
- Had been running R13 since our ESP days
- Now running different levels--SOP for new rollout

# Irreconciled Differences



- Most everything came up fine
- System Automation did not
- All kinds of errors and failures
- Especially with message handling
- Under R13 everything worked fine
- Used all the same files except sysres-resident
  
- We opened SR with IBM: Level 2 was mystified
- R13 Serverpac had come with Netview 6.1 and SA 3.3
- V2.1 Serverpac came with Netview 6.2 and SA 3.4
- Much doc flowed over the interweb
- Many suggestions offered and implemented
- Lots of frustration and delay ensued
- V2.1 rollout was stuck on the first sandbox system

# Irreconciled Differences

- Eventually someone mentioned Subsystem Name Table
- IEFSSN defines z/OS subsystems for IBM, vendor, and user
- Includes entries for Netview and SA
- We try to avoid duplicating similar PARMLIB members
- Causes confusion, prone to error over time
- Here we created two members: Shared 00 and release-specific 01
- Concatenated as (00,01)
- Layout of IEFSSN00
  - SMS
  - JES2
  - Two entries for TCP/IP (don't ask me why)
  - BEGINPARALLEL
  - A whole bunch of other entries

# Irreconciled Differences

- IEFSSN01 contained only entries for Netview and SA
- Why? Skip's hot button: incompatible product changes
- Netview V6 had changed SSN by adding INITRTN(DSI4LSIT)
- Netview V5 could not tolerate this parameter
- I.e. R13 could not share SSN member with R12
- Skip's Rube Goldberg workaround
- Isolate Netview entries in a separate 01 member
- Put unique IEFSSN01 on SYSRES for R12 and R13
- Share IEFSSN00 in the common PARMLIB
- Result: entries for Netview/SA were at the bottom
- This worked fine for R12 and R13
- SYSRES for V2.1 was built the same way
- Even though the compatibility issue was long gone

# Irreconciled Differences

- This layout of SSN entries was the culprit
- z/OS 2.1 with Netview 6.2 and SA 3.4 was broken
- I moved Netview and SA entries to -00 before BEGINPARALLEL
- Eliminated -01 altogether
- Result works fine for both R13 and V2.1
- After months of stagnation, problem vanished
  
- Conclusion: incompatible parm changes are deadly
- Customer is forced to invent his own cockamamie accommodation
- This particular customer is not smart enough to survive the challenge

# My Head on a JES2 Block

- Several JES2 control block changes in V2.1
- Some fields moved from \$DTE/\$DCN to \$CIWORK
- This was done in support of 'batch modernization'
- In Exit 6, we used these fields
  - DCNVMMSG 'ACB FOR SYSTEM MSGS DATA SET'
  - DCNVSCHS 'Scheduling environment for job'
  - DCNVCAT 'Address of CAT for job'
- These and other fields are now in \$CIWORK
  - Pointed directly to by exit parm list word 6 (+20)
- CIWBMSG 'ACB for system msgs data set'
- CIWJSCHS 'Scheduling environment'
- CIWCATA 'Address of CAT for job'
- Control block changes hit exits up front
- **Regardless of JES2 run time options**



# Robo Logo

- In vanilla ISPF, primary panel displays a 'logo'
- Really an IBM copyright notice
- We have never displayed it
- But in new ISPF, we could not suppress it

```
+-----+
| Licensed Materials - Property of IBM          |
| 5650-ZOS      Copyright IBM Corp. 1980, 2013. |
| US Government Users Restricted Rights -      |
| Use, duplication or disclosure restricted     |
| by GSA ADP Schedule Contract with IBM Corp. |
+-----+
```

# Robo Logo

- We modify primary panel ISR@PRIM a lot
- Same mods appeared to carry forward with no error
- No change we could see would explain this behavior
- After discussion on IBM Main, we commented out two lines
- Logo no longer displays

```
/* .MSG = ISRL0999      Set logo information      @L5A*/  
/* .RESP = ENTER       Simulate enter            @L5A*/
```

# SHARE in Orlando Preview!

- z/OS 2.2 sessions aplenty!
- Bob Rogers will be doing How you do what you do when you're a z13 CPU \*and\* Sysprog Goody Bag
- New to z track
- Glenn Anderson will be back and doing an MVS Dispatching update
- Tom Wasik (IBM) will be back with JES2 update & more
- *A flock of User Experiences*: Insourcing Experiences, Datacenter move, RD&T, z/OS 2.2, migrating from HTTP server to Apache, Auditors Myths, COBOL 5, Large Memory exploitation
- Deep technical content z13, z/OSMF, USS, ISPF, Print



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