

## RFE #131932

see [http://www.ibm.com/developerworks/rfe/execute?use\\_case=viewRfe&CR\\_ID=131932](http://www.ibm.com/developerworks/rfe/execute?use_case=viewRfe&CR_ID=131932)

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### Environment:

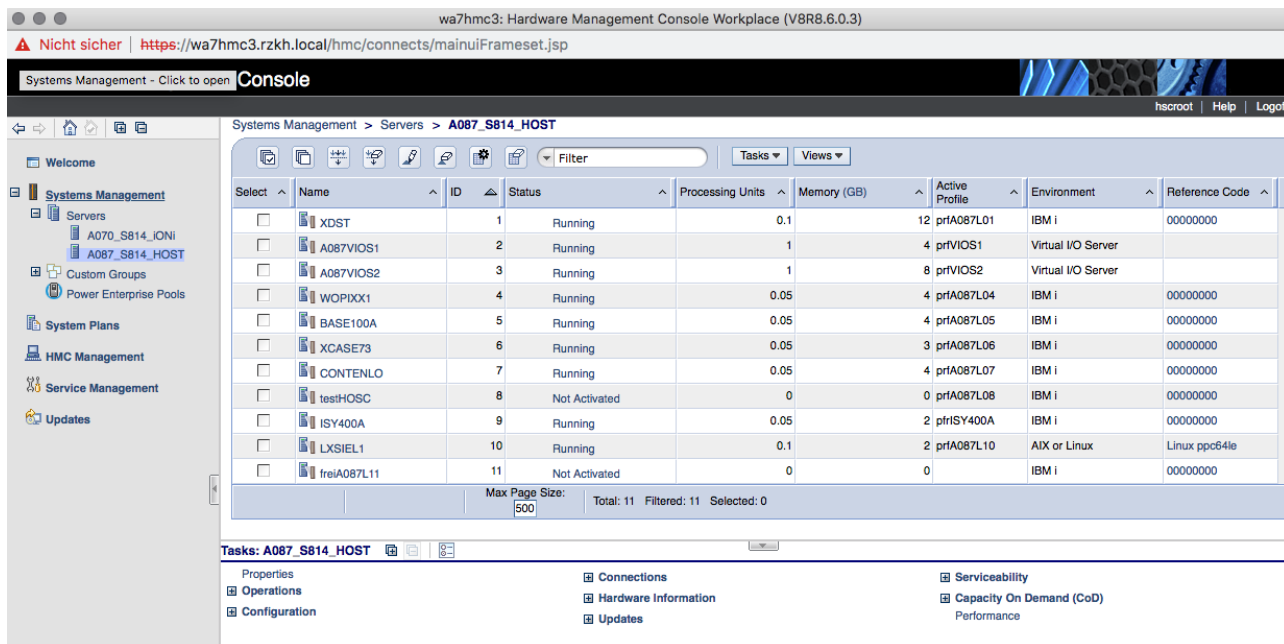
- HMC V8R8.6.0.3
- Power8 8286-41A
- VIOS 2.2.40.20 (yes, some outdated but working. I assume that level is causing some of the issues...)
- HMC-Client: MacOS 10.13.6, Browser Chrome (most current) or Apple Safari 12.0.3 running on MacPro 5.1 with 2\*Quadcore Xeon 64GB RAM (so not a slow machine)
- we ran HMC 8.8.3 for long time as it was ok for us, but after upgrading the Power8 firmware we needed to level up. So actually we share experience when switching from 8.8.3 to 8.8.6

### General:

- compared to HMC 8.8.3 the vHMC seems to be some slower (has 2 virtual CPU and 8GB RAM running on VMWare) when using german language. After switching the browser to english, pages load faster. I did not deep dive into this as it might be caused by web server caching but i will monitor performance
- browser compatibility much better :-) As we also need to host old Power 5 servers we run a combination of HMC 7.7.9 and newer to support all servers. Old HMC only works with Firefox 2.x, newer HMC support newer browsers but sometimes there still are some issues in display. For example when clicking on the left bar > Systems Management > Servers > Select a server, the main window is not updated quickly. Even with a fast vHMC users need to wait 20 seconds compared to 2 seconds using HMC 8.8.3 running on the same VMWare hardware...
- We plan to go to HMC 9.1 (maybe with a new VM) but at the moment 8.8.6 is the only version we can use as it has the classic interface. See below...

## compare classic to enhanced+ interface:

- on systems with a number of LPARs the display of classic intercase is compact, neat and admins find their way rather fast. Let us see this example when the user shrinks the HMC window (to have room for other windows on his desktop):



The screenshot shows the HMC console interface for system A087\_S814\_HOST. The main area displays a table of LPARs with columns for Name, ID, Status, Processing Units, Memory (GB), Active Profile, Environment, and Reference Code. The table lists 11 LPARs, including X DST, A087VIOS1, A087VIOS2, WOP1XX1, BASE100A, XCASE73, CONTENLO, testHOSC, ISY400A, LXSIEL1, and freiA087L11. The status of these LPARs varies, with most being 'Running' and some 'Not Activated'.

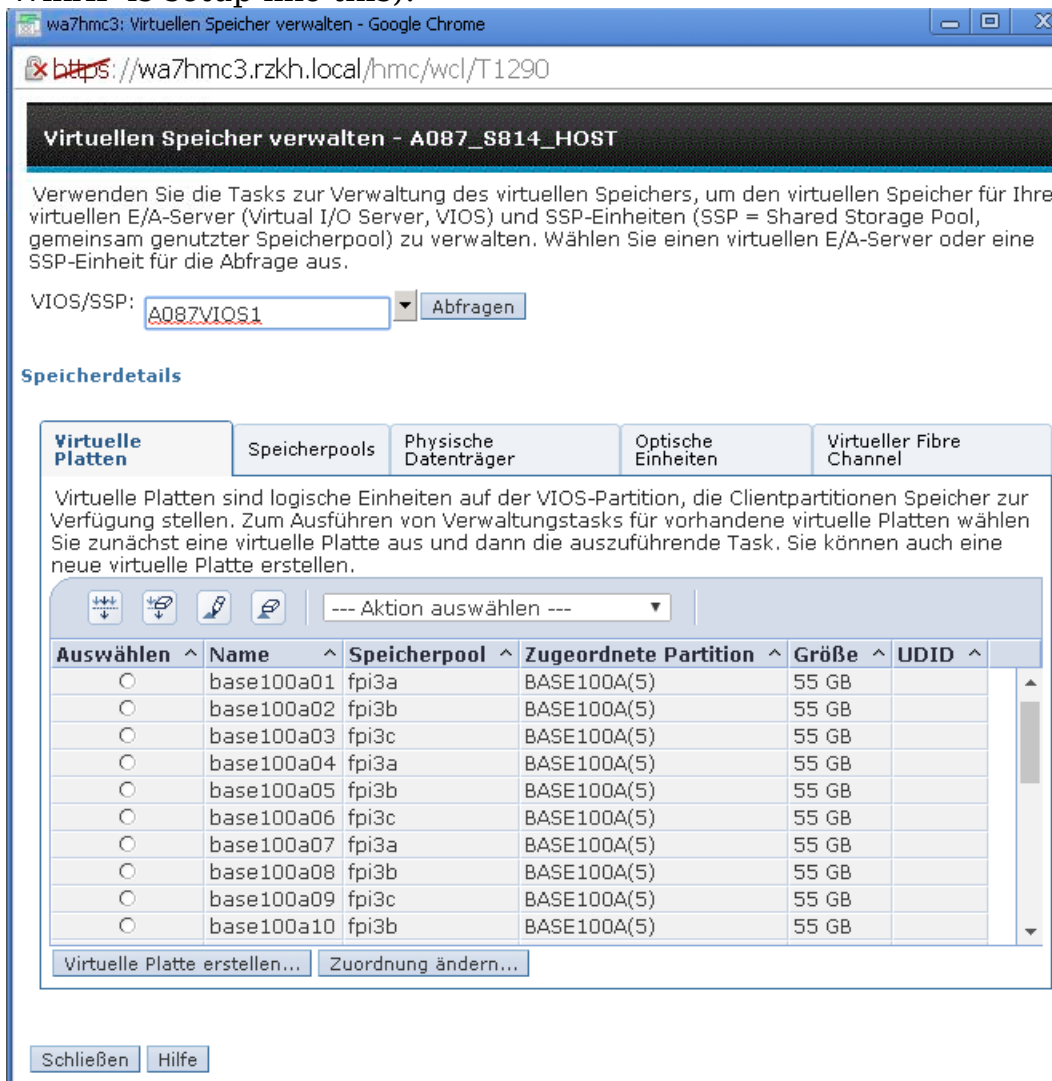
Select	Name	ID	Status	Processing Units	Memory (GB)	Active Profile	Environment	Reference Code
<input type="checkbox"/>	X DST	1	Running	0.1		12 prA087L01	IBM i	00000000
<input type="checkbox"/>	A087VIOS1	2	Running	1		4 prVIOS1	Virtual I/O Server	
<input type="checkbox"/>	A087VIOS2	3	Running	1		8 prVIOS2	Virtual I/O Server	
<input type="checkbox"/>	WOP1XX1	4	Running		0.05	4 prA087L04	IBM i	00000000
<input type="checkbox"/>	BASE100A	5	Running		0.05	4 prA087L05	IBM i	00000000
<input type="checkbox"/>	XCASE73	6	Running		0.05	3 prA087L06	IBM i	00000000
<input type="checkbox"/>	CONTENLO	7	Running		0.05	4 prA087L07	IBM i	00000000
<input type="checkbox"/>	testHOSC	8	Not Activated		0	0 prA087L08	IBM i	00000000
<input type="checkbox"/>	ISY400A	9	Running		0.05	2 prISY400A	IBM i	00000000
<input type="checkbox"/>	LXSIEL1	10	Running		0.1	2 prA087L10	AIX or Linux	Linux ppc64le
<input type="checkbox"/>	freiA087L11	11	Not Activated			0	IBM i	00000000

So we have System A087 running 2 VIOS LPAR and some client LPAR. All Clients use VIOS for virtual Storage on file based storage pools and NPIV based SAN connections. Due to different customer situations this is a mix.

Selected Virtual Resources > Virtual Storage management should lead to the VIOS selection. Needs loooong time to show up compared to 8.8.3. So users sometimes are frustated waiting and click „Virtual Storage Management“ again... when user closes the Chrome Window, message shows that there are three (or other number) running tasks, depending on how often they clicked the link :-)

*Now comes the trick:* I switch to an old Windows PC (running Windows XP on a slow Core2Duo) - i open Chrome (the last supported version 49.0.2623.112m), navigate to System A087 and click on „Virtual Storage Management“ the VIOS selection opens immedeately! In parallel on my fast Mac - VIOS selection needs about 30 seconds to show up. This might be some chrome issue, some safari issue or what ever - i am not that web programming expert but this is annoying.

Let's assume we selected one of the VIOS to see the storage configuration so we see all communication HMC and VIOS is working (sorry, this is german, the old WinXP is setup like this):



Even display of virtual FibreChannel works as expected:

**Zuordnung der virtuellen Fibre-Channel-Partition ändern - A087\_S814\_HOST**

Eine ausgewählte Zeile in der Tabelle zeigt an, dass der physische Anschluss einer logischen Partition zugeordnet ist. Wählen Sie zusätzliche Partitionen aus, um sie dem Anschluss zuzuordnen oder wählen Sie Partitionen ab, die aktuell dem Anschluss zugeordnet sind.

Verfügbare Verbindungen: 60

Auswählen	Partitionsname	Partitionsstatus	Weltweite Portnamen	Aktuelle Zuordnung
<input checked="" type="checkbox"/>	BASE100A	Aktiv	c0507609eceb0020 c0507609eceb0021	fcs1
<input checked="" type="checkbox"/>	CONTENLO	Aktiv	c0507609eceb001e c0507609eceb001f	fcs1
<input checked="" type="checkbox"/>	WOPIXX1	Aktiv	c0507609eceb001c c0507609eceb001d	fcs1
<input checked="" type="checkbox"/>	XDST	Aktiv	c0507609eceb001a c0507609eceb001b	fcs1
<input checked="" type="checkbox"/>	testHOSC	Nicht aktiviert	c0507609eceb000a c0507609eceb000b	fcs1

Administrators can work with vFC as they are used to by going to VIOS profile config, Client LPAR config and VIOS command line.

~~https://wa7hmc3.rzkh.local/hmc/wcl/T14ca~~

Eigenschaften des Profils für logische Partitionen: prfA087L01 @ XDST @ A087\_S814\_HOST - XDST

Allgemein | Prozessoren | Speicher | E/A | **Virtuelle Adapter** | Stromversorgungssteuerung | Einstellungen | E/A mit Kennung | OptiConn

Aktionen ▾

Virtuelle Ressourcen ermöglichen die gemeinsame Nutzung von physischer Hardware zwischen logischen Partitionen. Die aktuellen Einstellungen für den virtuellen Adapter sind im Folgenden aufgelistet.

Maximale Anzahl der virtuellen Adapter: \* 200  
 Anzahl der virtuellen Adapter: 8

--- Aktion auswählen --- ▾

Auswählen	Typ	Adapter-ID	Server/Client-Partition	Partneradapter	Erforderlich
<input type="checkbox"/>	Ethernet	151	N/A	N/A	Nein
<input type="checkbox"/>	Ethernet	152	N/A	N/A	Nein
<input type="checkbox"/>	Ethernet	153	N/A	N/A	Nein
<input type="checkbox"/>	Client-Fibre Channel	71	A087VIOS1(2)	71	Ja
<input type="checkbox"/>	Client-SCSI-Adapter	101	A087VIOS2(3)	101	Ja
<input type="checkbox"/>	Client-SCSI-Adapter	11	A087VIOS1(2)	11	Nein
<input type="checkbox"/>	Serieller Serveradapter	0	Beliebige Partition	Beliebiger Partitionsbereich	Ja
<input type="checkbox"/>	Serieller Serveradapter	1	Beliebige Partition	Beliebiger Partitionsbereich	Ja

Gesamt: 8 Gefiltert: 8 Ausgewählt: 0

### Now we switch to enhanced+ interface

I will not forward all comments our administrators gave when they saw this interface for the first time but they did not like it at first glance. Nice pictures but too much space used for unwanted information, and columns need too much space. They do have 27 Inch displays but the HMC is not the only window open on the desktop...

Hardware Management Console

wa7hmc3 Resources > All Systems > A087\_S814\_HOST > Partitions

Partitions

View and monitor the state, health, and capacity information of all the partitions on the selected system.

Actions ▾ Total: 9 Selected: 0

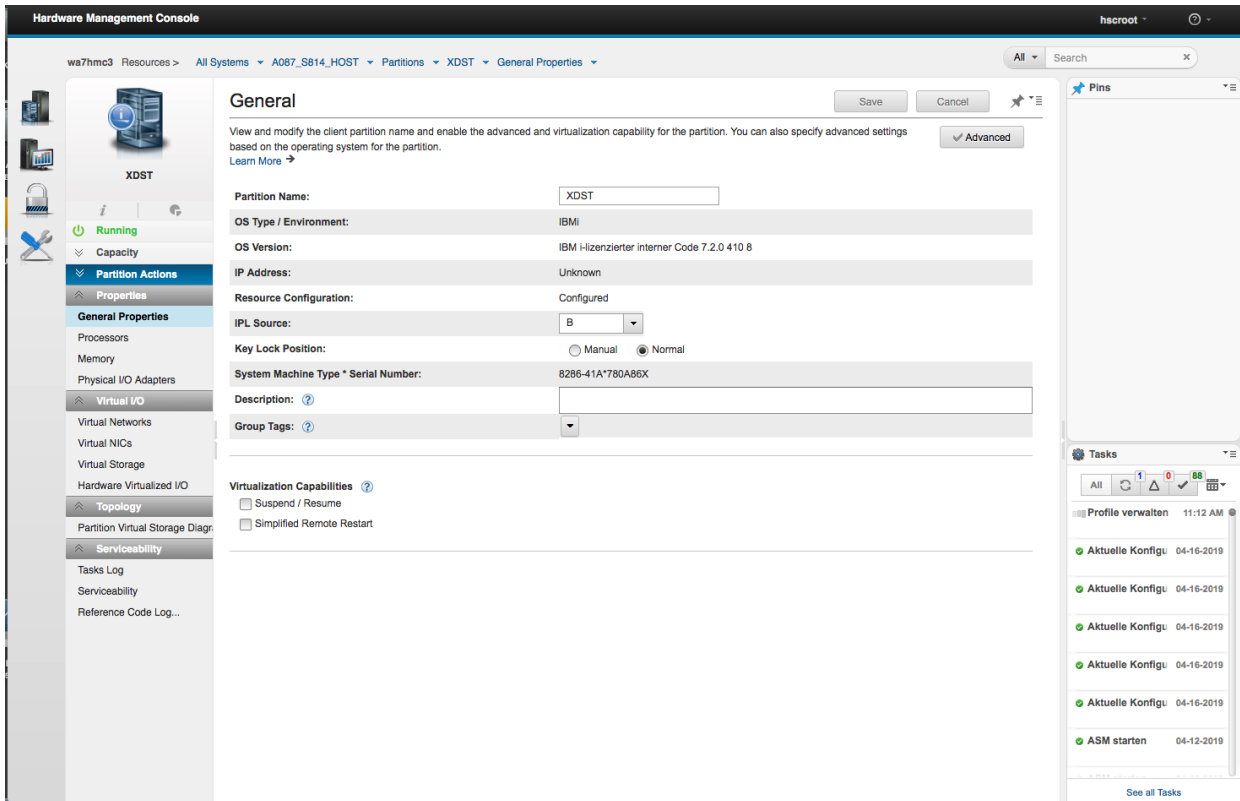
Name	Partition State	Partition ID	IP Address	Attention LED	Reference Code	OS
BASE100A	Running	5	-	Off	00000000	IBM
CONTENTLO	Running	7	-	Off	00000000	IBM
ISY400A	Running	9	-	Off	00000000	IBM
LXSIEL1	Running	10	-	Off	Linux ppc64e	AIX
WOPIXX1	Running	4	-	Off	00000000	IBM
XCASE73	Running	6	-	Off	00000000	IBM
XDST	Running	1	-	Off	00000000	IBM
freIA087L11	Not activated	11	-	Off	00000000	IBM
testHOSC	Not activated	8	-	Off	00000000	IBM

10 | 20 | 30 | 50

Tasks

- Profile verwalten 11:12 AM
- Aktuelle Konfigu: 04-16-2019
- Aktuelle Konfigu: 04-16-2019

Now i want t work with virtual storage on LPAR „XDST“ as shown above. This is running IBM i 7.2.0 410 8 code. Still the windows is full of information but needs a lot of space:



Now i select „Virtual storage“ on the left. I expected to see some virtual SCSI as this is setup in the profile (please see on previous page), but i end up with:

Virtual SCSI    Virtual Fiber Channel    Virtual Optical Device

The table displays the Virtual SCSI devices that are configured to a logical partition. You can also view the information about the physical volume groups, shared storage pool volume, and the logical volume.  
[Learn More](#) →

[Add Virtual SCSI Storage](#)

**Physical Volume** ⓘ

Action ▾

User Defined Name	OS Device Name	Size in GB	Connections	Unique Device ID
No items to display				

**Shared Storage Pool Volume** ⓘ

Action ▾

Device	Size in GB	Shared Storage Pool Cluster	Tier	Thin Provisioning	Connections
No items to display					

**Logical Volume** ⓘ

Action ▾

Device	Volume Group	Size in GB	Virtual I/O Server
No items to display			



udid="01M0ICTTixNDU4RzQ2MDA1MDc2ODAxOEYwMzAzMTAwMDAwMDAwMDAwMDAxOQ==" name="disk4" description="MPIO IBM 2145 FC Disk"><PhysicalVolume\_base capacity="517120" locationCode="U78C9.001.WZS11VK-P1-C9-T1-W5005076801201714-L1000000000000" unique\_id="3321360050768018F03031000000000001904214503IBMfcp" vendor\_id="IBM" product\_id="2145" model="8G4" storage\_label="QTA4N1ZJT1MyRDay" in\_use="yes" state="ONLINE" SCSIReserve="single\_path" MpioAlgorithm="fail\_over" reserveKey="none" descriptor="NjAwNTA3NjgwMThGMDMwMzEwMDAwMDAwMDAwMDAwMTk=" desType="NAA" nonRotationalMedia="0"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMDIFNDQwODY1MkQwNkRCOEVEEMDM=" name="disk9" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="266240" vendor\_id="FreeBSD" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMDIFNDQwODY1MkQwNkRCOEVEEMDM=" desType="NAA" nonRotationalMedia="1"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMERENkI0OTRDRElWQkMzMdJFRjc=" name="disk10" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="266240" vendor\_id="FreeBSD" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMERENkI0OTRDRElWQkMzMdJFRjc=" desType="NAA" nonRotationalMedia="1"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMEQzQkQ2QjA3RTBBMDhDMMD0ODI=" name="disk11" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="266240" vendor\_id="FreeBSD" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMEQzQkQ2QjA3RTBBMDhDMMD0ODI=" desType="NAA" nonRotationalMedia="1"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMEU2QUi0MDgwM0JFNEVBNDIxODM=" name="disk12" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="266240" vendor\_id="FreeNAS" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMEU2QUi0MDgwM0JFNEVBNDIxODM=" desType="NAA" nonRotationalMedia="0"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMDM2MzQxODhFRjdFRUQ1NjFBMDc=" name="disk13" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="266240" vendor\_id="FreeNAS" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMDM2MzQxODhFRjdFRUQ1NjFBMDc=" desType="NAA" nonRotationalMedia="0"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMERCNUUwMkQ4RjY4MDgzRUNGRjk=" name="disk14" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="266240" vendor\_id="FreeNAS" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMERCNUUwMkQ4RjY4MDgzRUNGRjk=" desType="NAA" nonRotationalMedia="0"></PhysicalVolume\_base></PhysicalVolume></InventoryResponse></Response></VIO><VIO version="2.00" xmlns="http://ausgsa.austin.ibm.com/projects/v/vios/schema/vio2.00"><Response><InventoryResponse viosId="8286-41A02780A86X" sequence="17" inventoryType="base" eventLogOn="true"><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMEJDNUU0QTY2RTk5NUVFRUVBNDI=" name="disk15" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="307200" vendor\_id="FreeBSD" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMEJDNUU0QTY2RTk5NUVFRUVBNDI=" desType="NAA" nonRotationalMedia="1"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMEIyQzY1MDQ5Mjc1REFGNTFGRTY=" name="disk16" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="307200" vendor\_id="FreeBSD" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMEIyQzY1MDQ5Mjc1REFGNTFGRTY=" desType="NAA" nonRotationalMedia="1"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMDM4NjMyREU5MjA5MUYwODAzRkQ=" name="disk17" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="307200" vendor\_id="FreeBSD" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMDM4NjMyREU5MjA5MUYwODAzRkQ=" desType="NAA" nonRotationalMedia="1"></PhysicalVolume\_base></PhysicalVolume><PhysicalVolume udid="01M0ZyZWVCU0RpU0NTSSBEaXNrNjU4OUNGQzAwMDAwMEY0MTdCODJEN0MwOTM3RjgxNkI=" name="disk18" description="Other iSCSI Disk Drive"><PhysicalVolume\_base capacity="307200" vendor\_id="FreeBSD" product\_id="iSCSI Disk" storage\_label="VU5LTk9XTg==" in\_use="yes" state="ONLINE" MpioAlgorithm="" descriptor="NjU4OUNGQzAwMDAwMEY0MTdCODJEN0MwOTM3RjgxNkI=" desType="NAA" nonRotationalMedia="1"></PhysicalVolume\_base></PhysicalVolume></InventoryResponse></Response></VIO><?xml version="1.0" encoding="UTF-8" standalone="yes"?><VIO xmlns="http://ausgsa.austin.ibm.com/projects/v/vios/schema/vio2.00" version="2.00"></Response></VIO>

So at this stage this was a full stop for us to upgrade that particular HMC at the moment as my assumptions are:

- VIOS 2.2.40 is outdated. Maybe this is a reason for this errors but at the moment we have no time window for VIOS update. Maybe next two weeks or so, but i always try to not quickly update infrastructure components which do their job flawlessly...
- Verify browser setups. Different browser on different client operating systems can be a mess - but i expect to have a working console, not a nice looking console
- The enhanced interface shows a lot of information: on the right side the „pins“ and „Tasks“ area which no one really needs. The main detail information windows are nice to look at but usually the admins know what they are doing and do not need an interface for non-experienced users. They need more information at a glance.
- The left navigation bar is totally different from the view they are used to and has changes in the methodology on how some virtual storage is being configured.
- If there really is a communication error between HMC and VIOS (which results in not showing information, or big error message), the error reporting must be improved (e.g. „this VIOS version is not compatible with this HMC“) to have the administrators do the needed action or report the need for an upgrade.



- My personal show stopper: the tiled partition view for a system is not worth any view as the performance data gathering needs lots of time and the information on the following screen is almost zero:

**Partitions** All Filter x + Create Partition...

View and monitor the state, health, and capacity information of all the partitions on the selected system.

Select All Actions Total: 9 Selected: 0

System	Status	Allocated	Performance Data
BASE100A	Running	4 GB	Gathering...
CONTENLO	Running	4 GB	Gathering...
ISY400A	Running	2 GB	Gathering...
LXSIEL1	Running	2 GB	No RMC connection
WOPIXX1	Running	4 GB	Gathering...
XCASE73	Running	3 GB	Gathering...
XDST	Running	12 GB	Gathering...
freiA087L11	Not activated	0.00	Processors Allocated: 0.00, GB Allocated: 0.00

testHOSC

Not activated

0.00 PU 0 VP

0.00 GB Allocated

After about 30 secs the display is filled with information which shows resource usage of the LPARs. This is nice, but useless as this data is outdated after some seconds and we have better system monitoring tools which cover all systems managed by multiple HMC consoles. I would prefer a screen with the configured resources again.

**Partitions** All Filter x + Create Partition...

View and monitor the state, health, and capacity information of all the partitions on the selected system.

Select All Actions Total: 9 Selected: 0

System	Status	Allocated	Usage	Performance Data
BASE100A	Running	4 GB	22% CPU, 80% Mem, 0% I/O	Gathering...
CONTENLO	Running	4 GB	1% CPU, 79% Mem, 0% I/O	Gathering...
ISY400A	Running	2 GB	50% CPU, 75% Mem, 0% I/O	Gathering...
LXSIEL1	Running	2 GB	2% CPU, 80% Mem, 0% I/O	No RMC connection
WOPIXX1	Running	4 GB	2% CPU, 79% Mem, 0% I/O	Gathering...
XCASE73	Running	3 GB	1% CPU, 77% Mem, 0% I/O	Gathering...
XDST	Running	12 GB	61% CPU, 30% Mem, 0% I/O	Gathering...
freiA087L11	Not activated	0.00	Processors Allocated: 0.00, GB Allocated: 0.00	

testHOSC

Not activated

0.00 PU 0 VP

0.00 GB Allocated