



IBM Hardware Management Console



HMC 8.20 GUI



New User Interface



called “Tech-Preview”



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Total insanity to

1) write a Redbook on a GUI

2) write a presentation on a GUI

it needs a demo, right!

Agenda

- Classic & new GUI modes
- Hints & tips

Demonstration

- Basic navigation + multiple paths for a task
- Start & stop a Server or VM
- Dynamic VM change (DLPAR)
- Live Partition Mobility (LPM)
- Network & Storage views
- Which VM is using the machine most?
- User control
- Create a virtual machine (VM) via templates
- Shared Storage Pools

HMC 8.1 and 8.2 → Pre-Reqs, Checks & Installing

AIX Virtual User Group - USA

– <http://tinyurl.com/ibmAIXVUG>

- Roughly monthly Web seminar from subject matter expert
 - Started in 2007 → 13 sessions last year
 - Slides downloadable and YouTube Replays

Look for:

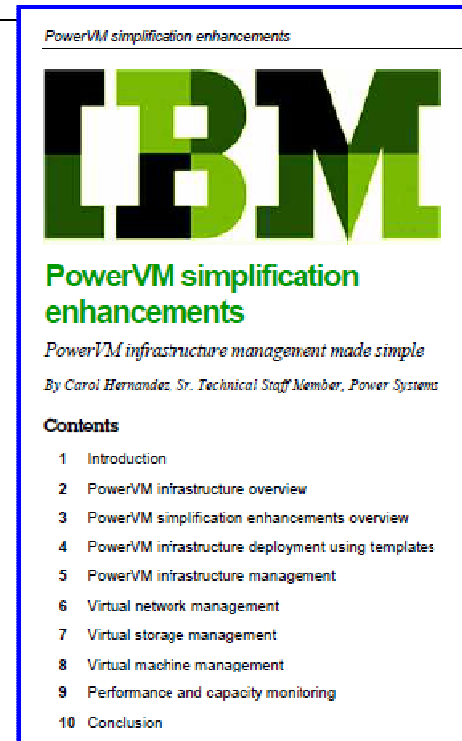
December 11, 2014 - HMC V8 - Ailyn Walsh & Steve Nasypany
8:00 Pacific / 9:00 Mountain / 10:00 Central / 11:00 Eastern (90 minutes)
[Presentation Materials](#)
[YouTube Replay](#)

- Included a quick demo of the Perf/Capacity Monitoring (PCM)

The K2 game plan

- Classic mode → not going away
- Massive Graphical overhaul
 - One touch VIOS deploy
 - Hands off PowerVM
 - Templates to deploy similar:
 - LPAR/VM or
 - Whole system include VIOS install
 - Performance, Capacity (think hourly)

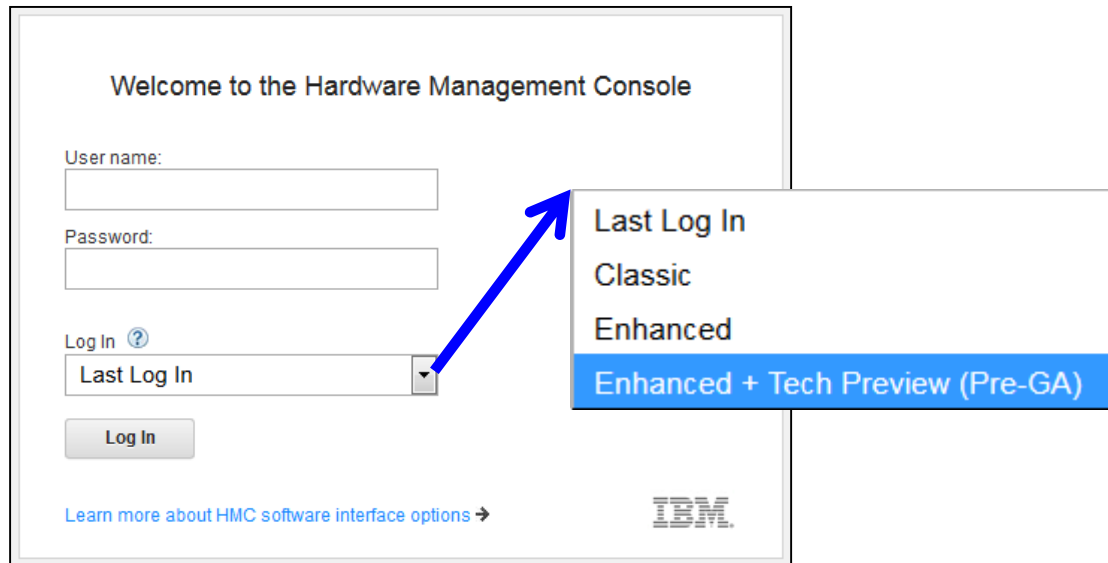
[https://www.ibm.com/developerworks/community/files/form/anonymous/api/library/81a21c26-4e57-4061-87c5-6326c6861010/document/27c68a38-0f88-4cce-b35f-f05dfb2b3b44/media/PowerVM Simplification White Paper2014v1.0.pdf](https://www.ibm.com/developerworks/community/files/form/anonymous/api/library/81a21c26-4e57-4061-87c5-6326c6861010/document/27c68a38-0f88-4cce-b35f-f05dfb2b3b44/media/PowerVM%20Simplification%20White%20Paper2014v1.0.pdf)



One Slide reminder

- Pre-reqs
 - **HMC hardware CR6** or later
 - Memory 4 GB but 8 GB recommended (CR7/8 start at 8GB)
- Upgrade N-2 levels 7.8→8.1 or 7.9→8.2
- Only connects to POWER6, POWER7 or POWER8 (no POWER5)
- Max servers 48 - or - for Power 595 / Power 795 = 32 servers
- Max 1024 VMs

Selecting the HMC mode



Welcome to the Hardware Management Console

User name:

Password:

Log In [?](#)
Last Log In

[Learn more about HMC software interface options](#) →


IBM

- Last Log In
- Classic
- Enhanced
- Enhanced + Tech Preview (Pre-GA)

Welcome to the Hardware Management Console

User name:

Password:

Log In 

Review and accept [Terms and conditions for Technical Preview](#) to continue login process

I agree to the terms and conditions

[Learn more about HMC software interface options](#) →



What is a Technical Preview ?

- Answer : deliberately vague **IMHO**
- Somewhere between
 - Beta level test software
 - Technical Preview
 - Evaluation purposes
 - Technical familiarity
 - Learning and feedback
 - Production

Technical Preview - is it “supported”?

Answer : **Yes** and **No**

Not allowed to raise a PMR

- The PMR response would be “use the Classic version”
- If you can reproduce the issue there, raise a PMR

- But you can get support via the Forum
 - <http://tinyurl.com/HMC8-Tech-Preview-Forum>
- DeveloperWorks pages
 - [Feedback on the Enhanced + Tech preview user interface](#)

- Developers seem to check for questions daily.

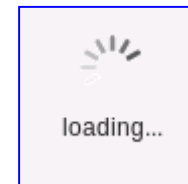
“Only the GUI is new”

I talked to the developers :

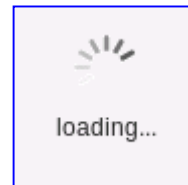
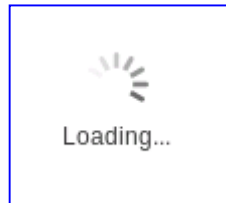
- New graphical user interface
- But calling the Classic underlying “field hardened” functions
- QED: [What could possibly go wrong???](#)

Well !!!

- Performance is **a bit slow** – not tuned-up yet
- Graphics can get locked up in “Loading “
- We did see some Gotcha in V8.1 but 8.2 better

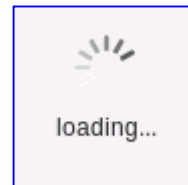
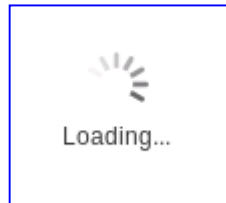


Getting stuck



1. Bookmark → cut the URL to paste buffer
 2. Close the Browser Tab
 3. Open a new Tab
 4. Bookmark add or paste the URL
- It might start back one step back from where you left off

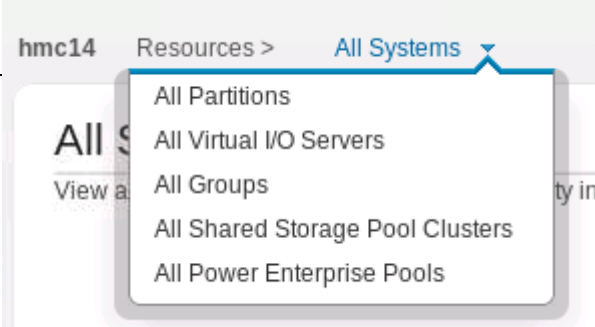
Getting stuck



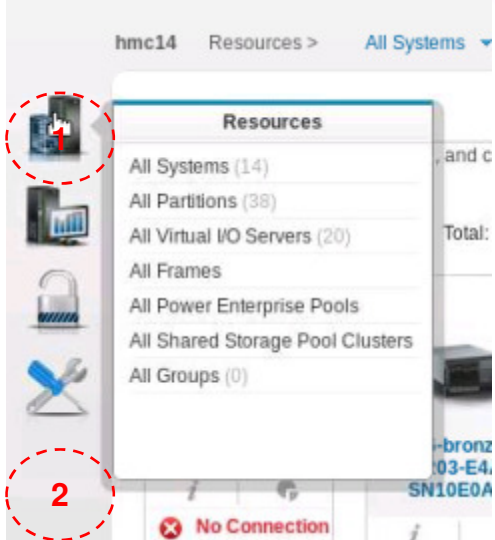
- Windows 7 browser the try Control+F5
= reload the web page from the start
- But don't over do this !!
- Like only if stuck for 5 minutes



Stuck pop-up?



The screenshot shows the HMC14 Resources page with a dropdown menu open for 'All Systems'. The menu items are: All Partitions, All Virtual I/O Servers, All Groups, All Shared Storage Pool Clusters, and All Power Enterprise Pools. The background is dimmed, but the pop-up is not fully transparent, making it difficult to interact with the background elements.



The second screenshot shows the same HMC14 Resources page. A red dashed circle with the number '1' highlights the top-left logo. Another red dashed circle with the number '2' highlights the bottom-left corner of the page, indicating where to click to close the pop-up.

1. Click on Top Left logo
2. Then Lower Background

Running Slow



Browser cache issues causes S L O W screen updates

- I got this after the HMC8.2 SP1 upgrade
 1. Log-out of HMC GUI
 2. Browser: Control + Shift + Del
 3. Clear everything (you can keep your history)
 4. Log-in
 5. First time on each page is slow = loading the cache
 6. But then it accelerates

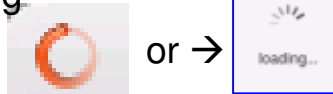
- Reboot the HMC 8.2 regularly until GA

Switching to/from Enhanced+Tech.Preview

- You **can't** have Classic & Tech.Preview open at same time
 - It just diverts you to the currently open one
 - I use two HMC's to get both
- I switched to new GUI some time ago but ...
 - If very short of time (in a panic) switch back to classic ☹
- Classic launches a separate browser window
- TechPreview stays in the Firefox browser Tab
 - Nicer IMHO

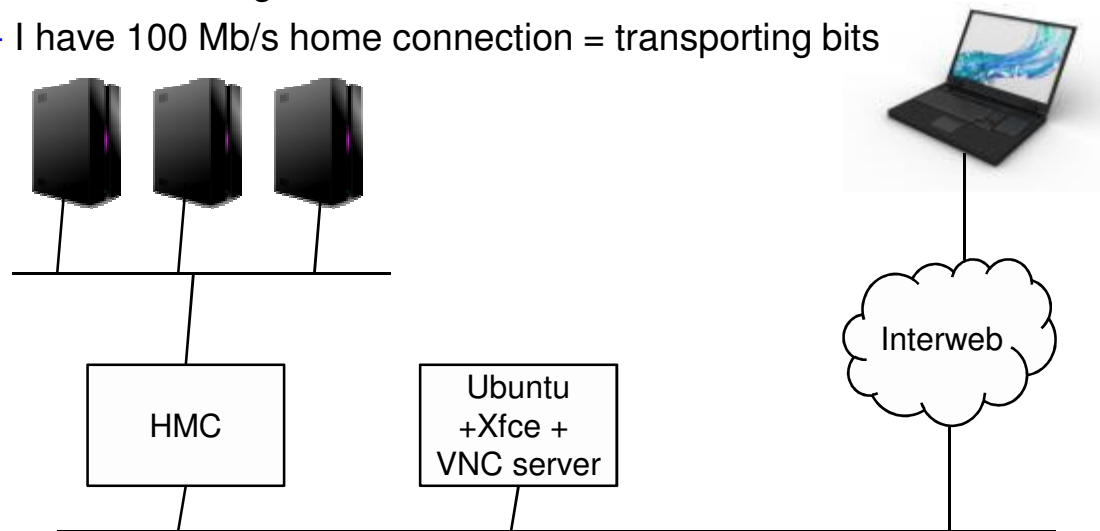
In practice – Dual users + Dual HMC

- For testing I have two user accounts on the HMC
- Regular **nag** user for TechPreview GUI
- New **nigel** user for classic GUI
 - Double check what is going on
 - Get urgent work done
- I also have sessions on both Dual HMC set up
 - Used if one session gets stuck
 - So I can leave it running & see if it finished in the end
- Until full GA level – Don't rush in while the page is still loading
 - Browser “not responding”
 - Tab has “waiting” icon



In practice – local GUI could be one way for speed

- GUI = lots more packets on the network
 - For demo using 1Gb/s local GUI box then VNC to home VNC Client
 - I have 100 Mb/s home connection = transporting bits



- If you see brown squares – that is VNC delay



In practice: “not going to teach you to suck eggs”

- If we click a Tech.Preview Button and get to the Classic pop-up panel → we will stop there

The image shows two overlapping screenshots from a technical interface. The background screenshot is titled "LPM Validate" and shows a "Partition Migration Validation" form. The form includes fields for "Source system", "Migrating partition", "Remote HMC", "Remote User", "Destination system", "Destination profile name", "Destination shared processor pool", "Source mover service partition", "Destination mover service partition", "Wait time (in min)", and several checkboxes for "Override virtual network errors when possible", "Override virtual storage errors when possible", and "Override partition UUID". At the bottom, there are buttons for "View WLAN Settings...", "Validate", and "Migrate".

The foreground screenshot is a "User Profiles" pop-up panel. It has a title bar "User Profiles" and a "Refresh Data" button. Below the title bar is a table with the following columns: "Select", "User ID", "Task Role", "Resource Role", "Authentication Type", and "Description". The table contains the following data:

Select	User ID	Task Role	Resource Role	Authentication Type	Description
<input checked="" type="checkbox"/>	hmsroot	hmsuperadmin	AllSystemResources	Local Authentication	HMC Super User
<input type="checkbox"/>	hmsape	hmsape	AllSystemResources	Local Authentication	new user from Wizard
<input type="checkbox"/>	gpat	hmsuperadmin	AllSystemResources	Local Authentication	new user from Wizard
<input type="checkbox"/>	niag	hmsuperadmin	AllSystemResources	Local Authentication	NigelGettins
<input type="checkbox"/>	jbb	hmsuperadmin	AllSystemResources	Local Authentication	Jean-Armand Boylle/France/IBM/IBMFR
<input type="checkbox"/>	mperzi	hmsuperadmin	AllSystemResources	Local Authentication	Michael Perzi
<input type="checkbox"/>	adrienne	hmsviewer	AllSystemResources	Local Authentication	Adrienne McGony
<input type="checkbox"/>	carlsw	hmsviewer	AllSystemResources	Local Authentication	Alan Carlsw
<input type="checkbox"/>	allyn	hmsuperadmin	AllSystemResources	Local Authentication	Allyn Walsh
<input type="checkbox"/>	pu8support	hmsviewer	AllSystemResources	Local Authentication	Linda Zimmer PB support
<input type="checkbox"/>	juan	hmsuperadmin	AllSystemResources	Local Authentication	Juan Casas AXI Kernel Dev
<input type="checkbox"/>	alex	hmsviewer	AllSystemResources	Local Authentication	Alex_Abdemazag
<input type="checkbox"/>	labguys	hmsviewer	AllSystemResources	Local Authentication	India Lab Services
<input type="checkbox"/>	lyoti	hmsuperadmin	AllSystemResources	Local Authentication	Jyoti Dobhia
<input type="checkbox"/>	rachel	hmsuperadmin	AllSystemResources	Local Authentication	Rachel Meagar
<input type="checkbox"/>	alexandre	hmsuperadmin	AllSystemResources	Local Authentication	alexandre blanke

In practice – the learning curve

You will go through different phases

1. Oh heck! What the Dickens is this about. I can't do this now!
2. Oh nuts! I can't find any thing!
3. Oh! Darn . . . its got to be here somewhere!
4. Oooo! That was cool!
5. I wonder what that button does? Wow!
6. Hey, I seem to be getting the hang of this now!
7. Yep! This is workable.

8. I have five minute lets try something I have never done before.

9. When they get this working a bit faster – I will use it.

Login then take the GUI Intro & you get this MAP ...

Classic Login Tasks	Enhanced Login Tasks	Enhanced+Tech Preview Login Tasks
Server Context		
<ul style="list-style-type: none"> • Server > Configuration > Virtual Resources <ul style="list-style-type: none"> ◦ Shared Processor Pool Management ◦ Shared Memory Pool Management ◦ Reserved Storage Device Pool ◦ Virtual Network management ◦ Virtual Storage Management 	<ul style="list-style-type: none"> • Server > Manage PowerVM <ul style="list-style-type: none"> ◦ Shared Processor Pool ◦ Shared Memory Pool ◦ Reserved Storage Pool ◦ Virtual Networks ◦ Virtual Storage 	<ul style="list-style-type: none"> • Server > PowerVM <ul style="list-style-type: none"> ◦ Shared Processor Pool ◦ Shared Memory Pool ◦ Reserved Storage Pool ◦ Virtual Networks ◦ Virtual Storage

Login take the GUI intro

<ul style="list-style-type: none"> • Server > Hardware Information > Adapters <ul style="list-style-type: none"> ◦ Host Channel ◦ Host Ethernet ◦ SR-IOV End to End Mapping 	<ul style="list-style-type: none"> • Server > Manage PowerVM > Hardware Virtualized I/O <ul style="list-style-type: none"> ◦ Host Channel Adapters (HCA) ◦ Host Ethernet Adapters (HEA) ◦ SR-IOV Adapters 	<ul style="list-style-type: none"> • Server > PowerVM > Hardware Virtualized I/O <ul style="list-style-type: none"> ◦ Host Channel Adapters (HCA) ◦ Host Ethernet Adapters (HEA) ◦ SR-IOV Adapters
<ul style="list-style-type: none"> • Server > Configuration > Create Partition <ul style="list-style-type: none"> ◦ AIX / Linux ◦ IBM i ◦ VIOS 	<ul style="list-style-type: none"> • Server > Templates <ul style="list-style-type: none"> ◦ Create Partition from Template 	<ul style="list-style-type: none"> • Server > System Actions > Templates <ul style="list-style-type: none"> ◦ Create Partition from Template • Server > PowerVM > Create Partition

Login take the GUI intro

NA	<ul style="list-style-type: none">• Server > Templates<ul style="list-style-type: none">◦ Deploy System from Template◦ Capture Configuration as Template◦ Template Library<ul style="list-style-type: none">▪ Deploy System Template▪ Copy Template▪ Export Template▪ View / Edit Template▪ Import Template	<ul style="list-style-type: none">• Server > System Actions > Templates<ul style="list-style-type: none">◦ Deploy System from Template◦ Capture Configuration as Template<ul style="list-style-type: none">▪ With Physical I/O▪ Without Physical I/O◦• HMC Management > Template library<ul style="list-style-type: none">◦ Deploy System Template◦ Copy Template◦ Export Template◦ View / Edit Template◦ Import Template
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Partition Context		
<ul style="list-style-type: none"> • Partition > Configuration > Apply Profile 	<p>N/A; The configuration or the profile are applied as part of Manage Partition if needed.</p>	<p>N/A; The configuration or the profile is applied as part of making any changes to View Partition Properties task, if needed..</p>
<ul style="list-style-type: none"> • Partition > Properties 	<ul style="list-style-type: none"> • Partition > Manage > Properties <ul style="list-style-type: none"> ◦ General Settings 	<ul style="list-style-type: none"> • Partition > Properties <ul style="list-style-type: none"> ◦ General Settings ◦ Processor ◦ Memory ◦ Physical I/O
<ul style="list-style-type: none"> • Partition > Dynamic Logical Partitioning <ul style="list-style-type: none"> ◦ Processor ◦ Memory ◦ Physical I/O 	<ul style="list-style-type: none"> • Partition > Manage > Properties <ul style="list-style-type: none"> ◦ Processor ◦ Memory ◦ Physical I/O 	
<ul style="list-style-type: none"> • Partition > Dynamic Logical Partitioning <ul style="list-style-type: none"> ◦ Host Ethernet ◦ SR-IOV Logical Ports • Partition > Hardware Information > Adapters <ul style="list-style-type: none"> ◦ Host Channel ◦ Host Ethernet ◦ SR-IOV Logical Ports 	<ul style="list-style-type: none"> • Partition > Manage > Hardware Virtualized I/O <ul style="list-style-type: none"> ◦ Logical Host Ethernet Adapter ◦ Host Channel Adapters ◦ SR-IOV 	<ul style="list-style-type: none"> • Partition > Properties > Hardware Virtualized I/O <ul style="list-style-type: none"> ◦ Logical Host Ethernet Adapter ◦ Host Channel Adapters ◦ SR-IOV


Login take the GUI intro

<ul style="list-style-type: none"> • Partition > Hardware Information > Virtual I/O Adapters <ul style="list-style-type: none"> ◦ Fiber Channel ◦ SCSI ◦ Ethernet 	<ul style="list-style-type: none"> • Partition > Manage > Virtual Storage <ul style="list-style-type: none"> ◦ Virtual SCSI > Adapters ◦ Virtual Fiber Channel > Adapters 	<ul style="list-style-type: none"> • Partition > Virtual I/O > Virtual Storage <ul style="list-style-type: none"> ◦ Virtual SCSI > Adapters ◦ Virtual Fiber Channel > Adapters
<ul style="list-style-type: none"> • Partition > Hardware Information > Virtual I/O Adapters <ul style="list-style-type: none"> ◦ Ethernet 	<ul style="list-style-type: none"> • Partition > Manage > Virtual Network > Adapters 	<ul style="list-style-type: none"> • Partition > Virtual I/O > Virtual Network > Adapters
<ul style="list-style-type: none"> • Partition > Operation > Deactivate Attention LED 	<ul style="list-style-type: none"> • Partition > Manage 	<ul style="list-style-type: none"> • Partition > Partition Actions > Turn Attention LED Off

Views



Gallery View

All Systems All Filter Connect Systems... 

View and monitor the state, health, and capacity information of all the systems that are connected to the management console. The relational view shows the partitions and the virtual I/O servers of each system.

Select All Actions Total: 14 Selected: 0

























<input type="checkbox"/>  172.16.222.41   No Connection 0 CPU 0 CPU Available 0.0 GB 0.0 GB Available	<input type="checkbox"/>  P6-bronze-8203-E4A-SN10E0A21   Operating 2 CPU 2 CPU Available 10.1 GB 5.9 GB Available	<input type="checkbox"/>  P6-gold-8203-SN10E0A11   Operating 0.5 CPU 3.5 CPU Available 3.5 GB 12.5 GB Available	<input type="checkbox"/>  P6-orange-8203-E4A-SN10E0A51   Operating 0.5 CPU 3.5 CPU Available 4.5 GB 11.5 GB Available	<input type="checkbox"/>  P6-red-8203-E4A-SN10E0A41   Operating 0.5 CPU 3.5 CPU Available 4.6 GB 11.4 GB Available	<input type="checkbox"/>  P6-silver-8203-SN10E0A31   Operating 1 CPU 3 CPU Available 8.8 GB 7.3 GB Available
<input type="checkbox"/> 	<input type="checkbox"/> 	<input type="checkbox"/> 	<input type="checkbox"/> 	<input type="checkbox"/> 	<input type="checkbox"/> 

Table View

All Systems All Filter Connect Systems... ☰ ☰ ✈ ☰

View and monitor the state, health, and capacity information of all the systems that are connected to the management console. The relational view shows the partitions and the virtual I/O servers of each system.

Actions Total: 14 Selected: 0

Name	System State	Attention LED	Reference Code	Number of Partitio	Number of VIOS
172.16.222.41	No Connection	Off	0000-0000-00000000	0	
P6-bronze-8203-E4A-S	Operating	Off		3	1
P6-gold-8203-SN10E0	Operating	Off		0	1
P6-orange-8203-E4A-S	Operating	Off		0	1
P6-red-8203-E4A-SN10	Operating	Off		0	1
P6-silver-8203-SN10E0	Operating	Off		0	1
P7-cyan-8231-E2B-SN10	Operating	Off		1	0
P7-diamond-8233-E8B-S	Operating	Off		2	2
P7-green-8231-E2B-SN10	Operating	Off		0	2
P7-indigo-8231-E1C-SN10	Operating	Off		0	1
P7-peach-8233-E8B-SN10	Operating	Off		3	2
P7-purple-8117-MMR-SN10	Operating	Off		0	1

Missing Servers

Servers

Restricted View

All Systems Connect Systems... ☰ ☰ ☰ ☰ ☰

View and monitor the state, health, and capacity information of all the systems that are connected to the management console. The relational view shows the partitions and the virtual I/O servers of each system. Open All Close All

172.16.222.41 | System

0 Partitions 0 Virtual I/O Servers 🟢 0 🔌 0 ⚠️ 0 ❌ 0

P6-bronze-8203-E4A-SN10E0A21 | System **Server**

Actions Total: 4 Selected: 0 All Filter x

Name	Part	IP Address	Partition State	Atten	Reference Code	OS Type	Processor Usage	Memor
bronzevi	1	9.137.62.246	Running	Off		Virtual I/O Serve		3.500
vm52-12	4	9.137.62.52	Running	Off	SUSE Linux	AIX/Linux		2.000
vm53-d7	2	9.137.62.53	Not Activated	Off	00000000	AIX/Linux		2.000
vm54-2a	3	9.137.62.54	Not Activated	Off	00000000	AIX/Linux		2.000

20 / 30 / 50 / 100 / All

P6-gold-8203-SN10E0A11 | System **Server**

Actions Total: 1 Selected: 0 All Filter x

Name	Part	IP Address	Partition State	Atten	Reference Code	OS Type	Processor Usage	Memor
goldvlos	2	9.137.62.60	Running	Off		Virtual I/O Serve		3.000

To the Demonstration

1. Start & stop a Server or VM
2. Dynamic VM change (DLPAR)
3. Live Partition Mobility (LPM)
4. Network & Storage views
5. Which VM is using the machine most?
6. User control
7. Create a virtual machine (VM) via templates
8. Shared Storage Pools

