



**Session 108:
First Look at the new
POWER9 based HMC CR2**

Hardware Management Console (HMC) POWER9 based 7063-CR2

First Look - HW Install – SW Install

Announce 13 April 2021

Available 21 May 2021

v9

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<https://ibm.biz/AIXpertBlog>



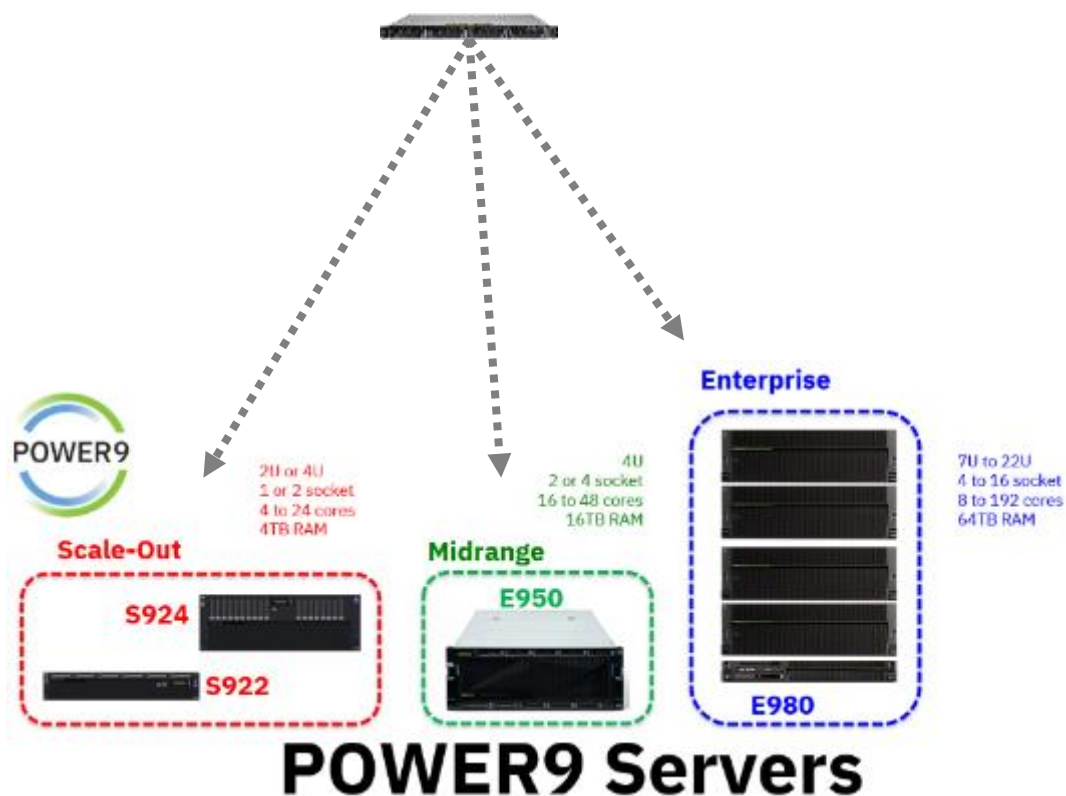
Gareth Coates

IBM Power Systems UK

gaz@uk.ibm.com

<https://ibm.biz/PowerTricks>

Hardware Management Console



Also POWER7 and POWER8

HMC

Hardware Management Console allows you to:

1. Power Servers on / off
2. Virtual Machine: create / start / stop
3. Configure Virtual CPU, RAM, I/O
4. RAS, Diags & Call home
5. Supporting:
 - Dynamic VM changes
 - Live Partition Mobility
 - Simplified Remote Restart
 - Higher management functions: PowerVC, CMC, ...

IBM Power Systems HMC

IBM Power HMC

Specifications:

- 19" Rack, 1U Form Factor
- One POWER9 processor with 6 cores
- 64 GB or 128 GB Memory ← ← ← Choose one size
- 2x 1.8TB SAS SFF 2.5-inch hard disk drive in RAID1/mirrored
- 4x 1Gb baseT (one shared mgmt.) + 1x 1Gb dedicated IPMI
- Optional 10 Gb RJ45 Ethernet adapter, 2 port
- Four USB 3.0 hub ports, 2 in the front + 2 in the rear
 - Option to not have the front USBs
- Customer Setup and Install
- IBM Lab Services/Support is available

RAS:

- Concurrent maintenance disks
- Redundant Hot plug 900W power supplies
- Redundant cooling (fan) with Hot Swap capability
- Simplified Op panel
- In-rack system service

Machine Type Model: 7063-CR2

HMC code level V9R2M950 (V9.2)

- For POWER7, POWER8, & POWER9

7063-CR2 can be rack shippable

Two Rail Features Available:

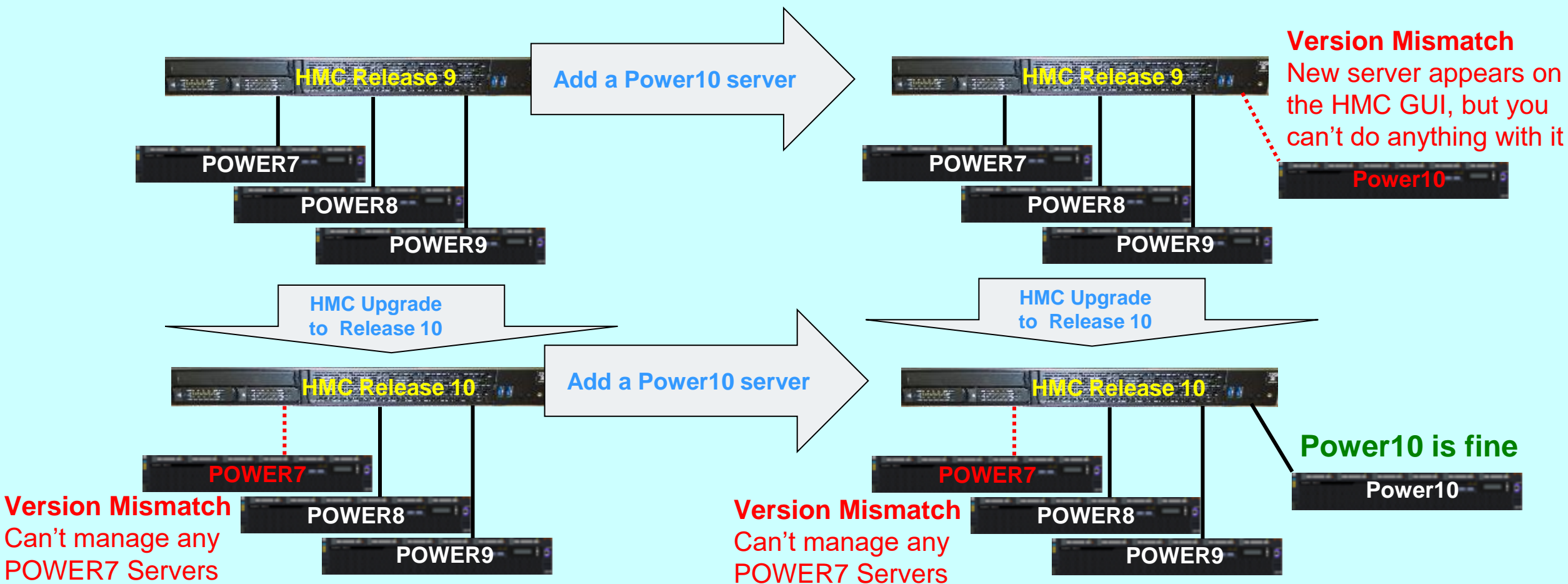
- Fixed Length Rail kit
 - Required, if shipped in a rack S42, T42, or T00
- Adjustable Length Rail kit
 - Round + square hole racks support

Announcement:

<https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=AN&subtype=CA&htmlfid=897/ENUS121-001&appname=USN>

IBM Power HMC

Machine Type Model: 7063-CR1 & 7063-CR2



For **POWER7 Version Mismatch**

- 1) HMC on Release10: Select the server then Remove System Connection
- 2) Cable the Server FSP network to older HMC running Release 9, use HMC "Connect System" to find the server

Wilson Mevius
SDL **GEODIS**
 MAMB VIA
 2-46749780 LHR
 MAMB DES
 LOGDL875833 LHR
 271
 1395279
 FACTUR

SHIP TO: IBM UNITED KINGDOM, LIMITED 2021-35-06
 C/O GEODIS UK LTD.
 DOVE CLOSE - FRADLEY PARK
 LICHFIELD, UNITED KINGDOM
 WS13 8SU
 UNITED KINGDOM

SHIP TO: WS13 8SU Ship in Case

Job No. **1131887**

Deliver To: **NIGEL GRIFFITHSIBM**
SE1 9PZ
 Geodis United Kingdom Ltd
WS13 8SU

Customer Reference: **GEOD01**
 Consign Date: **29/03/2021**
 Delivered Date: **31/03/2021**

Order No: **U75538**
 Ref: **D20010860257**
 Ref 3: **96COMBY**

Customer Order Reference: **0700D80TOLK00** Cons 1 of 1
1131887 (1)

POWER - RMC

Customer order details:
 D-Machine Type: Model: **7863CR2**

Configuration:

Option	Qty	Description	Option	Qty	Description
0001	1	POWER PLUG	0001	1	POWER - USE OFFERS BRIDGE
0002	1	POWER SUPPLY	0002	1	POWER SUPPLY - 12VDC
0003	1	POWER SUPPLY	0003	1	POWER SUPPLY - 12VDC
0004	1	POWER SUPPLY	0004	1	POWER SUPPLY - 12VDC
0005	1	POWER SUPPLY	0005	1	POWER SUPPLY - 12VDC
0006	1	POWER SUPPLY	0006	1	POWER SUPPLY - 12VDC
0007	1	POWER SUPPLY	0007	1	POWER SUPPLY - 12VDC
0008	1	POWER SUPPLY	0008	1	POWER SUPPLY - 12VDC
0009	1	POWER SUPPLY	0009	1	POWER SUPPLY - 12VDC
0010	1	POWER SUPPLY	0010	1	POWER SUPPLY - 12VDC

7870030
 7863CR270000
 YDEAJ

Machine Type: **7863CR2**
 Serial Number: **7863CR270000**
 Configuration Number: **00010001**
 Weight: **1.000**
 Volume: **0.000**
 Volume Unit: **CM3**
 Volume Unit Code: **CM3**
 Volume Unit Description: **CUBIC CENTIMETER**
 Volume Unit Factor: **1.000**
 Volume Unit Factor Code: **1.000**
 Volume Unit Factor Description: **1.000**
 Volume Unit Factor Unit: **CM3**

Customer Reference: **GEOD01**
 Consign Date: **29/03/2021**
 Delivered Date: **31/03/2021**

Order No: **U75538**
 Ref: **D20010860257**
 Ref 3: **96COMBY**

Customer Order Reference: **0700D80TOLK00** Cons 1 of 1
1131887 (1)

Pallet & box in good condition



Officially a Early Ship Program (ESP) test HMC or an “Engineering Proto-type”

As General Availability was a few weeks away = just a few labels and tiny details different



At the top the box for the rack rails, bag of nut clips and bolts.

Lid opened to the regular:

- Mains leads
- Parts list
- Pointless bits



With the top-box packing removed
Already impressed

Noticed the self destructing label
securing the plastic bag = good move

HMC CR2 is 1U in height
= simple one person lift to a table





Quality cardboard covering the HMC rear connectors
looks a little crude with blue tape but does the job 100%
Might be different for GA HMCs

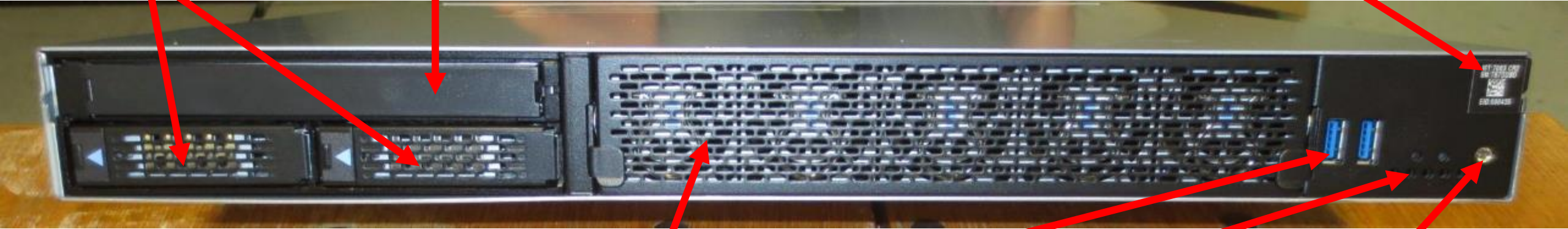
First look: the clean lines and minimalist styling!



Two disks only

Cover plate

MTM & Serial Number
repeated at the back



5 mini fans, 2 USB, LED lights & On/Off button & lamp

Warning: don't press the button accidentally, like I did!

HMC CR2 has no IBM logo normal for a Early Ship



The rear of the HMC looks very professional & organised

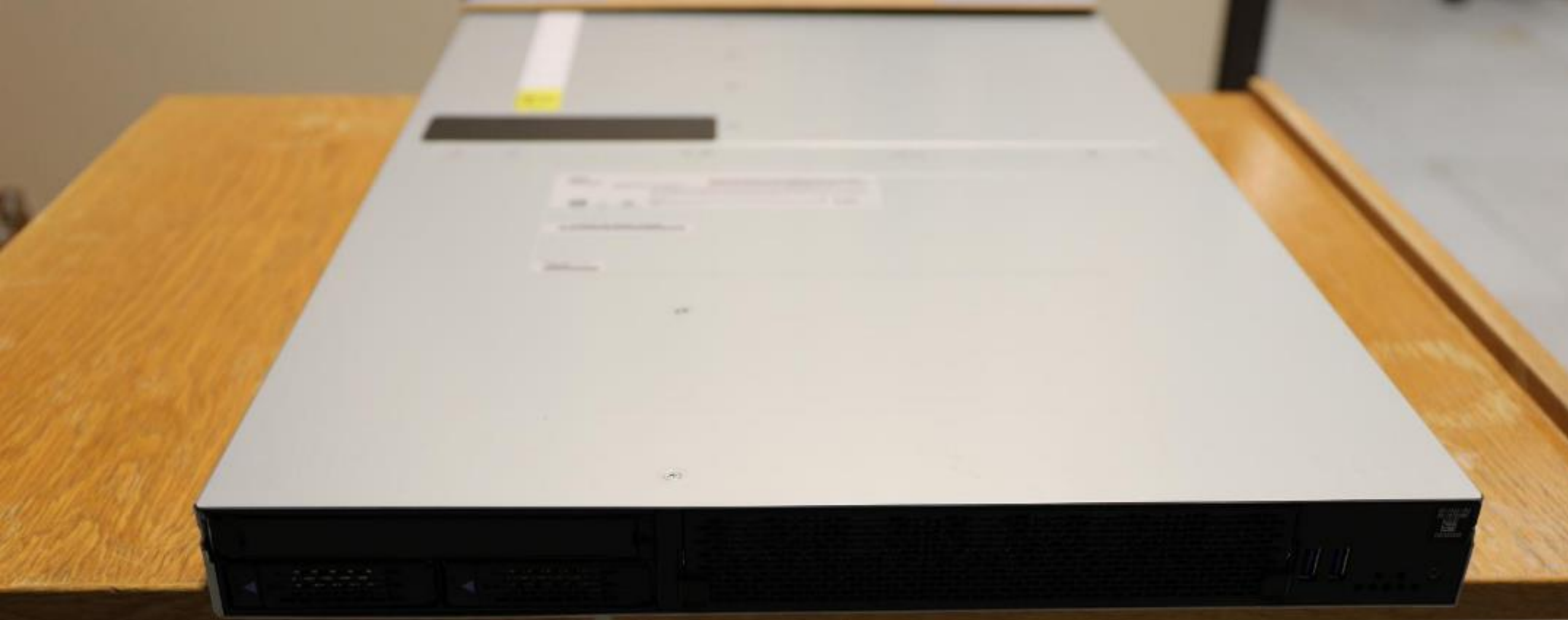
Zooming in



We will return to investigate this but first a question:



How do you get the lid off
to fiddle about inside?



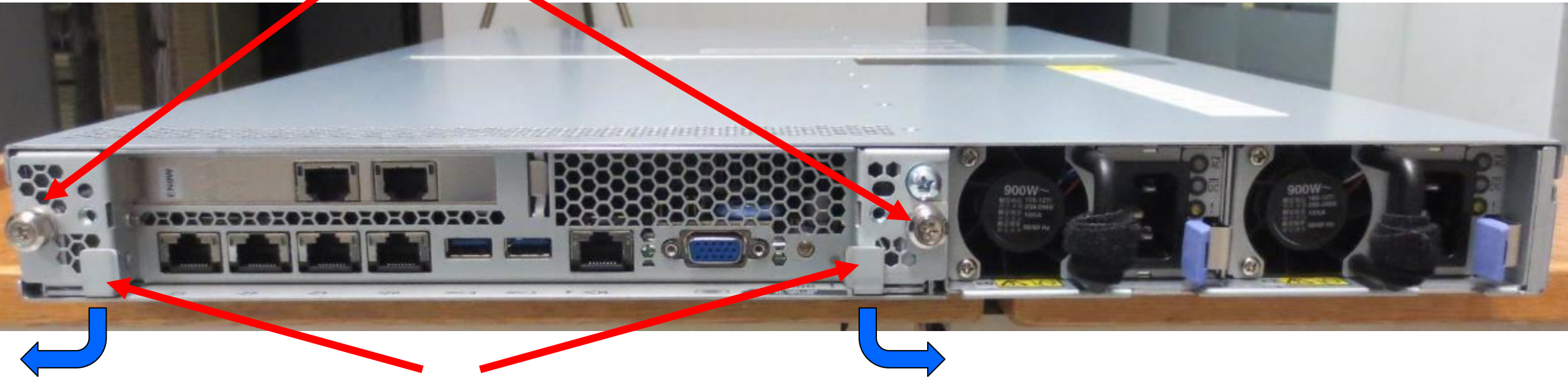
How do you get the lid off
to fiddle about inside?

Answer: **You don't** 😊

DO NOT REMOVE THE 24 SCREWS!

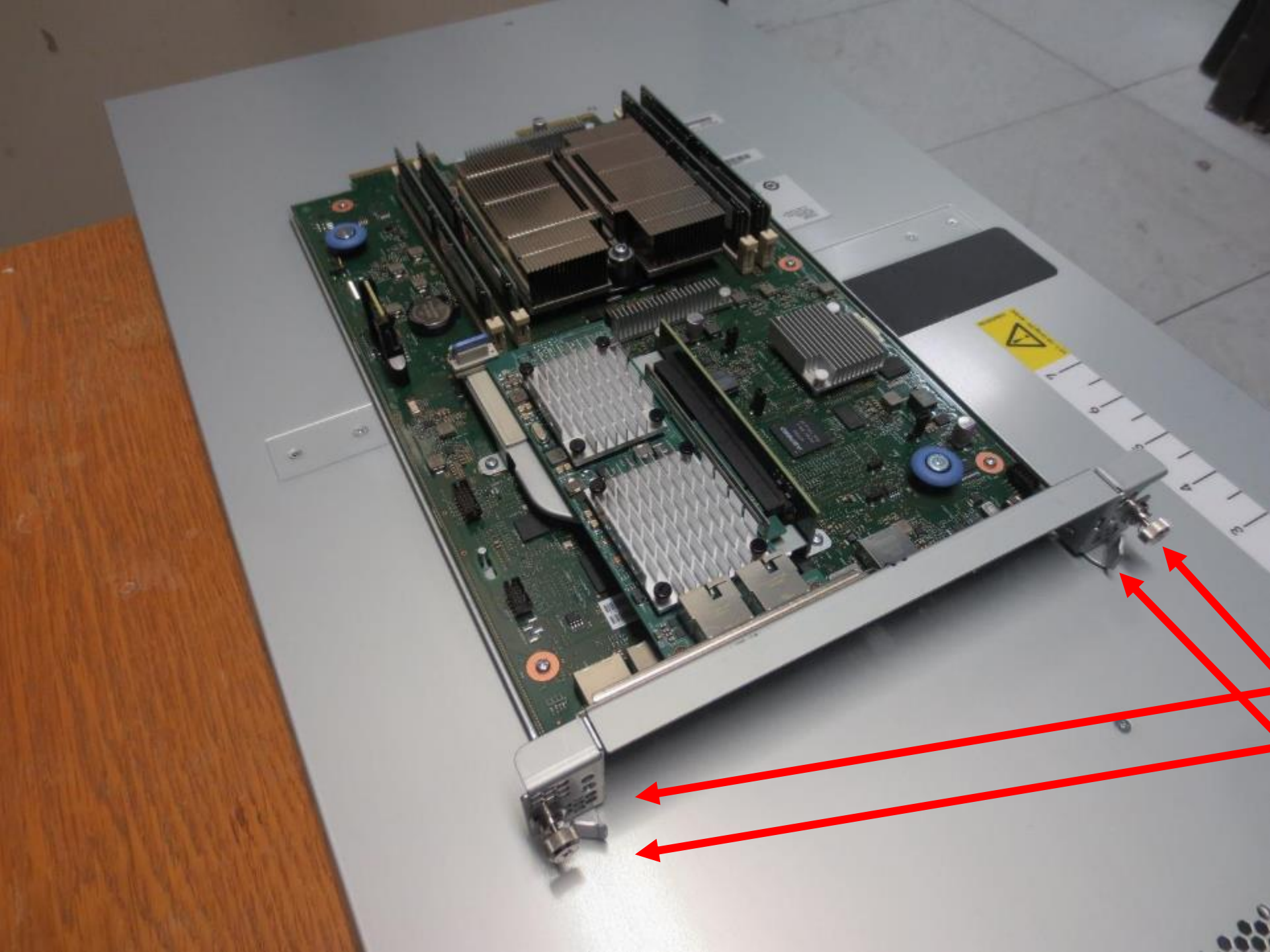
HMC internal units are extracted from the front and rear

Undo these two knurled handles



Pull and swivel these two handles

Carefully pull out the planar



Removed Planar

Use an anti-static strap!

You can see the screws & handles better from this angle



Close up





PWR01 - AC POWER 01 - 413

Panasonic
CR 2032
3V

40 27 041 002
1-400-707-074
www.dell.com
G884574

Four DIMMs

POWER9 6 cores under heatsink

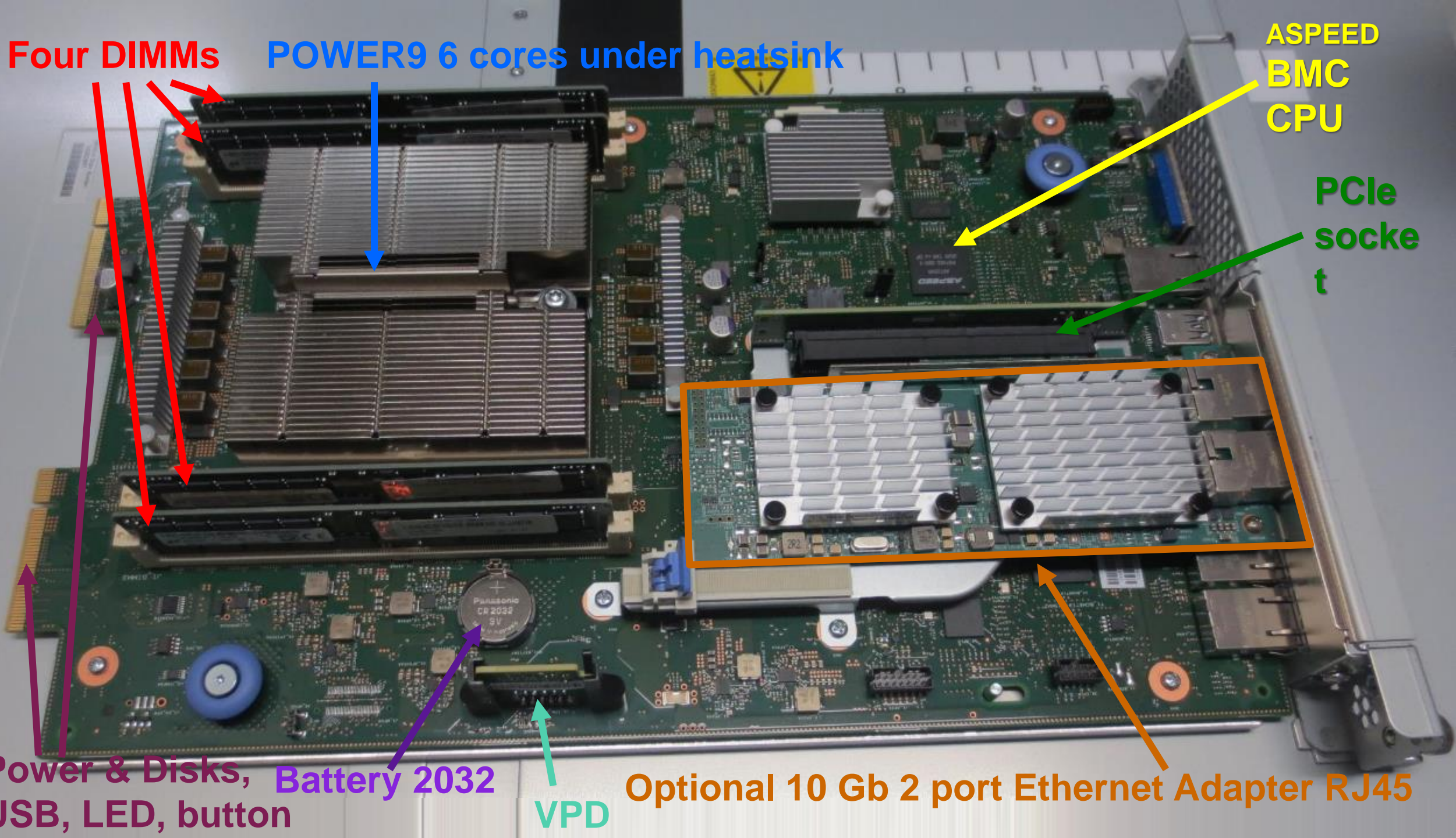
ASPEED
BMC
CPU

PCIe
socket

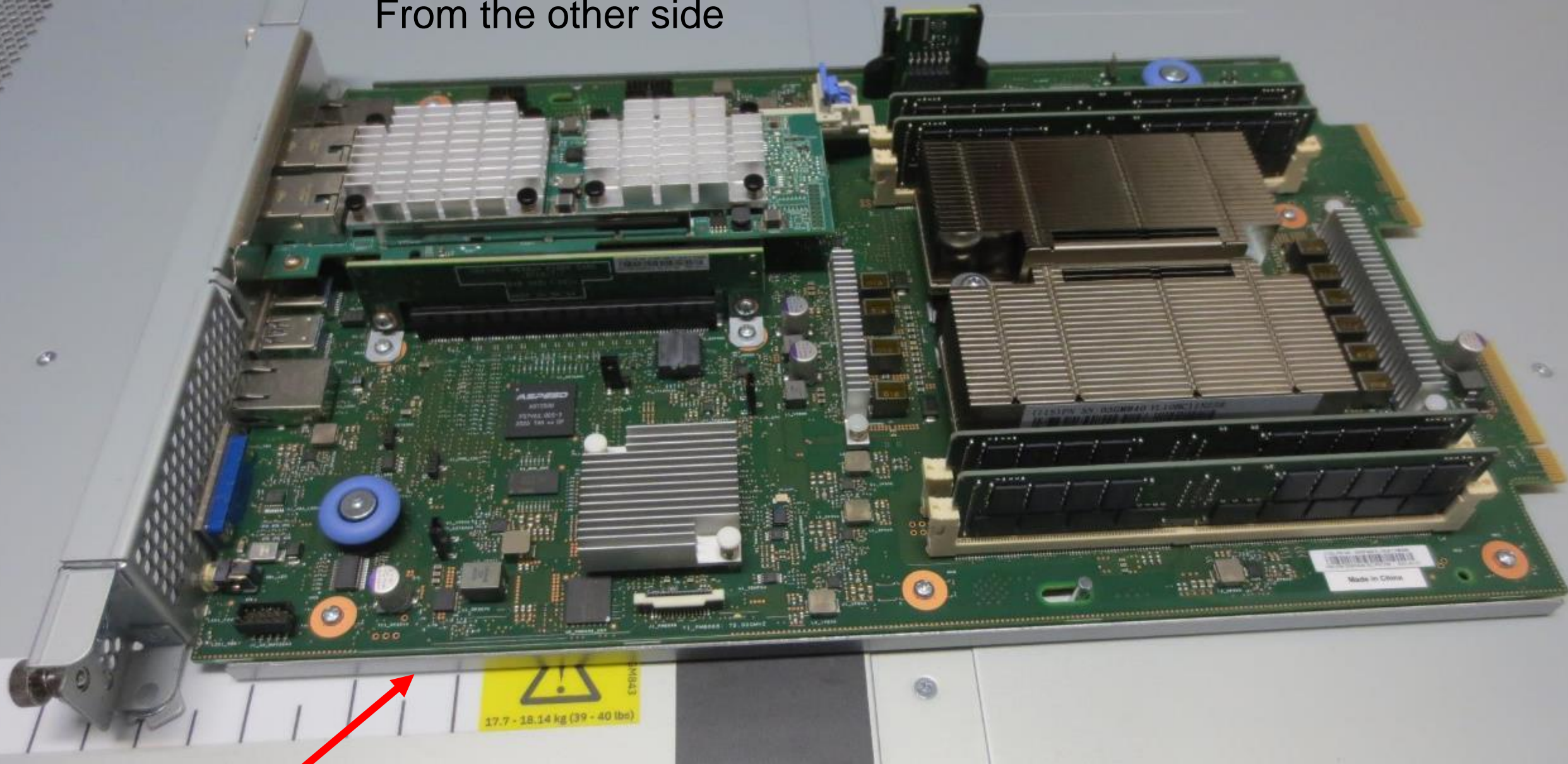
Power & Disks, USB, LED, button

VPD

Optional 10 Gb 2 port Ethernet Adapter RJ45



From the other side



Edge of the bottom metal cover.

The whole planar unit is reassuringly heavy!



Two 900W Power Supplies

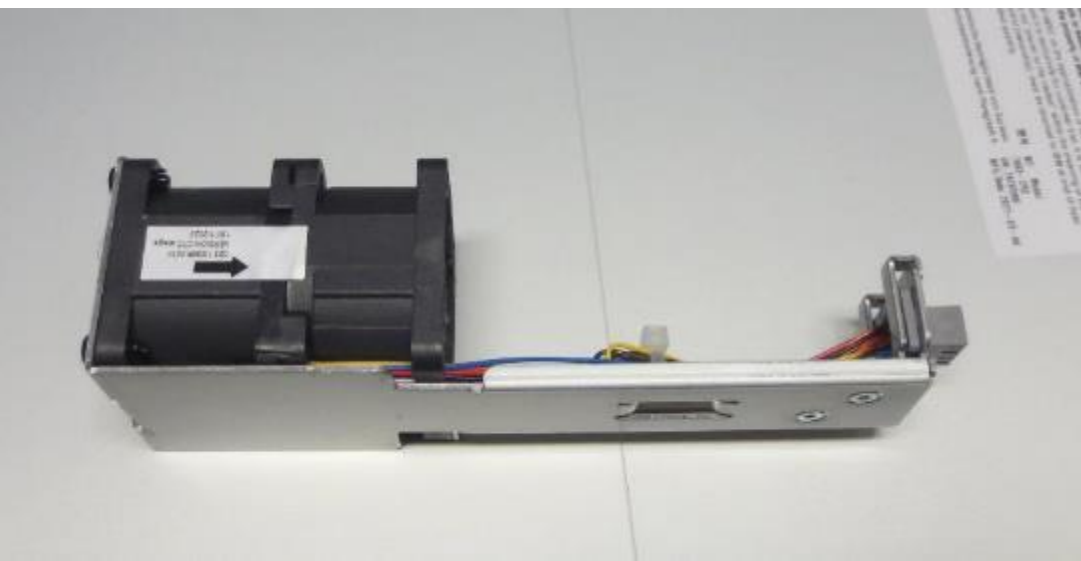


900 Watt Power Supplies
Rating: 80 plus Platinum class



Round the front:
2 disks & 5 fans





Front fan removal
Simple ring pull &
push back in



Disk Removal

Press blue triangle symbol and the handle pops out
Swing the handle out and gentle pull the disk out





IBM Winchester SAS Disk 1.8 TB
in a strong metal case



Installing Rails & HMC



Unpacking the rack rails, bolts
(no screws) and nut clips



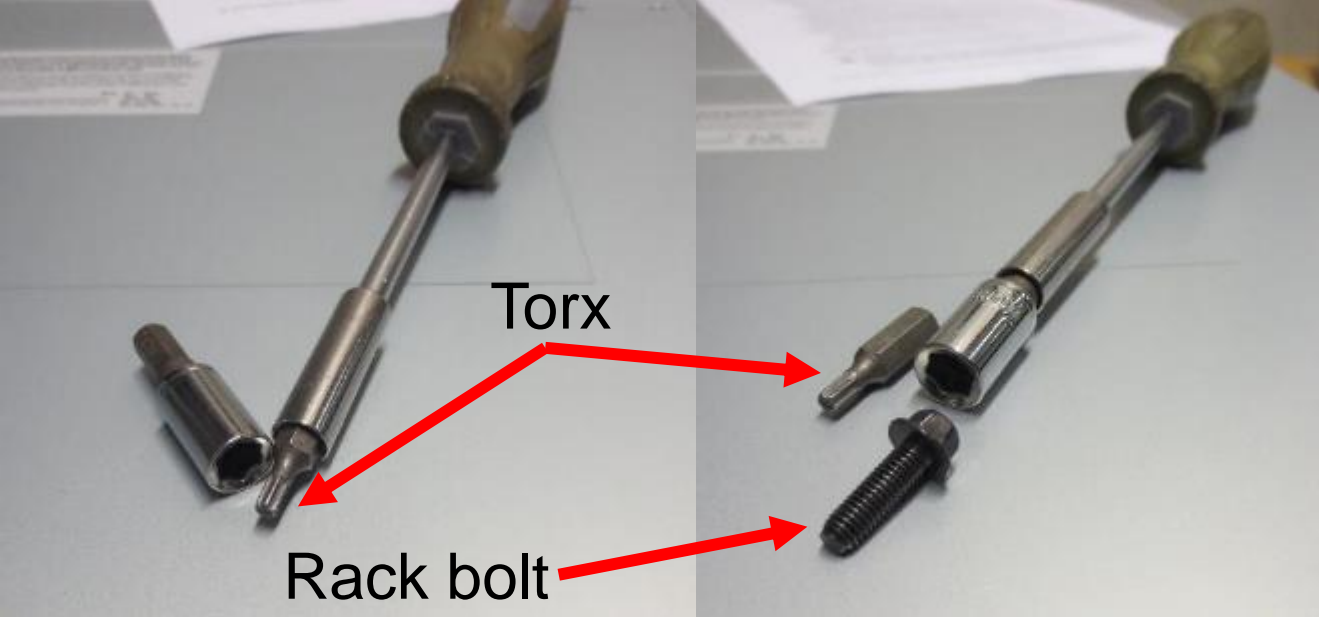
These are the Adjustable Rails

These brackets attach to the HMC

Rack rails:
Black ends for the back of the server

Silver ends at the front of the server





Rack lock nuts:

Square hole rack

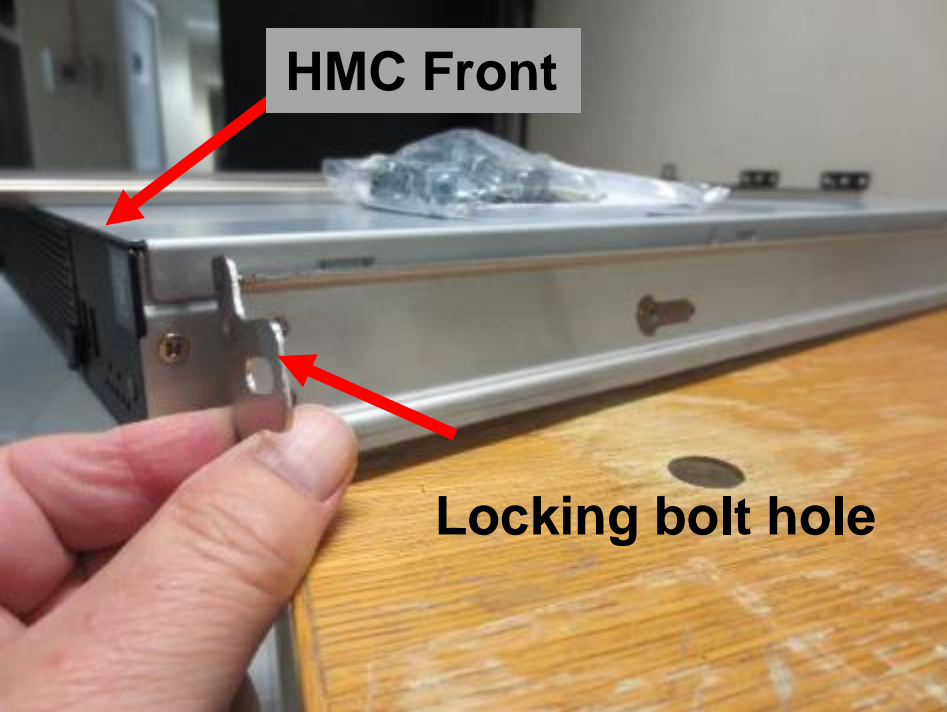
Round hole rack

Torx bolt for brackets

Round hole rack

Square hole rack

Note: Torx bolts replaced with Philip bolts for GA



HMC Front

Locking bolt hole

Right HMC bracket

**3 flat nail heads
per HMC side**

**Flat head nail bolt
mount holes**



Align all three flat head bolts & holes



**Push rail forward till
flat head nails
fully engaged**

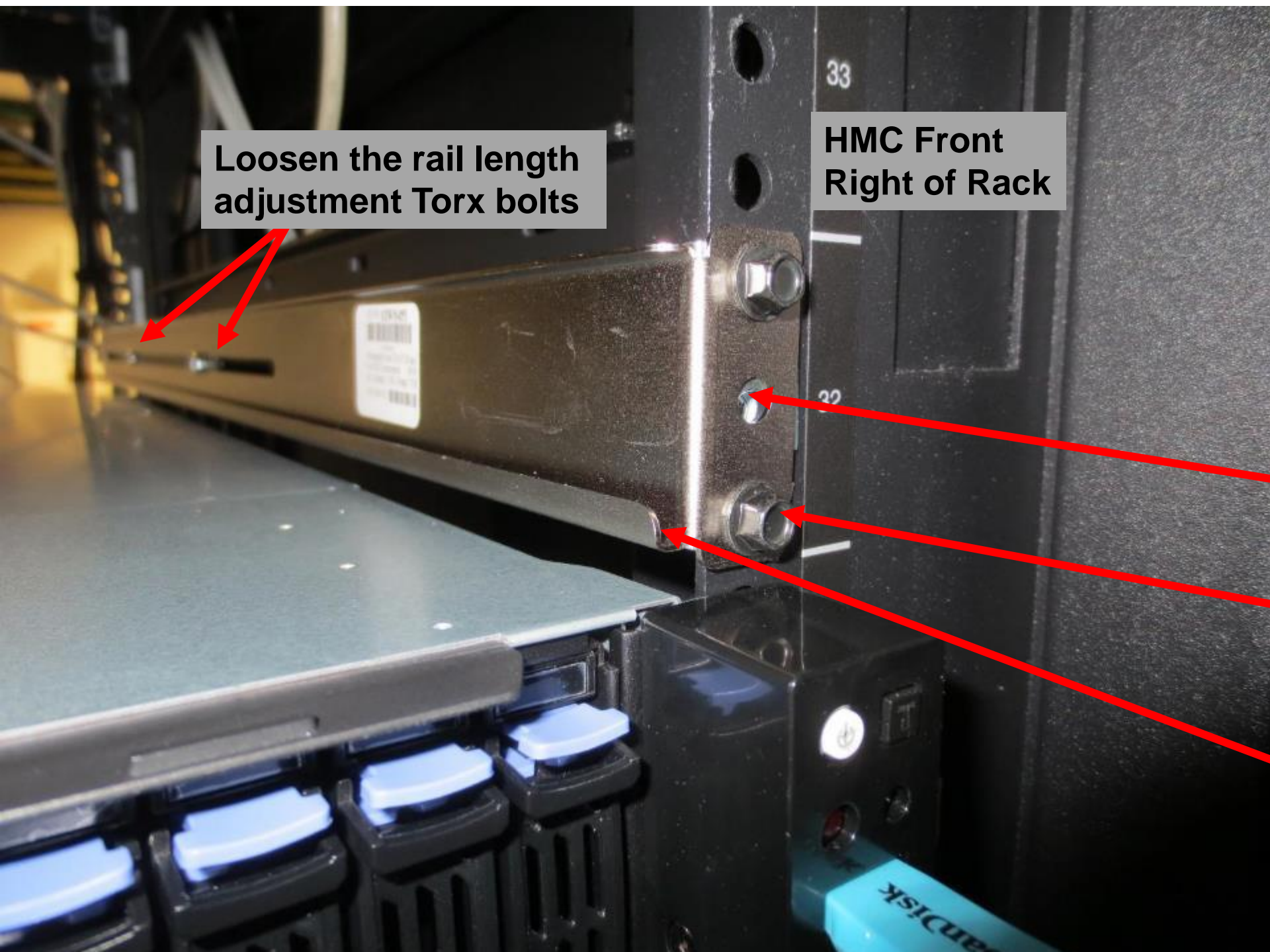


**Line up holes with bolt threads &
screw in the tiny silver Torx bolts**



**This edge fits in the
U**

channel of the rack rail



Loosen the rail length adjustment Torx bolts

HMC Front Right of Rack

Adding the Rails

Not shown:
adding the nut spring clips for round holes or square holes

Middle hole for locking in the HMC

Top & bottom rack bolts

Note U shape at the bottom

**HMC Back
same side of Rack**

**Pull the rail back half to reach the
Rear rack round or square holes**

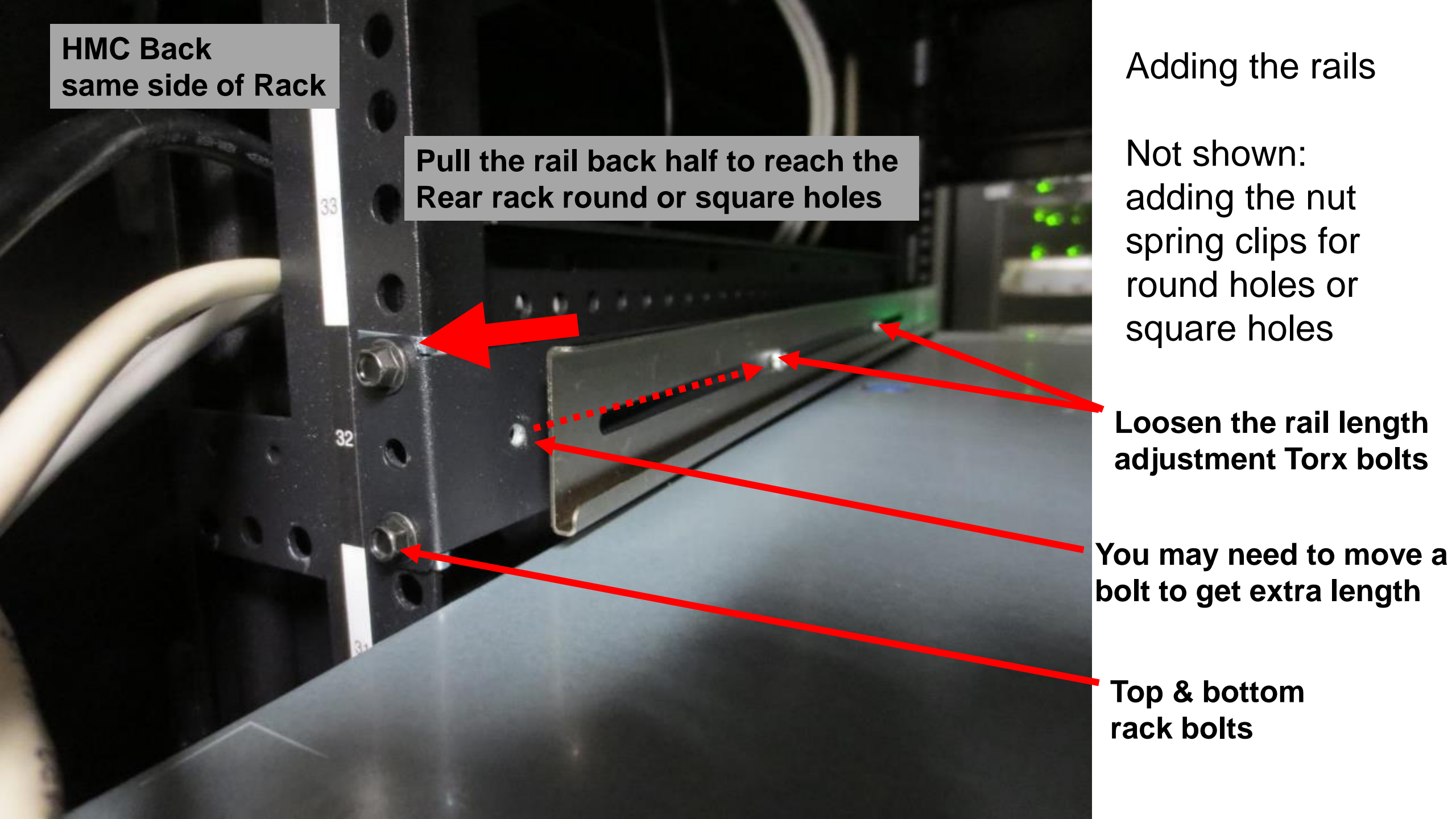
Adding the rails

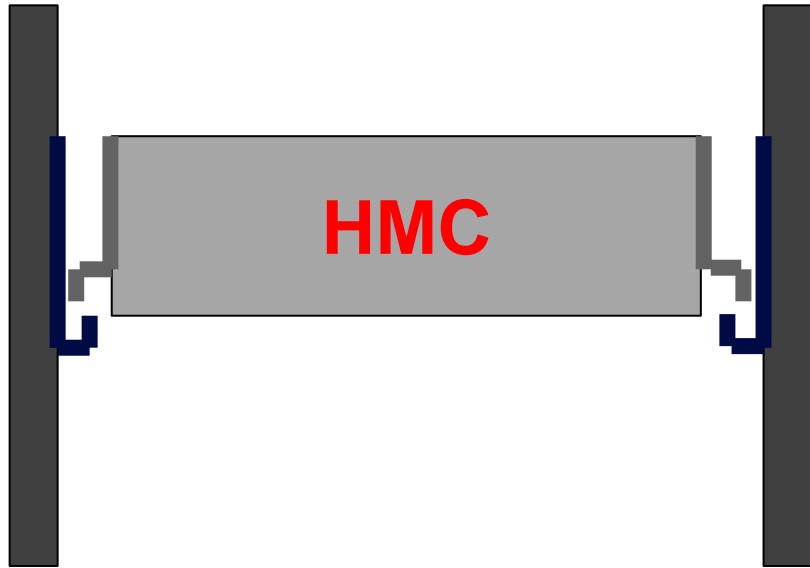
Not shown:
adding the nut
spring clips for
round holes or
square holes

**Loosen the rail length
adjustment Torx bolts**

**You may need to move a
bolt to get extra length**

**Top & bottom
rack bolts**

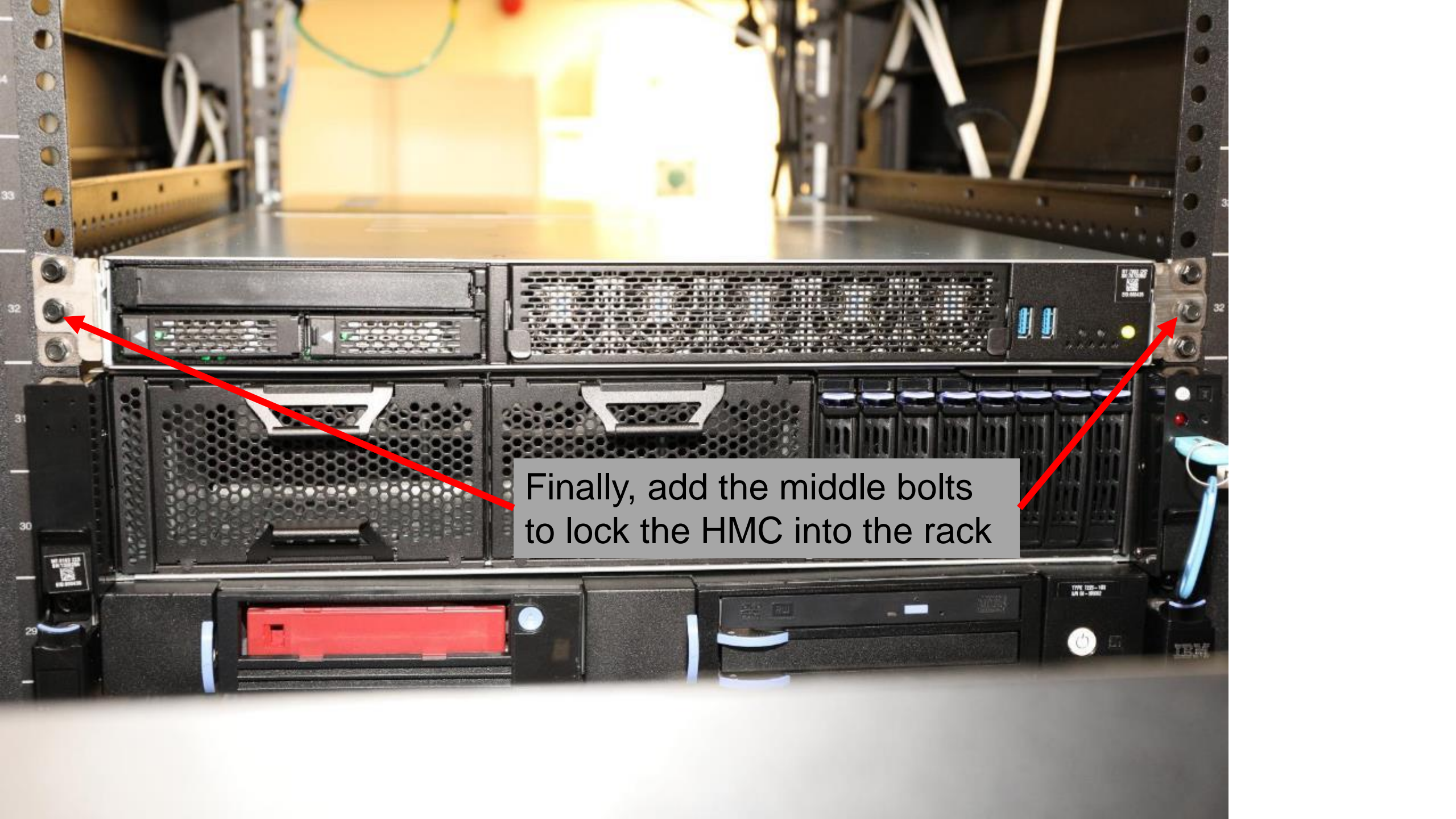




HMC metal flange on the HMC rail bracket runs along the rack rail lower U shape metal

No ball bearing smoothness, so it is a stiff push
- with metal to metal friction





Finally, add the middle bolts to lock the HMC into the rack

Cabling

Optional 10 Gb
RJ45 Ethernet
adapter

2 USB for
mouse &
keyboard

VGA to a
monitor/screen

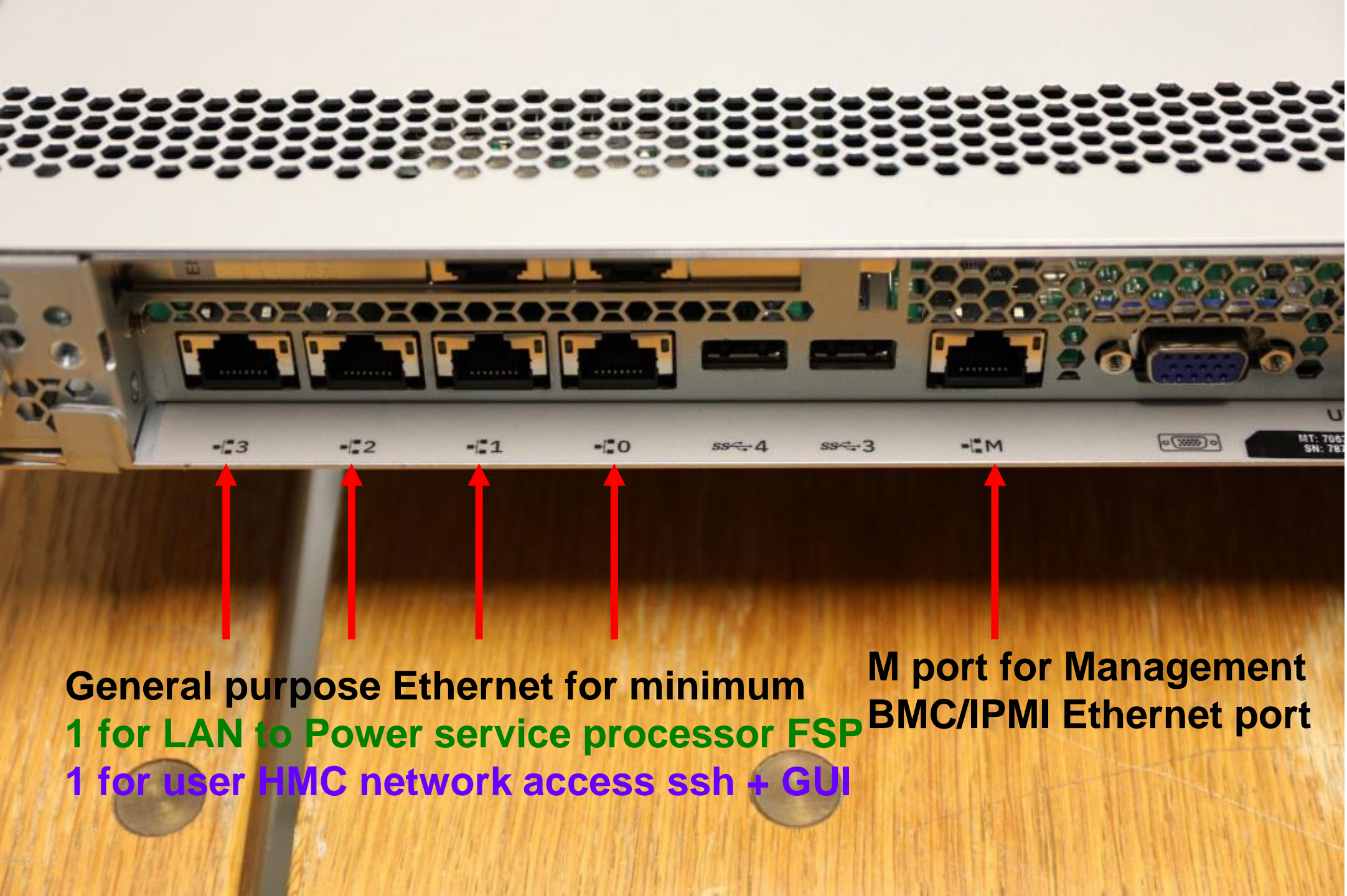


Two 900W Power Supplies



A diagram of the port above!

We think it was deliberately humorous.



General purpose Ethernet for minimum
1 for LAN to Power service processor FSP
1 for user HMC network access ssh + GUI

M port for Management
BMC/IPMI Ethernet port

Hardware Review and Installation Assessment:

1. Boxing and Packing - 100%
2. General initial look of the HMC - 100%
3. Labelling – appropriate for proto-type - 100%
4. Parts removal front and back - 100%
5. Chassis robust and stiffness - 100%
6. Removing parts catches and latches - 100%
7. Layout and labelling of external ports - 100%
8. Motherboard design - 100%
9. Battery access - 100%
10. Enjoyed the VGA label joke! - 100%
11. Simple one button operation at the front - 100%
12. Initial impression of performance once setup - excellent

This is a VERY nice Power Server / HMC

We are very impressed

Full marks and well done to the whole team

100%



CR2



CR2

IBM Power HMC
7063-CR2



IC922



Media tray

Just for fun . . .

POWER9 HMC CR2 – super cool and functional look



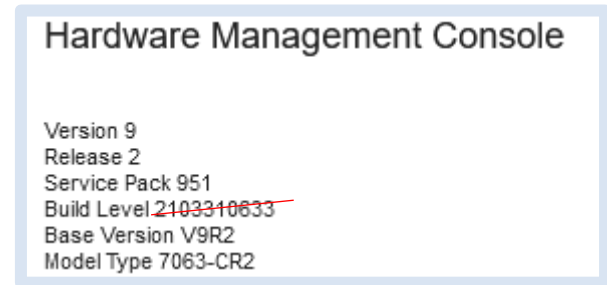
POWER8 HMC CR1 looks old fashioned now!

Installing HMC SW

This is not a basic 101 class in HMC setup but focused on the differences compared to X86 based HMC's of old

Code and documentation

- For the ESP, we used early code that is now released
- Released Images
 - Recover Image 9.2.951.0
- Normal network planning in advance ☺ →



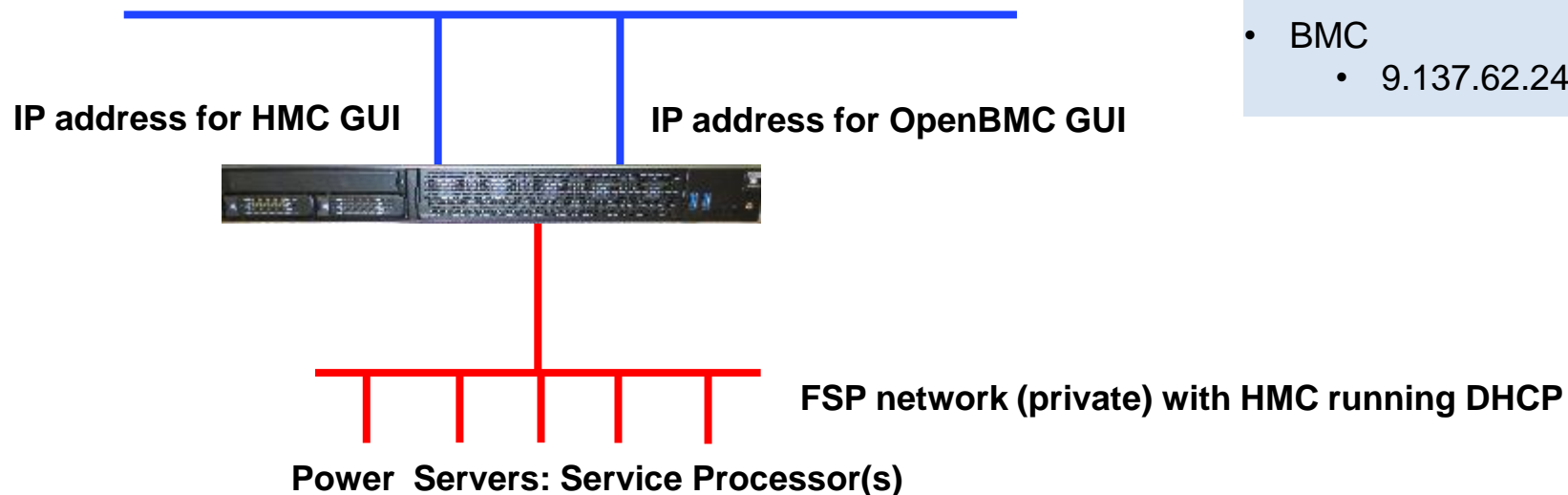
Public system admin users and network for RAS reporting

- IP Address: 9.137.62.19/24
- Gateway: 9.137.62.1
- DNS: 9.137.62.2
- Search: uk.ibm.com, ecurep.ibm.com
- Hostname: hmc17.aixncc.uk.ibm.com

Private for Power service processors

- 192.168.128.2 - 192.168.255.254/17 (255.255.128.0)
- BMC
 - 9.137.62.244/24

Network for Systems Administrator access (public) and RAS report home



Optional card EN0W = PCIe2 2-Port 10GbE Base-T

- <https://www.redbooks.ibm.com/Redbooks.nsf/RedbookAbstracts/tips1225.html>
- System access to the HMC GUI and Report Home via in the rack 10 Gbps switches



Description

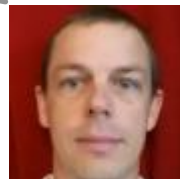
PCIe2 2-port 10 GbE BaseT RJ45 Adapter

Feature code

EN0W

The EN0W 10G RJ45 makes sense in that it is a lower cost option (than optical connections) plus it can be used at 1G or 10G. Clients tend to have lower cost management network switches than their core data switches, so this helps with that as well.

I don't see IBM making Optical Ethernet (EN0S or EN16) an option for a while, unless we get a large number of client requests.



Douglas Gibbs
Power I/O Offering Manager

Starting the HMC CR2

1. Connected Power Cords
2. Waited till the On/Off button is a steady blinking rate (few minutes)
3. Pressed the power on button ONCE and waited – then it sprang into life



← Boot information on the console

Petitboot Menu



Setting up the BMC IP address

At the “petitboot” menu, we “Exited to a shell” and set up networking

```
ipmitool lan set 1 ipsrc static  
ipmitool lan set 1 ipaddr 9.137.62.244  
ipmitool lan set 1 netmask 255.255.255.0  
ipmitool lan set 1 defgw ipaddr 9.137.62.1  
  
ipmitool mc reset cold
```

We couldn't make the settings stick, so ...

Probably a Early Ship firmware problem.
Fortunately, there are other ways of setting up the network ...

Use the BMC default IP address, connect, login and change the IP Addresses

Once on the network access the OpenBMC GUI website



BMC System Management



BMC HOST OR BMC IP ADDRESS

hmc17bmc.aixncc.uk.ibm.com

USERNAME

root

PASSWORD

.....

OpenBmc

Log in



⊗ The password has expired and must be changed.

BMC HOST OR BMC IP ADDRESS
hmc17bmc.aixncc.uk.ibm.com

USERNAME
root

NEW PASSWORD
Must be between 8-20 characters.

CONFIRM NEW PASSWORD

[Go back](#)

[Change password](#)

Doesn't seem to like the username in the password. Fair enough, but it doesn't tell us.

[Log in](#)



hmc17
9.137.62.244

Server health >
 Critical

Server power >
 Running

Data last refreshed
Jul 8, 2021 12:27:27 BST

Refresh



Server overview

hmc17

Server information

MODEL	MANUFACTURER
7063-CR2	N/A
SERIAL NUMBER	FIRMWARE VERSION
787DDBD	IBM-mowgli-ibm-OP9_v2.5_4.108-prod

BMC information

HOSTNAME	MAC ADDRESS
hmc17	8:94:ef:81:99:3c
IP ADDRESSES	FIRMWARE VERSION
169.254.180.29	op940.hmc-3-0-g10d5072c0
9.137.62.244	
9.137.62.243	
169.254.248.211	

Power Consumption

POWER CONSUMPTION	POWER CAP
96 W	Not Enabled

[View 5 high priority events](#)

BMC time

Jan 14, 2021 18:50:05 GMT

Turn on server LED Off

Serial over LAN console >

Edit network settings >

**A few screen dumps from the HMC
Note: Server here = the HMC!**

BMC System Management

IBM hmc17
9.137.62.244

- Server overview
- Event log
- Hardware status
- Sensors
- Server health
- Server control
- Server configuration
- Access control

BMC System Management

IBM hmc17
9.137.62.244

- Server overview
 - Server power operations
 - Manage power usage
- Server health
 - Server LED
 - Reboot BMC
 - Serial over LAN console
- Server control
 - KVM
 - Virtual Media
- Server configuration
- Access control

BMC System Management

IBM hmc17
9.137.62.244

- Server overview
 - Network settings
 - SNMP settings
- Server health
 - Firmware
 - Date and time settings
- Server control
- Server configuration
- Access control

BMC System Management

IBM hmc17
9.137.62.244

- Server overview
 - LDAP
 - Local users
- Server health
 - SSL certificates
- Server control
- Server configuration
- Access control

The BMC menu options



hmc17
9.137.62.244

Server health >
Critical

Server power >
Running

Data last refreshed
Jul 8, 2021 12:35:35 BST

Refresh



Server overview



Server health



Server control



Server configuration



Access control

Server power operations

Current status

Last power operation at Jan 11, 2021 22:53:53 GMT

hmc17 - 9.137.62.244

Running

Host OS boot settings

BOOT SETTING OVERRIDE

None

Enable one time boot

TPM REQUIRED POLICY

Enable to ensure the system only boots when the TPM is functional.

On

Cancel

Save

Operations

REBOOT SERVER

- Orderly - OS shuts down, then server reboots
- Immediate - Server reboots without OS

Reboot

SHUTDOWN SERVER

- Orderly - OS shuts down, then server shuts down
- Immediate - Server shuts down without OS

Shut down

If the HMC has no software or goes horrible wrong, this BMC Reboot or Shutdown option is a "Get out of jail free" card.

Avoiding a trip to the computer room.

Documentation for HMC CR2 SW Install is here → good starting point
<https://www.ibm.com/docs/en/power9?topic=rack-configuring-7063-cr2-hmc>

Nigel Hint:

- Use only the Physical Console (VGA screen, USB mouse, USB keyboard) or
- Use only the Virtual Console via the OpenBMC website in a browser

Note:

Different Install Default passwords are in the web page above and below:

Console or Interface	Default ID	Default Password	Description
BMC (OpenBMC)	root	OpenBmc	The root user ID and password are used to log in to the BMC for the first time.
HMC	hscroot	abc123	The hscroot user ID and password are used to log in to the HMC for the first time. They are case-sensitive and can only be used by a member of the super administrator role.
HMC	root	passw0rd	The root user ID and password are used by the service provider to perform maintenance procedures. They cannot be used to log in to the HMC.

You will have to change these, write them down & store securely

Documentation for HMC CR2 SW Install is here → good starting point
<https://www.ibm.com/docs/en/power9?topic=rack-configuring-7063-cr2-hmc>



This document covers 3 methods to install the HMC SW.
Currently, each method has a show stopper bug! Oops! [[IMHO July 2021]]

- The document will get updated at some point.
- Until then, here are my hints.

The three methods – see next three slides:

1. Install by USB Flash Drive (memory key, thumb stick, ...)
2. Install by Remote Media via the BMC
3. Install by external USB DVD Drive

Flash Drive

Linux only – tough luck Window10 or Apple users

parted command sub command *mkpart* manual pages are different for RHEL7 and RHEL8
I think this runs by accident on RHEL8, where *ext3* is taken as the name and not the format

“cat” is weird choice to move a 4.7 GB file
And “fails with permission” issues even as root

As root: `dd if=HMC*.iso of=/dev/sdb1`
Works and takes ~12 minutes

Flash Size (8 GB or more) but right at the end after a 4 GB Flash would have failed!

Installing the HMC by using USB flash drive

To install the HMC by using USB flash drive, complete the following steps for Linux® systems:

- Note:** For examples in different operating systems, see:
- Windows: [USB flash installation media \(Windows\)](#)
 - Mac: [USB flash installation media \(macOS\)](#)

1. Download the HMC version that you want from the [Fix Central](#) website.
2. Run the following command to identify the device name of the USB drive when it is plugged in: `lsblk`.
For example: `/dev/sdb` (where `sdb` is the name of the USB drive)
3. Run the following command to wipe the USB drive: `wipefs --all /dev/sdX`.
For example: `wipefs --all /dev/sdb`
4. Run the following command to verify the size of the disk under the SIZE column: `lsblk`.
For example: When a 16 GB USB drive shows as 14.3 GB, round it down to 14 GB for the next step 5.
5. Run the following command to format the disk and create a partition: `parted /dev/sdX`

From the parted utility, run the following three commands:

```
mklabel gpt

mkpart primary ext3 1MiB <size>GiB

quit
```

- Note:** size is the size of the USB drive obtained in the step 4.

For example:
`parted /dev/sdb`

```
mklabel gpt

mkpart primary ext3 1MiB 14GiB

quit
```

6. Run the following command to copy the ISO onto the partition: `cat HMC-Recovery-ppc64le.iso > /dev/sdX1`.
For example: `cat HMC-9.2.950.0-2103300827-ppc64le.iso > /dev/sdb1`
7. Insert the USB drive, and power on the system.

- Note:** The USB drive must be at least 8 GB. Certain USB drives might be too wide to fit properly into the USB port at the rear of the system. Test the fit of your USB drive before you proceed.

8. When the Petitboot menu is displayed, select the **Install Hardware Management Console** option that is located under **USB**.

Virtual Remote Media

.iso image on your workstation

Installing the HMC by using virtual media from the BMC

2

To install the HMC by using virtual media from the BMC, complete the following steps:

1. Open a supported web browser. In the address bar, enter the IP address of the BMC that you want to connect to. For example, you can use the format `https://<BMC IP>` in the address bar of the web browser.
2. From the OpenBMC logon window, enter the **Host** address of the BMC and the **Username** and **Password** that is assigned to you.

Note: The default user ID is `root` and the default password is `OpenBmc`.

If you are using firmware level OP940.01, or later, the root password is expired by default. You must change the default password before you can access the BMC. For more information about changing the expired default password, see [Setting the password](#).

If you forgot your password, you can perform a factory reset of the system to restore the default password. To reset the system, see [Performing a factory reset](#).

3. Click **Log in**.
4. Select **Server control**.
5. Select **Virtual Media**.
6. Click **Choose file**.
7. Locate the HMC Recovery media ISO and click **Open**.
8. Click **Start**.
9. Power on the system.
10. When the Petitboot menu is displayed, select the **Install Hardware Management Console** option that is located under **USB**.

BMC Server control → Server power operations

BMC Server control → Serial over LAN console

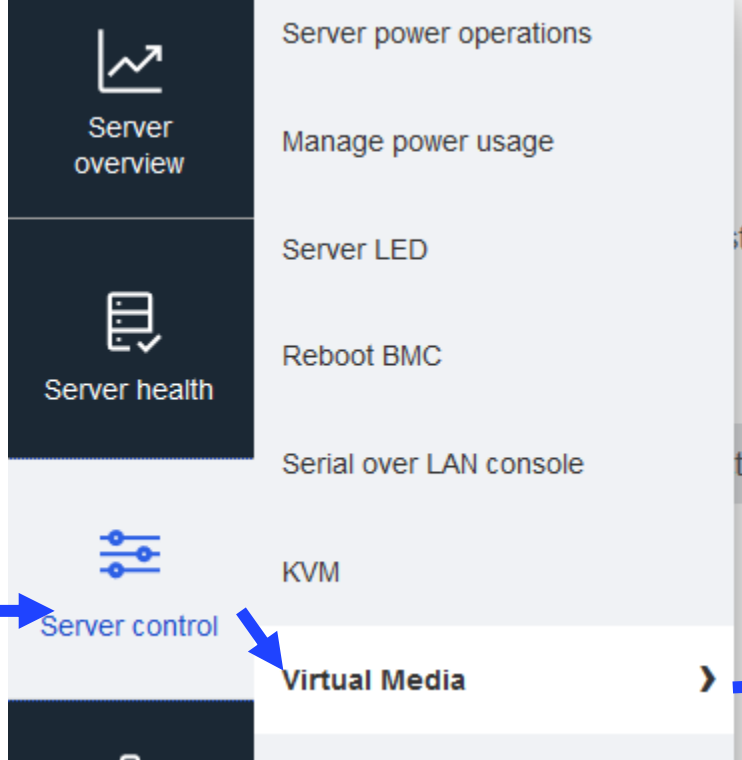
→ 11 Switch to the BMC → Server control → Select KVM then continue the install process

It should also note that the uploading of the 4.7 GB HMC Recovery image will take time. For example, a few hours.

If over the Internet, uploads speeds are typically 10% of the downloads speed.

Example: 200 Mb download = 20 Mb upload = 2 MB upload for 4700 MB = 40 minutes

Recommend you find a way to monitor your network upload traffic - at least if the network is busy, you then know to wait even longer



Virtual Remote Media Method

On the OpenBMC GUI

Tell BMC where the file is on your workstation

Virtual media

Specify image file location to start session.

Virtual media device

HMC-9.2.950.0-2103300827-ppc64le.iso

The file is on your workstation/PC
~4.7 GB

* GA Filename may be different

External USB DVD Drive

3

The HMC Recovery media .iso file is over 4.7 GB
so it can't be burnt to a normal 4.7 GB DVD media

Can you see the work around?

The two letters DL are easy to
over look, I did!

DL = "Dual Layer"

Do you know if your DVD burner
supports DL? I did not!

Double check the writing on your
DVD burner or its packaging
(if you have it) for any
"DL" reference. I got lucky!

Then go order DVD DL media.
I purchased "DVD+R DL" and
that worked OK. Took 2 days!

Installing the HMC by using an external USB attached DVD drive

To install the HMC by using an external USB attached DVD drive, complete the following steps:

1. Download the HMC recovery version that you want from the [Fix Central](#) website.
2. Burn the HMC recovery DVD image to a DVD-R DL media as an image.
3. Power off the HMC.
4. Connect the external USB DVD drive to the HMC and insert the HMC recovery DVD.

Note: You might need to connect the USB DVD drive to an external power source or use a USB Y cable to connect to an extra USB port to provide sufficient power to the DVD drive.

5. Power on the HMC.

Note: The display monitor might show no signal during startup. The process might take 2 or 3 minutes before the display monitor shows any status.

6. When the Petitboot bootloader starts, navigate to stop the automatic boot.

Note: A 10-second timeout is enforced. If no action is taken within 10 seconds, the system attempts to boot from the hard disk drive.

7. Wait until the CD/DVD device appears in the Petitboot menu.

Note: This process can take up to a minute.

8. Select the **Install Hardware Management Console** option that is located under **CD/DVD**.

Server overview

Server health

Server control

Server configuration

Access control

Server power operations

Manage power usage

Server LED

Reboot BMC

Serial over LAN console

KVM

Virtual Media

Whatever the media method
Physical Console and BMC SoL show the same thing:
“Petitboot” for the initial selection of boot media
(this screen taken while booting from USB)

Serial over LAN console

Access the Serial over LAN console

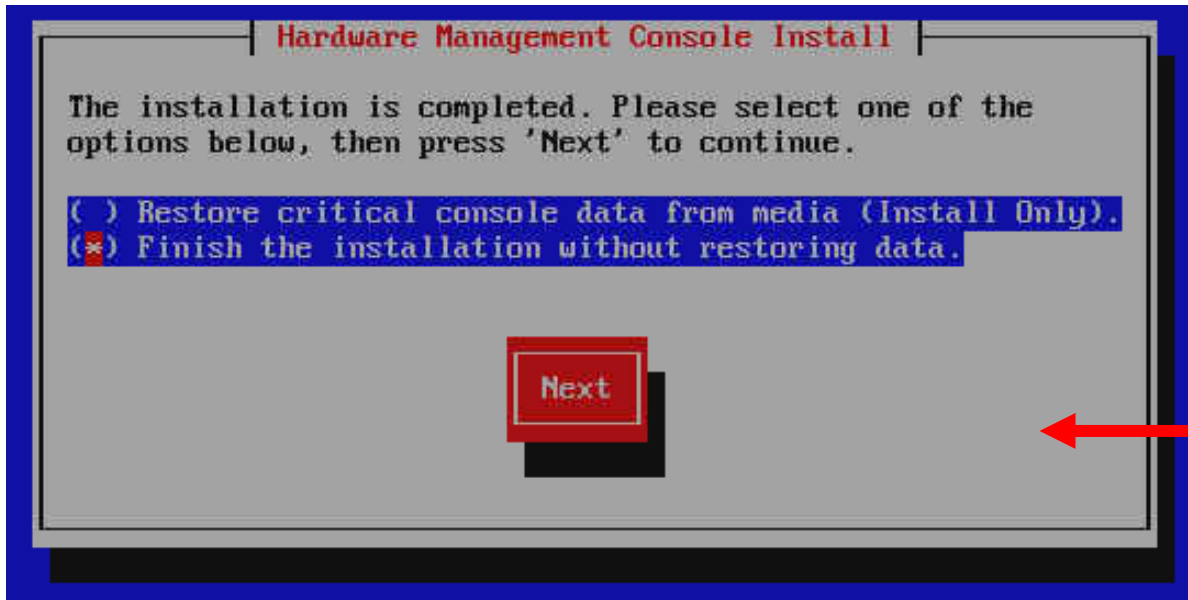
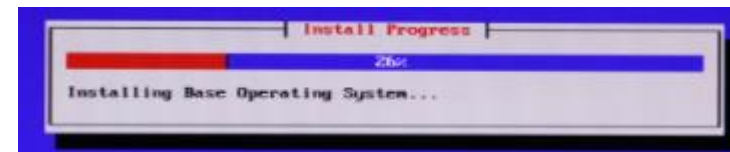
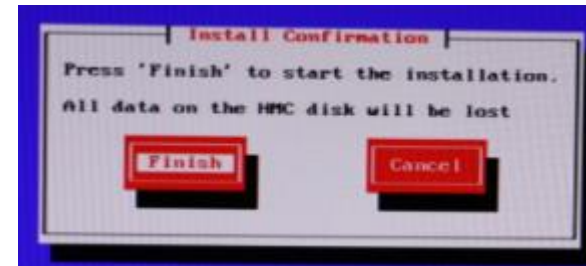
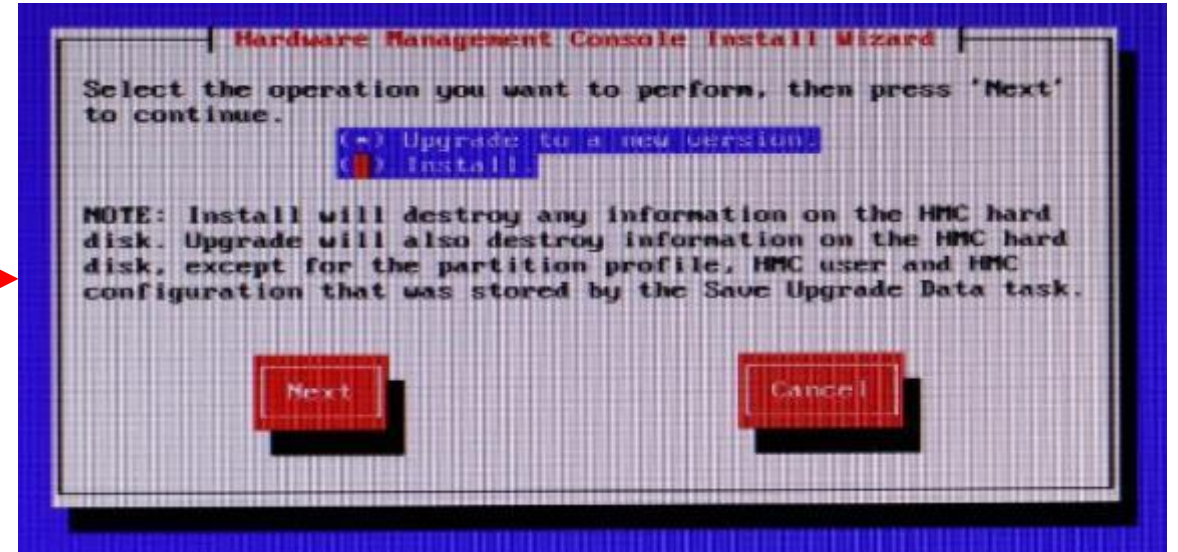
The Serial over LAN (SoL) console redirects the output of the server's serial port to a browser window on your workstation.

```
Petitboot (v1.12) 7063-CR2 787DDBD
[Disk: sda2 / 8b1d397e-f43a-466b-aeafa-e23c6507e72e]
Hardware Management Console
[USB: sdb / 60632d2e000b1af0]
* Install Hardware Management Console

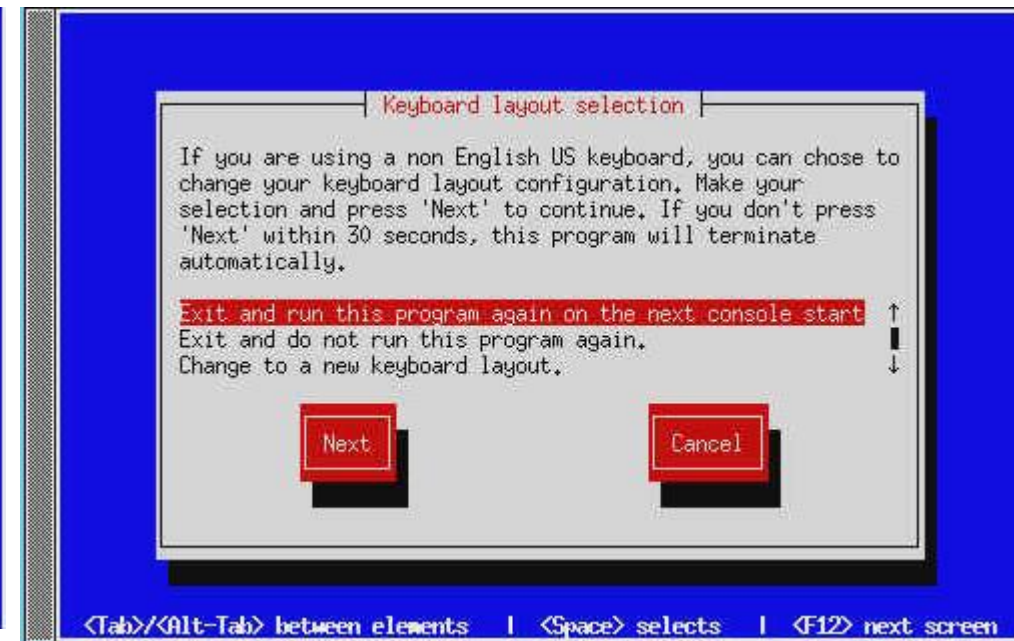
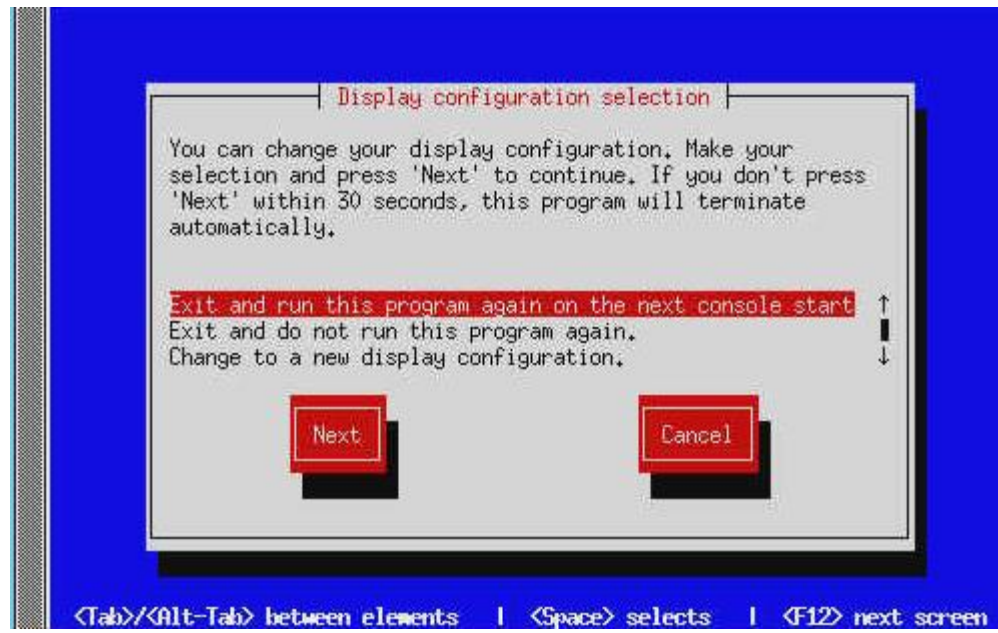
System information
System configuration
System status log
Language
Rescan devices
Retrieve config from URL
Plugins (0)
Exit to shell
```

If the new Install Boot media does not appear at or near the top. . . wait a minute
Or scroll down to “Rescan Devices” hit Enter and wait a minute
To start the Install move to a “Install HMC” line and hit Enter

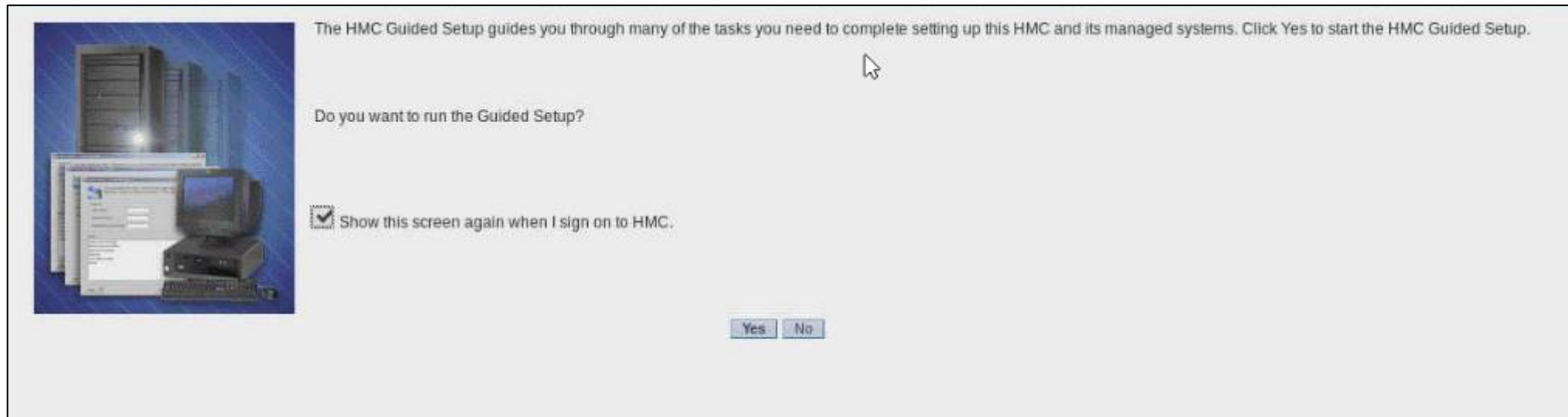
Regular: HMC Install Wizard



Regular: Display config and Keyboard Layout selection



After the reboot from disks we get the regular: HMC Guided Setup guides



KVM virtual GUI console

Same view on the physical VGA console

- Server overview
 - Server power operations
 - Manage power usage
- Server health
 - Server LED
 - Reboot BMC
 - Serial over LAN console
- Server control** (KVM)
 - Virtual Media
- Server configuration
- Access control

Hardware Management Console

Log in

User ID

User ID is required

Password

Password is required

Log in

Learn about the HMC Interface

1 SYSTEMS are all good

1 PARTITIONS are all good

2 VIOS are all good

0 Attention LEDs

11 Serviceable Events

hmc17: Hardware Management Console (VIOR1) Logon - Mozilla Firefox

10:38:29

This screen is the new login screen

HMC CR2 discovering the Power Servers

- This is business as usual
- You may need to manually add FSP passwords (if they are not all the same)



All Systems

All

Filter

x



Connect Systems...



View and monitor the state, health, and capacity information of all the systems that are connected to the management console.

Select All

Actions

Total: 9 Selected: 0

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
192.168.240.15	192.168.240.17	192.168.240.16	192.168.240.18	192.168.240.13	192.168.240.14	P7-p710b-cyan	P7-p710c-indigo	P7-p770-purple
Failed authentication	Failed authentication	Failed authentication	Failed authentication	Failed authentication	Failed authentication	Standby	Operating	Power off
0000-0000-00000	0000-0000-00000	0000-0000-00000	0000-0000-00000	0802-0001-00000	0802-0001-00000	STANDBY		
0 CPU 0 CPU Available	0 CPU 0 CPU Available	0 CPU 0 CPU Available	0 CPU 0 CPU Available	0 CPU 0 CPU Available	0 CPU 0 CPU Available	4 CPU 0 CPU Available	3 CPU 1 CPU Available	0 CPU 0 CPU Available
0.0 GB 0.0 GB Available	0.0 GB 0.0 GB Available	0.0 GB 0.0 GB Available	0.0 GB 0.0 GB Available	0.0 GB 0.0 GB Available	0.0 GB 0.0 GB Available	16.0 GB 0.0 GB Available	6.0 GB 10.0 GB Available	0.0 GB 0.0 GB Available

Console Management

Manage console operations and maintain data for the management console.

Management

- Shut Down or Restart the Management Console
- Schedule Operations
- View Licences
- Update the Hardware Management Console

Maintenance and Data

- Format Media
- Backup Management Console Data
- Restore Management Console Data
- Save Upgrade Data
- Manage Data Replication

Upgrade to HMC 9 service pack 951

hmc17: Install Corrective Service - Mozilla Firefox

https://9.137.62.19/hmc/wd/T13

Install HMC Corrective Service Wizard

- ✓ [Current HMC Driver Information](#)
- ✓ [Select Service Repository](#)
- [Installation and Configuration Options](#)
- [Select Service Package](#)
- [Confirm Service Installation](#)

Installation and Configuration Options

Remote server was selected as the source where the HMC corrective service packages can be located.

Choose the remote server type.

FTP
 NFS
 SFTP

Type the information required to access the remote FTP server. Click Next to continue.

Remote Server: *

User ID: *

Password: *

Remote directory:

* indicates a required parameter

< Back Next > Finish Cancel Help

Using the remote FTP server method

hmc17: Install Corrective Service - Mozilla Firefox

https://9.137.62.19/hmc/content?taskId=3&refresh=5

Install HMC Corrective Service Wizard

- ✓ [Current HMC Driver Information](#)
- ✓ [Select Service Repository](#)
- ✓ [Installation and Configuration Options](#)
- [Select Service Package](#)
- Confirm Service Installation

Select Service Package

The corrective service packages listed below are available for HMC installation. Select a service package to install and click Next to continue.

Current HMC Driver Release: 2
Service Pack: 950

--- Select Action ---

Select	Package Name	Details
<input type="radio"/>	MH01874-9.2.951.0-2103310633-ppc64le.iso	No descrip

< Back Next > Finish Cancel Help

Might be due to this HMC CR2
Having an earlier life in the
Power Development Lab

Lightening quick look at the new GUI:

Note: new minimalist “carbon” style

All Systems View

Hardware Management Console hmc17

Resources > All Systems >

All Resources Search systems, partitions, help topics and

All Systems

View and monitor the state, health, and capacity information of all the systems that are connected to the management console.

All Filter x | Connect Systems...

Select All Actions Total: 10 Selected: 1

System	Status	Power	CPU	Memory	Storage	Alerts
P7-p710b-cyan	Operating	Power off	0 CPU / 0 CPU Available	0.0 GB / 0.0 GB Available		
P7-p710c-indigo	Operating	Operating	7% / 38%	0% / 0%		
P7-p730b-green	Operating	Power off	2 CPU / 10 CPU Available	130 GB / 51.0 GB Available		
P7-p770-purple	Operating	Power off	0 CPU / 0 CPU Available	0.0 GB / 0.0 GB Available		
P8-E850-ruby	Operating	Operating	Attention LED	7% / 43%	0% / 0%	
P8-S822-lemon	Operating	Power off	20 CPU / 0 CPU Available	128.0 GB / 0.0 GB Available		
P8-S822-lime	Operating	Operating	0.5% / 19%	15% / 31%		
P8-S824-emerald	Operating	Operating	0.8% / 57%	15% / 35%		
P9-S922-amber	Operating	Operating	Attention LED	16% / 25%	30% / 44%	

All Partitions

View and monitor the state, health, and capacity information of all the partitions that are connected to the management console.

Select All Actions Total: 67 Selected: 0

<input type="checkbox"/> Linux or AIX 10-3F02P P7-p710b-cyan → Not available No RMC connection 0 PU VP 0.00 GB Allocated	<input type="checkbox"/> Linux or AIX 21-1986A P8-S822-lemon → Not available 20 Processors Allocated 12325 GB Allocated	<input type="checkbox"/> Linux or AIX brass5 P8-E850-ruby → Not activated 0 PU 0 VP 0.00 GB Allocated	<input type="checkbox"/> Linux or AIX cyan1 P7-p710b-cyan → Not available No RMC connection 0 PU VP 0.00 GB Allocated	<input type="checkbox"/> Linux or AIX cyan2 P7-p710b-cyan → Not available No RMC connection 0 PU VP 0.00 GB Allocated	<input type="checkbox"/> AIX dns-local-disks P7-p710c-indigo → Running 2 GB Allocated 1% 0% 0%	<input type="checkbox"/> AIX download-repo P8-E850-ruby → Running 16 GB Allocated 2% 67% 0%	<input type="checkbox"/> AIX emeraldbackup-76665db5-00000009 P8-S824-emerald → Running 8 GB Allocated 0.1% 87% 0%	<input type="checkbox"/> Linux or AIX gaz-play-vFC P9-S922-amber → Not activated 0.1 PU 1 VP 1.00 GB Allocated	<input type="checkbox"/> Linux or AIX gaz-playpen P8-E850-ruby → Not activated 0 PU 0 VP 0.00 GB Allocated
<input type="checkbox"/> AIX nim32 P8-S824-emerald → Running 16 GB Allocated 0.4% 91% 0%	<input type="checkbox"/> AIX rubybacku P8-E850-ruby → Running 8 GB Allocated 0.8% 87% 0%	<input type="checkbox"/> Linux or AIX silver1 Ubuntu18.04 P9-S924-red → Running Linux ppc64le No RMC connection 8 GB Allocated 0.1% 90% 0%	<input type="checkbox"/> LINUX silver2 RHEL79 P9-S924-red → Running Linux ppc64le 8 GB Allocated 35% 36% 0%	<input type="checkbox"/> AIX silver3 AIX7.1 TL4 P8-E850-ruby → Running 8 GB Allocated 19% 64% 0%	<input type="checkbox"/> AIX silver4 AIX6.1 P8-E850-ruby → Running 8 GB Allocated 1% 66% 0%	<input type="checkbox"/> AIX silver5 AIX 7.2.TL4 P9-S924-red → Running 8 GB Allocated 12% 91% 0%	<input type="checkbox"/> Linux or AIX silver6 SLES15 P9-S924-red → Running Linux ppc64le No RMC connection 16 GB Allocated 0.1% 90% 0%	<input type="checkbox"/> Linux or AIX silver7 RHEL8 P9-S924-red → Running Linux ppc64le No RMC connection 8 GB Allocated 0.2% 91% 0%	<input type="checkbox"/> Linux or AIX silver8 RHEL82 P9-S922-amber → Running Linux ppc64le No RMC connection 8 GB Allocated 0.1% 90% 0%

All Partitions View



- Resources
- Console Management
- Users and Security
- Serviceability

All Virtual I/O Servers

View and monitor the state, health, and capacity information of all the Virtual I/O Servers that are connected to the management console.

Select All

Actions

Total: 19 Selected: 0

All Virtual I/O Server View

- Resources
- Console Management
- Users and Security
- Serviceability



<input type="checkbox"/> VIOS ambervios2 P9-S922-amber → Running 4 GB Allocated 1% 21% 5%	<input type="checkbox"/> VIOS ambervios3 P9-S922-amber → Running 4 GB Allocated 3% 70% 7%	<input type="checkbox"/> VIOS emeraldvios1 P8-S824-emerald → Running 8 GB Allocated 1% 22% 2%	<input type="checkbox"/> VIOS emeraldvios2 P8-S824-emerald → Running 8 GB Allocated 1% 18% 4%	<input type="checkbox"/> VIOS greenvios1-orbit P7-p730b-green → Not available 1 PU 2 VP 6.00 GB Allocated	<input type="checkbox"/> VIOS greenvios2-orbit P7-p730b-green → Not available 1 PU 2 VP 6.00 GB Allocated	<input type="checkbox"/> VIOS indigovios1-orbit P7-p710c-indigo → Running 3 GB Allocated 13% 20% 19%	<input type="checkbox"/> VIOS limevios1 P8-S822-lime → Running 8 GB Allocated 2% 26% 15%	<input type="checkbox"/> VIOS limevios2 P8-S822-lime → Running 8 GB Allocated 2% 22% 12%	<input type="checkbox"/> VIOS purplevio1 P7-p770-purple → Not available No RMC connection 0 PU VP 0.00 GB Allocated
<input type="checkbox"/> VIOS purplevio2 P7-p770-purple → Not available No RMC connection 0 PU VP 0.00 GB Allocated	<input type="checkbox"/> VIOS purplevio3 P7-p770-purple → Not available No RMC connection 0 PU VP 0.00 GB Allocated	<input type="checkbox"/> VIOS purplevio4 P7-p770-purple → Not available No RMC connection 0 PU VP 0.00 GB Allocated	<input type="checkbox"/> VIOS redvios1 P9-S924-red → Running 8 GB Allocated 3% 19% 0.7%	<input type="checkbox"/> VIOS redvios2 P9-S924-red → Running 8 GB Allocated 2% 29% 0.6%	<input type="checkbox"/> VIOS rubyvios1-orbit P8-E850-ruby → Running 8 GB Allocated 2% 22% 2%	<input type="checkbox"/> VIOS rubyvios2-orbit P8-E850-ruby → Running 16 GB Allocated 4% 20% 4%	<input type="checkbox"/> VIOS rubyvios3-spiral P8-E850-ruby → Not activated 1 PU 2 VP 8.00 GB Allocated	<input type="checkbox"/> VIOS rubyvios4-spiral P8-E850-ruby → Not activated 1 PU 2 VP 8.00 GB Allocated	

Console Management: Settings



Resources



Console Management



Users and Security



Serviceability

Console Settings

Configure network settings, performance monitoring settings and locale for the management console.

Launch Guided Setup Wizard

Create additional management console users, change passwords and network settings, and configure customer notification for problem events.

Network Settings

View Network Topology

View and ping the connectivity between various network nodes within the management console.

Test Network Connectivity

View network diagnostic information about the network protocols for the management console.

Change Network Settings

View or change the current network settings for the management console.

Change BMC/IPMI Network Settings

View or change the current network settings on BMC/IPMI for the management console.

Console Inband Communication Credentials

Manage Management Console Inband Communication Credentials for problem event monitoring

Hardware Management Console (HMC)

POWER9 based 7063-CR2

First Look - HW Install – SW Install

Another improvement in the HMC line

- Excellent design
- Faster with POWER9 more CPU cores
- 64 GB memory = good for high user numbers, rapid LPAR changes (via APIs) and collecting performance stats
- Very hard to benchmark HMC performance but the GUI “seems” faster
- Easier to live with due to OpenBMC new features with remote access
- Even looks good in the rack!
- Please, order CR2’s for your POWER8, POWER9 and Power10 servers today!