Hardware Management Console Readme

For use with Version 9 Release 1 Maintenance 910 (V9 R1 M910)

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Contents

These instructions contain the following information specific to the HMC V9 R1 M910 code level

Terminology

x86 - This term is used to reference the legacy HMC that runs on x86/Intel/AMD hardware for both the 7042 Machine Type appliances and the Virtual HMC that can run on the Intel hypervisors (KVM, VMWare, Xen).

ppc64 or ppc64le - describes the Linux code that is compiled to run on Power-based servers or LPARS (Logical Partitions)

Installation Notes

Note 1: During the installation, the screen can pause or go blank. Press the space bar / scroll-lock to activate the display again.

Note 2: IBM is investigating a rare issue where the HMC upgrade may indefinitely hang at "Processing

SaveHSCSystemUpgradeData.tar ....."
If the HMC stays at "Processing SaveHSCSystemUpgradeData.tar ....." for more than one hour please contact IBM support for further problem determination.
As an additional precaution, you may wish to manually record settings prior to the upgrade so that the HMC could be rebuilt from a scratch install of V8 R8.7.0 if needed.
For a list of recommended settings to record see http://www.ibm.com/support/docview.wss?uid=nas8N1011269

HMC V9 R1 M910 Recovery Media - for 7042 Machine Type

This package represents the Recovery image that can be used to install HMC V9 R1 M910 on the 7042 machine type.

This Recovery image can be used to upgrade to HMC V9 R1 M910 from HMC V8 R8.6.0 or later.

You can reference the Recovery image by APAR MB04119 and PTF MH01733.

Package information (The x86 recovery media ISO image was repackaged on October 10, 2017.)					
Package name	**Size**	**Checksum (sha1sum)**	**APAR#**	**PTF#**
HMC_Recovery_V9R1M910_1_x86.iso	4223098880	8e616061bc6c2228cb504a755ea64c3a22b49374	MB04119	MH01733
Splash Panel information (or lshmc -V output)				
After installing the Recovery package				
"version= Version: 9 Release: 1 Service Pack: 910 HMC Build level 1803052221 ","base_version=V9R1 "				
The updated version of this readme is available in Fix Central : https://www-945.ibm.com/support/fixcentral/				

HMC V9 R1 M910 Recovery Media - for 7063 Machine Type

This package represents the Recovery image that can be used to install HMC V9 R1 M910 on the 7063 machine type.

This Recovery image can be used to upgrade to HMC V9 R1 M910 from HMC V8 R8.7.0

You can reference the Recovery image by APAR MB04121 and PTF MH01735.

Package name	**Size**	**Checksum (sha1sum)**	**APAR#**	**PTF#**
HMC_Recovery_ V9R1M910_1_ppc.iso	4129568768	47efb0d8118706f09b2da91fb290c38b0fdb1e96	MB04121	MH01735
Splash Panel information (or lshmc -V output)				
After installing the Recovery package				
"version= Version: 9 Release: 1 Service Pack: 910 HMC Build level 1803052221 ","base_version=V9R1 "				
The updated version of this readme is available in Fix Central : https://www-945.ibm.com/support/fixcentral/				

Upgrade notes

- The minimum HMC levels required for the upgrade to HMC V9 R1 M910 are:
    - HMC V8 R8.6.0 + Service Pack 1 (or supersede) recommended.
    - HMC V8 R8.7.0 + mandatory fix (MH01706 - 7042 Machine type / MH01707 - 7063 Machine type)

- HMC V9 R1 M910 provides server management support for POWER9 processor-based systems.

- HMC V9 R1 M910 continues to provide support for POWER7 and POWER8 processor-based systems.

- Management of POWER6 and older servers is not supported by HMC V9. Attempts to manage POWER6 and older servers will result in a connection state of Version Mismatch and connection_error_code "Connection not allowed 0009-0008-00000000".

- HMC V9 R1 M910 supports the following HMC models:
    - X86 : 7042-CR7, 7042-CR8, 7042-CR9, 7042-OE1 and 7042-OE2
    - Open Power: 7063-CR1

- HMC V9 R1 M910 does not support 7042 models CR2, CR3, CR4, CR5, CR6 , C03, C04, C05, C06, C07 and C08.

- HMC V9 R1 M910 does not allow "Classic" GUI log in. The functions that were previously available in the HMC Classic interface are now available in the HMC Enhanced+ interface. For further information see:
https://www.youtube.com/playlist?list=PLKQlFnmiWVyeMb4e9iU2zmH67JgHddfl4
and
http://www.ibm.com/support/docview.wss?uid=nas8N1022258

- If two HMCs manage the same server, both HMCs must be at the same version, release and maintenance level.

- If you are upgrading to HMC V9R1 M910 from a version of HMC V8 R8.6.0 with a fix level prior to HMC V8 R8.6.0 Service Pack 1 and you require that remote command execution via SSH be enabled immediately after the upgrade, please update to HMC V8 R8.6.0 Service Pack 1 or later prior to upgrading to HMC V9R1 M910.
remote command execution via SSH is always enabled. No firewall settings are affected. The remote SSH firewall setting is disabled by default. To disable remote command execution via SSH after the applying the mandatory fix, use the Users and Security > Systems and Console Security > Enable Remote Command Execution task.

- It is recommended to have all connected VIOS servers on the latest level i.e., Virtual I/O Server (VIOS) level 2.2.6.21. To have optimal performance from the Enhanced+ UI, ensure all Virtual I/O Servers are at level 2.2.3.X level, or later.

- All running partitions (AIX, Linux, and VIOS) should be at Reliable Scalable Cluster Technology (RSCT) version 3.2.0.0, or later. It is recommended to have AIX 6.1 TL9 with SP5 or higher, and AIX

7.1 TL3 with SP5 or higher; these SP levels contain RSCT 3.2.0.6.

Enhancements and new function

- Added support for POWER9 processor compatibility mode to manage POWER9 Systems.
- Enhanced System Plan functionality to support POWER9 Systems.
- Enhancement to maintain user resource roles for a partition following a partition migration, remote restart/simplified remote restart operations, when the resource role, at least minimum resource access at target CEC.
- Enhancement to maintain user resource roles for a partition following LKU operations.
- Added support for specifying the maximum capacity setting when configuring an SR-IOV logical port or virtual NIC.
- Added functionality to enable or disable an SR-IOV logical port in order to prevent a misbehaving partition from impacting the network. This is similar to the capability provided for virtual Ethernet and for virtual NIC.
- NIC SR-IOV device support for "2-Port 100Gb RoCE QSFP28 PCIe 3.0 x16 Adapter" (EC3L,EC3M), "PCIe3 2 PORT 10 Gb NIC&ROCE SR/Cu ADAPTER" (EC2S,EC3R) and "PCIe3 2 PORT 25/10 Gb NIC&ROCE SFP28 ADAPTER" (EC2T,EC2U).
- Enhanced FFDC collection on a partition migration failure to collect snap data from the VIOS/MSP partitions involved in the partition migration.
- Enhanced HMC to support authorized email for notification of serviceable events.
- Analytics for storage devices to collect more data from SSD/HDD drives to understand failures and to predict future failures.
- Enhanced HMC's DHCP configuration to allow the user to configure a custom IP address range.
- GUI Enhancements
    - Persisting user preferences for All Partitions, All Systems, All Virtual IO Servers, System Partitions, and System Virtual IO Servers views. Users can now save settings such as the Default View, Pagination, Column Reorder and Visible Columns.
    - Partition Virtual Storage now allows multiple physical volumes to be selected when adding a physical volume.
    - Virtual Network Enhancement:
    - Enhanced to creating Network Bridge on an existing internal network
    - Enhanced to show SEA name in network bridge table, Adding Multiple networks with the same vLAN ID and virtual switch combination,
    - Enhanced to support Remove Virtual Switch
    - Combo Box for selection of server id is replaced with text field.
    - Enhancement to create partition for specifying CPU, Memory & Maximum Virtual Slot values
- Enhanced command line and REST API to specify an override during LPM operation to check/enforce affinity score on target system
- Simplified Remote Restart Enhancements:
    - Ability to remote restart with reduced CPU, Memory on target system.
    - Ability to choose a different virtual switch on the target system.
    - Test option to remote restart a partition when the system is in Operating state.
    - Ability to view the configuration information collected & stored for remote restart.
    - Ability to remote restart without powering on the partition on target system

This package provides the following fixes:

General fixes

- Fixed an issue where ntp.org NTP servers were included on a clean install. With this fix, an install will not include any default NTP servers; on an upgrade any default ntp.org servers will be removed from the configuration only if ntp is disabled.
- Fixed a timing issue that can result in service event E25CD21F after a new install.
- Enhance "pedbg" command to collect system dumps along with HMC debug data.

Security fixes

- Fixed Common Vulnerabilities and Exposures: CVE-2017-5715, CVE-2017-5753 and CVE-2017-5754
- Disabled all Arcfour and CBC mode ciphers on the HMC ssh interface.

Command line changes

- The **chhwres** and **lshwres** commands have been enhanced to support enabling and disabling SR-IOV logical ports.
- The **chhwres** and **lshwres** commands have been enhanced to support option IDs for configuring the maximum number of SR-IOV Ethernet logical ports supported for a physical port.
- The following commands have been enhanced to support configuring the maximum capacity for SR-IOV logical ports: **chhwres**, **chsyscfg**, **lshwres**, **lssyscfg**, and **mksyscfg**.
- The following commands have been enhanced to support configuring the maximum capacity for virtual NIC backing devices: **chhwres**, **chsyscfg**, **lshwres**, **lssyscfg**, **mksyscfg**, **migrlpar**, **lslparmigr**, and **rrstartlpar**.
- The **migrdbg** and **lsmigrdbg** commands have been enhanced to collect partition migration debug data from VIOSs.
- A new option, **--test**, has been added to the **rrstartlpar** command for testing purposes to allow a shutdown partition to be remotely restarted when the source managed system is in the Operating or Standby state.
- A new option, **--skippoweron**, has been added to the **rrstartlpar** command to prevent a partition from being started during the remote restart operation.
- The **rrstartlpar** command has been enhanced to allow a partition to be started with a different amount of processors or memory on the destination managed system than what the partition was assigned on the source managed system.
- The **lsrrstartlpar** command has been enhanced to list the partition configuration information saved in the remote restart data for all of the partitions in the managed system that are simplified remote restart capable.
- The **lshmc** command has been enhanced to display the overall Network Time Protocol (NTP) synchronization status and the state of configured NTP servers.
- The **chhmc** and **lshmc** commands have been enhanced to support configuration of the HMC as a DHCP server, including support for a custom IP address range.
- The **chsacfg** and **lssacfg** commands have been enhanced to support configuration of the authentication and encryption methods to use for customer notification email.

- A new command, **lsprimhmc**, to list information about the primary HMC for performing service functions for the managed system, and a new command, **chprimhmc**, to force the current HMC to become the new primary HMC have been added.
- A new command, **updpmh**, to add a comment to an IBM hardware support Problem Management Hardware (PMH) report has been added.

Known issues and Limitations

- When performing concurrent active live partition mobility (LPM) operations, the HMC can experience a problem with the concurrent deletions of multiple partitions with a large number of vNIC adapters. If the deletions cause a time out, the HMC will report HSCLB98C as the failure reason. If you do run into this situation, you can complete the migration using the migration recovery operation from the HMC GUI or migrlpar -o r from the HMC CLI. To avoid this issue, please limit the number of concurrent vNIC migrations with a large number of vNIC adapters to 4 or fewer concurrent migration operations.
- Migration of a partition with vNIC configuration between Emulex and Cx4 adapters can have below impacts.
    - Configuration of a vNIC with PVID greater than zero, VLAN Allow All and Allow specific list on Emulex cards will leads to VLAN Deny All on CX4 adapters with VNIC configuration override option.
    - Migrating from CX4 adapters to Emulex adapter, configuration of VLAN Deny All and MAC Allow All may cause network loss of the partition. User need to change the configuration to have VLAN/MAC consistency check before initiating the migration operations.
- The task log in the dashboard might show the tasks as running even after the task is complete in some cases.
- HMC GUI shows default capacity as 2% instead of 1% while adding Logical Port to Logical Partition of SRIOV "2-Port 100Gb RoCE QSFP28 PCIe 3.0 x16 Adapter" (EC3L,EC3M), "PCIe3 2 PORT 10 Gb NIC&ROCE SR/Cu ADAPTER" (EC2S,EC3R) and "PCIe3 2 PORT 25/10 Gb NIC&ROCE SFP28 ADAPTER" (EC2T,EC2U).
- IO Adapters with CCIN 57D7 are shown as 57DC adapters in HMC system plan.
- System Planning Tool does not recognize adapter feature codes EC2T,EC2U,EC2S,EC3R for 9009-42A model
- Non translated message will show up in 'All System Plans' task for all non-English languages.
- System plan may not capture all disk units.
- When the initial disk used to install vHMC on POWER is configured on an NPIV MPIO LPAR, you will need to reinstall if you want to change the disk configuration to single path (non MPIO).
- User will see a failure while creating Network Bridge on an internal network if it is associated with a Trunk Adapter. While trying to bridge an internal network, make sure the virtual network is not associated with any of the trunk adapters. If the internal network is associated with a Trunk Adapter, user need to delete the trunk adapter from command line and then attempt to create Network Bridge for that virtual network.
- Existing custom task and resource roles may need to be modified to work with the enhanced GUI. Existing custom resource roles may result in the user being restricted to the "Getting Started" page at login. Existing task roles may result in missing tasks or task returning "*The HMC information could not be displayed.*" For further information see http://www.ibm.com/support/docview.wss?uid=nas8N102212
- **In NIST mode**:

- o RMC code on partition does not support two HMC connections with mixed configuration i.e. one HMC running in NIST mode and other one in non-NIST mode. Both the HMCs must be in the same mode.
- **In non-NIST mode**:
  - o Following ciphers are not supported although the available cipher list shows them.

    TLS_RSA_FIPS_WITH_3DES_EDE_CBC_SHA

    Note this function is fully supported for all other Power systems assuming that the appropriate HMC, firmware and PowerVM levels installed.
- To ensure that the keyboard mapping is working properly for non-English keyboards, the codeset for the locale must be set to UTF-8. You can change the codeset by using the chhmc command. Example:
  Set the locale to French with UTF-8 codeset for use with French keyboard:
  chhmc -c locale -s modify -l fr_FR.UTF-8
  Set the locale to English with UTF-8 codeset for use with French keyboard:
  chhmc -c locale -s modify -l en_US.UTF-8
- The GUI does not support disconnected sessions like the previous Classic GUI did. In the GUI a session logoff is a logoff and a session disconnect is also a logoff. This means that the user cannot reconnect to a GUI session to resume a task(s) from where it left off. Every login via the GUI creates a new session. For more details on long running tasks, please refer to the link below:
  http://www.ibm.com/support/knowledgecenter/POWER9/p9eh6/p9eh6_loginmode.htm
- In some rare situations, especially with a Firefox browser, the user may be redirected to a second login page after login credentials have been validated. Providing the login credentials again will fail. If this issue occurs, close and relaunch the browser.

  If the login page locally shows "Console internal error" and "The requested resource is not available", the framework is still initializing. Wait a minute and restart the desktop on the local console using <ctrl><alt><backspace>
- Enabling or disabling service processor redundancy is only permitted when both primary and secondary service processors are at standby with service processor in position A as primary. The workaround is to set up service processor failover with the following command:
  chsyscfg –m <server name> **-r sys –i "sp_failover_enabled=1"**
- Launch of the ASMI menu is not supported using the Safari browser.
- In case HMC UI pops up a dialog stating "*failed to load widgetset...*", please click OK and wait for the content to be loaded or refresh the view after sometime.

Web browser requirements

Learn about the requirements your web browser must meet to monitor and control the HMC.

HMC web browser support requires HTML 2.0, JavaScript 1.0, Java™ Virtual Machine (JVM), Java Runtime Environment (JRE) Version 8 U144, and cookie support in browsers that will connect to the HMC. Contact your support personnel to assist you in determining if your browser is configured with a Java Virtual Machine. The web browser must use HTTP 1.1. If you are using a proxy server, HTTP 1.1 must be enabled for the proxy connections. Additionally, pop-ups must be enabled for all HMCs addressed in the browser if running with pop-ups disabled.

The following browsers have been tested:

Google Chrome

HMC V9 R1 M910 supports Google Chrome Version 62.03202.75.

Safari

HMC V9 R1 M910 supports Safari 11.0.1

Microsoft Internet Explorer

HMC V8 R8.7.0 supports Internet Explorer 11.0.

- If your browser is configured to use an Internet proxy, then local Internet addresses are included in the exception list. Consult your network administrator for more information. If you still need to use the proxy to get to the Hardware Management Console, enable Use HTTP 1.1 through proxy connections under the advanced tab in your Internet Options window.

- It is recommended to have:

    o Browser security setting in internet zone. If you are running security mode in "Local intranet" mode, make sure you do not have any setting to detect intranet network; disable Compatibility view.
    o Browser zoom setting to 100%.

Mozilla Firefox

HMC V9 R1 M910 supports Mozilla Firefox Version 45 Extended Support Release (ESR) and Mozilla Firefox Version 52 Extended Support Release (ESR). Ensure that the JavaScript options to raise or lower windows and to move or resize existing windows are enabled. To enable these options, click the Content tab in the browser's Options dialog, click Advanced next to the Enable JavaScript option, and then select the Raise or lower windows option and the Move or resize existing windows options. Use these options to easily switch between HMC tasks. For more information about the latest Mozilla Firefox ESR levels, see Security Advisories for Firefox ESR.

Clearing the Browser Cache

In Microsoft Internet Explorer

1. Open the Browser
2. Select **Tools**
3. Select **Internet Options**
4. Under Browser History, select **Delete**
5. Check "**Temporary Internet files and websites files**" and "**Cookies and website data**"
6. Click on **Delete**

In Mozilla Firefox

1. In the top-right corner of the browser window click the **menu**button
   Choose **History**, and then **Clear Recent History.**
   In time range to clear, select "**Everything**"
   In the Details section, select "**Cookies**" and "**Cache**"
   Click on "**Clear now**"
2. In the top-right corner of the browser window click the menu button

Choose **Options > Advanced > Network >**
In "**Offline Web Content and User Data**" section click on "**Clear Now**"

In Google Chrome

1. In the top-right corner of the browser window, click the **Chrome menu**
   Choose **History**.
   Click the button **Clear browsing data**. A dialog will appear.
   From the drop-down menu, select "t**he beginning of time**."
   Check the boxes "**Cookies, site, and plug-in data**" and "**Cache**"
   Click the button **Clear browsing data**.
2. Open the following URL with the Chrome browser: **chrome://appcache-internals/**
   If there is an entry related to the target hmc, click the corresponding "**Remove**" link

Other web browser considerations

Session cookies need to be enabled in order for ASMI to work when connected to HMC remotely. The ASM proxy code saves session information and uses it.

Internet Explorer

1. Click **Tools > Internet Options.**
2. Click the Privacy tab and select **Advanced**.
3. Determine whether **Always allow session cookies** is checked.
4. If not checked, select **Override automatic cookie handling** and **Always allow session cookies**.
5. For the First-party Cookies and Third-party Cookies, choose block, prompt, or accept. Prompt is preferred, in which case you are prompted every time a site tries to write cookies. Some sites need to be allowed to write cookies.

Mozilla Firefox

1. Click **Tools > Options**.
2. Click the **Cookies** Tab.
3. Select **Allow sites to set cookies.**
   If you want to allow only specific sites, select Exceptions, and add the HMC to allow access.

BMC Browser requirements

To access local console in OpenPower environment required the following browser requirements with JRE Plugin Version 8 U144

- Google Chrome Version 60
- Firefox Version 52.1.2
- Internet Explorer Version 11
- Safari Version 10.1.2

Installation for the 7042 Machine Type

Installation instructions for HMC Version 8 upgrades and corrective service can be found at these locations:

[Upgrading or restoring HMC Version 9 on 7042 machine types](#)

Instructions and images for upgrading via a remote network install can be found here:

[HMC V9 network installation images and installation instructions](#)

Installation methods for vHMC
https://www.ibm.com/support/knowledgecenter/POWER8/p8hai/p8hai_installvhmc.htm

Installing HMC in the OpenPower Environment, 7063 Machine type

 Setup and cabling of the 7063-CR1:
  https://www.ibm.com/support/knowledgecenter/POWER9/p9hai/p9hai_cabling7063.htm

The 7063-CR1 uses a BMC based service processor that provides remote management capability:
https://www.ibm.com/support/knowledgecenter/POWER9/p9eih/p9eih_kickoff.htm

The most current version of the install procedure for the HMC is here:
https://www.ibm.com/support/knowledgecenter/POWER9/p9hai/p9hai_configure7063.htm

Note: Use of an external USB 3.0 DVD device on the 7063-CR1 will require use of a y-cable connected to 2 USB ports in order to power the device properly.

Virtual HMC Installation for x86 hypervisors

Installation Images

Appliance (vHMC) install images are available at the Entitled Systems Support site (ESS): http://www-304.ibm.com/servers/eserver/ess/OpenServlet.wss . You must be entitled to Product ID 5765-HMV in order to download from the ESS site.

Fixes, mandatory fixes and service packs for the vHMC are common to the Power Hardware management console (HMC) and will be available at IBM [Fix Central](#).

The splash panel information (lshmc -V output) for the vHMC will be the same as for the HMC recovery DVD that is documented in the above description section.

Installation guidance for installing the vHMC into your hypervisor is found in the [IBM Knowledge Center](#). Installation procedures may vary depending on the operating system you use and the hypervisor you use.

A feature of the vHMC is the activation engine which allows you to preconfigure the HMC Console by passing configuration information to the HMC at the first boot of the HMC, when using these images. Please look at the on-line Knowledge Center documentation on using the [Activation Engine feature](#).

Notes for the Virtual Appliance for x86 hypervisors

- The supported hypervisors for x86 are
  - VMWARE ESXi 6.0 or higher
  - KVM on Red Hat RHEL7 or higher
  - Xen 4.2 or higher on SLES 12
- There are now two images for the VMWare ESXi Server, one is for ESXi 6.0 and the other for ESXi 6.5. This is due to differences in the encoding of the OVA images. SHA1 for ESXi 6.0 , SHA256 for ESXi 6.5
- The processor on the systems hosting vHMC for x86 must have either Intel VT-x or AMD-V Hardware Virtualization enabled.

Installation methods for vHMC on x86 hypervisors
http://www.ibm.com/support/knowledgecenter/POWER8/p8hai/p8hai_installvhmc.htm

Virtual HMC for PowerVM LPARS

Installation Images

Download of the Power Hardware Management Virtual Appliance (vHMC) install images are available at the Entitled Systems Support site (ESS): http://www-304.ibm.com/servers/eserver/ess/OpenServlet.wss . You must be entitled to Product ID 5765-HMA or 5765-HMB in order to download 5765-HMB from the ESS site.

Upgrade of 5765-HMA to 5765-HMB is supported.

Fixes, mandatory fixes and service packs for the vHMC are common to the Power Hardware management console (HMC) and are available at IBM Fix Central.

The splash panel information (lshmc -V output) for the vHMC will be the same as for the HMC recovery DVD that is documented in the above description section for the 7063 Machine type.

Installation guidance for installing the vHMC into your hypervisor are found in the Online Knowledge Center. Installation procedures may vary depending on the operating system you use and the hypervisor you use.

Notes for the Virtual Appliance for PowerVM :

- On Power9 servers, the HMC Virtual Appliance for PowerVM must run in Power8 compatibility mode, for this release.
- The HMC Virtual Appliance for PowerVM does not provide graphics adapter support for adapters assign to the partition. Use a supported web browser to point to the HMC for UI support.
- DLPAR operations such as memory and processor moves for HMCs running in an LPAR are not supported.
- Inactive partition migration and Simplified Remote Restart operations are supported.
- The virtual appliance for PowerVM requires a Power8 or Power9 server that is enabled for little endian support. Minimum System Firmware 860 recommended for Power8 servers.
- vHMC for PowerVM cannot manage the server it is hosted on.

Installation of vHMC for LPARs:
http://www.ibm.com/support/knowledgecenter/POWER8/p8hai/p8hai_vhmc_pvm.htm

General Virtual HMC notes

- Virtual HMC Appliance can be deployed in your existing POWER virtualized infrastructure. Virtual HMC Appliance supports install into PowerVM LPARs.
- Call home of serviceable events with a failing MTMS of the HMC itself is disabled. Those serviceable events should be manually reported to IBM software support.
- To see if you are running on a virtual HMC use the lshmc -v command. If it displays a UVMID field, then you are running in a virtual machine.

   Example:

   lshmc -v

   > "vpd=*FC ????????
   > *VC 20.0
   > *N2 Thu Sep 14 15:02:44 UTC 2017
   > *FC ????????
   > *DS Hardware Management Console
   > *TM Vc87-f0a
   > *SE 7f61457
   > *MN IBM
   > *PN N/A
   > *SZ 8371892224
   > *OS Embedded Operating Systems
   > *NA 127.0.0.1
   > *FC ????????
   > *DS Platform Firmware
   > *RM V8R8.7.0.0
   > **UVMID c87f:0a7f:603a:1457**
   > "

- When deploying a virtual HMC, if the mac address is not specified, it will be generated by the hypervisor. Network configuration on the HMC relies on the value of MAC addresses. If you re-deploy a new virtual HMC and want to restore critical console data previously taken on a virtual HMC, ensure sure you are using the same MAC addresses.
- When using Activation Engine to setup NTP configuration, you must specify the NTP version value.
- We recommend upgrading to the new image that uses 500GB by following the steps below:
    - From the current HMC version (e.g. HMC V8.860.0), upgrade to HMC V9 R1 M910
    - When the upgrade is complete the HMC is now at a new version but still has a 160GB disk.
    - Perform a Critical Console Data backup, excluding network information and store the backup to a remote location.
    - Deploy the new HMC V9 R1 M910 image which uses a 500GB disk.
    - After the HMC boots up with the 500GB disk, restore the Critical Console data.

National Language Support (Supported languages)

Languages	Locales
English	en_US,en_AU,en_BE,en_BE@preeuro,en_CA,en_GB,en_GB@euro,en_HK,en_IE,en_IE@preeuro,en_IN,en_NZ,en_PH,en_PK,en_SG,en_
Catalan	ca_ES, ca_ES@preeuro
German	de_DE, de_DE@preeuro, de_CH, de_AT, de_AT@preeuro, de_LU, de_LU@preeuro
French	fr_FR, fr_FR.UTF-8, fr_CH, fr_CA, fr_BE, fr_BE@preeuro, fr_LU, fr_LU@preeuro
Italian	it_IT, it_IT@preeuro, it_CH
Spanish	es_ES, es_ES@preeuro, es_AR, es_BO, es_CL, es_CO, es_CR, es_DO, es_EC,es_SV, es_GT, es_HN, es_MX, es_NI, es_PA, es_PY,es_
Brazilian Portuguese	pt_BR
Portugal Portuguese	pt_PT, pt_PT@preeuro
Polish	pl_PL, pl_PL.UTF-8, pl_PL@euro,pl_PL@preeuro
Japanese	Ja_JP
Simplified Chinese	zh_CN, zh_SG
Traditional Chinese	zh_TW, zh_HK
Korean	ko_KR
Hungarian	hu_HU, hu_HU.UTF-8,hu_HU@euro,hu_HU@preeuro
Dutch	nl_NL, nl_NL@preeuro, nl_BE, nl_BE@preeuro
Russian	ru_RU
Czech	cs_CZ, cs_CZ.UTF-8,cs_CZ@euro,cs_CZ@preeuro
Slovakian	sk_SK, sk_SK.UTF-8,sk_SK@euro,sk_SK@preeuro

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