

Hardware Management Console Readme

For use with Version 8 Release 8.6.0

Updated: 10 February 2017

Contents

These special instructions contain the following information specific to HMC V8 R8.6.0 code level.

- [Description](#)
- [Package information](#)
- [Upgrade notes](#)
- [Best Practices](#)
- [Enhancements and new function](#)
- [General and Security fixes](#)
- [Command line changes](#)
- [Known issues in HMC](#)
- [Web browser requirements](#)
- [Installation](#)
- [vHMC Installation](#)
- [National Language Support](#)
- [Copyright and Trademark Information](#)

PTF MH01654 HMC V8 R8.6.0 Recovery Media and Mandatory PTF MH01655

This package represents the Recovery Media that can be used to upgrade your HMC from HMC V8 R8.4.0 or later to HMC V8 R8.6.0. This package can also be used to install a clean version of HMC V8 R8.6.0.

The Mandatory PTF must be installed after you upgrade to HMC V8 R8.6.0 or after a new installation of HMC V8 R8.6.0 in order to be in a supported configuration. You can reference the Recovery image by APAR MB04039 and PTF MH01654. The Mandatory PTF is APAR MB04040 and PTF MH01655.

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: If the HMC is upgraded from the V8 R8.4.0 or V8 R8.50 release, reboot the HMC a second time to initialize the swap space. Otherwise, the HMC will report serviceable event SRC E212E11C.

Note 3: If the HMC is configured to use LDAP authentication and the LDAP server uses the rfc2307aix LDAP schema, ensure that the LDAP server is configured so that all HMC LDAP users have permission to search and read their own entries. Without these permissions, HMC LDAP users will not be able to log in to the HMC after upgrading the HMC to V8 R8.6.0. For information on how to validate the configuration prior to upgrading see IBM Support document "V8R8.6 HMC: Changes to LDAP authentication" at <http://www.ibm.com/support/docview.wss?uid=nas8N1021717>

Note 4: IBM is investigating a rare issue where the HMC upgrade may indefinitely hang at "*Processing SaveHSCSystemUpgradeData.tar*" 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 R8.6.0 if needed.

For a list of recommend settings to record see <http://www.ibm.com/support/docview.wss?uid=nas8N1011269>

Recovery:

Allow at least one hour before attempting recovery. Power off and power on the HMC. The HMC should retry the restore. If the restore hangs a second time then the HMC must be re-installed.

Package information				
Package name	Size	Checksum (sha1sum)	APAR#	PTF#
HMC_Recovery_V8R860_1.iso	3564083200	a427f063c6d3ba1ee8c24fe05e88452a32af72d7	MB04039	MH01654
MH01655.iso Mandatory PTF	2484033536	3390199f6602ce469b19928f51aa803fc368cffb	MB04040	MH01655
Splash Panel information (or lshmc -V output)				
After installing the Recovery package				
"version= Version: 8 Release: 8.6.0 Service Pack: 0 HMC Build level 20160914.1 ", "base_version=V8R8.6.0 "				
After installing the Mandatory PTF				

```
"version= Version: 8
Release: 8.6.0
Service Pack: 0
HMC Build level 20161101.1
MH01655: Required fix for HMC V8R8.6.0 (11-01-2016)
", "base_version=V8R8.6.0
"
```

The updated version of this readme is available in Fix Central : <https://www-945.ibm.com/support/fixcentral/>

Upgrade notes

- HMC V8 R8.6.0 will be the last release to support POWER6.
- HMC V8 R8.6.0 will be the last release to allow 'classic' UI login.
- HMC V8 R8.6.0 will be the last release that supports the model CR5, CR6 and C08.
- The HMC must be at version V8 R8.4.0 or later to be upgraded to HMC V8 R8.6.0. This requirement is enforced during installation.
- The following Power8 systems are supported by this level of HMC V8 R8.6.0:
 - IBM Power System S812L (8247-21L)
 - IBM Power System S822L (8247-22L)
 - IBM Power System S822 (8284-22A)
 - IBM Power System S814 (8286-41A)
 - IBM Power System S824 (8286-42A)
 - IBM Power System S824L (8247-42L)
 - IBM Power System E870 (9119-MME)
 - IBM Power System E850 (8408-E8E)
 - IBM Power System E880 (9119-MHE)
 - IBM Power System E850C (8408-44E)
 - IBM Power System E870C (9080-MME)
 - IBM Power System E880C (9080-MHE)
- HMC V8 R8.6.0 continues to provide support for POWER6 and POWER7 processor-based systems.
- POWER5 servers are not supported from HMC V8. Attempts to manage POWER5 servers will result in a connection state of Version Mismatch and connection_error_code "Connection not allowed 0009-0008-00000000".
- HMC V8 R8.6.0 supports the following HMC models:
 - Deskside: C08
 - Rack Mount: CR5, CR6, CR7, CR8, CR9, OE1 and OE2
 - HMC V8 does not support models CR2, CR3, CR4 and C03, C04, C05, C06, C07.
- In HMC V8, Enhanced GUI requires 4 GB memory. If the number of partitions are 300 to 700 , it is recommended to have 8 GB memory. If the number of partitions are more than 700, then it is recommended to use 16GB memory.
- If two HMCs manage the same server, both HMCs must be at the same version.
- If a server is connected to two different versions (for example, Version 7 and Version 8) of the HMC, the higher version of HMC will upgrade the partition configuration (profile data of the system) to the latest version. After the partition configuration upgrade, lower versions of the HMC will not be able to interpret the data correctly. After the server is managed by a higher version of the HMC, you must first initialize the server before you can use a lower version of the HMC. Also, you must initialize the server again using the lower version of the HMC. You can restore a backup that is taken at the lower version or recreate the partitions. If the server is not initialized with the lower version of the HMC, one of the following outcomes can occur depending on the version of the lower HMC:
 - HMC Version 8 Release 8.1.0, 8.2.0, 8.3.0 and 8.4.0 report a connection error of Version mismatch with reference code Save Area Version Mismatch if the server has been managed by Version 8.6.0.
 - HMC Version 7 Release 7.9.0 reports a connection error of Version mismatch with reference code Save Area Version Mismatch if the server has been managed by Version 8.
 - HMC Version 7 Release 7.8.0 reports a connection error of Version mismatch with reference code Save Area Version Mismatch if the server has been managed by Release 7.9.0 or Version 8.
 - HMC Version 7 Release 7.7.0 and earlier might report a server state of Incomplete or Recovery if the server has been managed by a later version and / or release. In addition, partition configuration corruption may occur.

- It is recommended to have all connected VIOS servers on the latest level i.e., Virtual I/O Server (VIOS) level 2.2.5.00. 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.
- Compatibility for DLPAR/RSCT on the LPARs with the HMC requires that the csm.client fileset on AIX be updated to 1.7.1.3 or higher where the IBM.MCP communication path was implemented to properly communicate with the HMC. Otherwise DLPAR communication may fail to establish communication successfully.
- The CIM interface on the Open Pegasus port 5989 has been disabled and is no longer supported. HMC V8 R8.6.0 and later support the REST API (port 12443) as the programmatic interface for PowerVM management via HMC. For more information see the forums on REST API at <https://www.ibm.com/developerworks/community/groups/community/powerhmc>

Best Practices

- For partitions enabled with the Remote Restart or Simplified Remote Restart capability, if storage/network changes are made using the VIOS CLI, without using the HMC, the user should run the HMC **refdev** command to refresh the partition configuration data stored for the Remote Restart capability. For more information about the Simplified Remote Restart capability, go to [IBM developerWorks](#) article.

[Back to top](#)

Enhancements and new function

New function or enhancement in V8R8.6.0:

- **Geographically Dispersed Resiliency**
 - Platform enablement for Disaster Recovery
- **SR-IOV and virtual NIC enhancements**
 - Provide virtual NIC redundancy for a client, without requiring the client to configure multiple virtual NICs. Multiple backing devices can now be configured for one virtual NIC. If a backing device becomes unusable, traffic is routed automatically to one of the other backing devices configured for the virtual NIC. For more information, see [Managing virtual Network Interface Controllers](#)
- **Performance and Capacity Monitoring enhancements** - Export of Performance Monitoring data in CSV format is available through the REST API or the GUI. The data thus exported can be used directly in third party data analytics tools like Splunk. For more information, see [Exporting data](#).
 - Shared Storage Pool metrics and Energy metrics are also available through the REST APIs starting this release.
- **Enhancement to the PCIe Hardware Topology to show the Cable Attributes of PCIe Link.**
- **HMC Virtual Appliance**
 - vHMC Activation Engine (AE) now supports DHCP server configuration. This feature added a new AE XML configuration that will allow the user to define and configure the vHMC as a DHCP Server on up to four network devices, define the default gateway device and configure private and public adapters at first boot.
- **Option to boot HMC without IPv6**
 - The chhmc command has been enhanced to allow the user to disable IPv6 on the HMC. This prevents static link-local IPv6 addresses from being assigned to each HMC network interface.
- **Live Partition Mobility enhancements**
 - Redundant mover service partitions are supported to improve LPM resiliency and performance.
 - The **migrpar** command has been enhanced to allow the user to choose between port validation only or both port and disk validation for NPIV devices during partition migration validation operations.
- **Dynamic toggle of simplified remote restart capability**
 - The simplified remote restart capability of a partition can now be changed when the partition is active.

- **Enhanced UI enhancements**

- Topology Diagrams now feature click cards which provide additional information about a selected resource. To view more detailed information, you can right-click a resource and additional information is displayed.
- Create Partition - HMC added a new feature to create a client partition with minimum resources. By default, a client partition is created with 0.5 processing units and 1 GB of memory. However, the client partition is not assigned any network or storage resources.
- Introduced a user task log accessible from the Serviceability menu. The task log lists the tasks initiated by a user via the Enhanced+ UI. The information shown includes a description of the task, success or failure of the task, and task duration. For the logged in user, a quick view of these tasks is available in the right-side dock pod.

We are tracking Classic tasks launched from the Enhanced+ UI. The following are some limitations on these tasks:

- Only Classic tasks with user modifications are tracked – a property must be modified or a wizard completed
- Errors are not tracked
- No resource information or additional message information is tracked

- **Performance Enhancements**

- General performance improvement across Enhanced+ UI and template deploy operations.
- Usability enhancements for servers without IBM i native I/O support
- To assist users in correctly configuring IBM i partitions on servers that do not support native I/O for IBM i partitions, the HMC now requires that the restricted I/O setting be enabled for all IBM i partitions on servers with firmware level FW860.

[Back to top](#)

This package provides the following fixes:

General fixes

- Fixed a problem where an attempt to deploy a system plan created with the IBM system planning tool on a model MHE/MME fails with an error reported against two of the three system units: "*System plan system unit 9119_MME-1-0, type MME not valid as planned. Validation errors occurred when compared to every MME type system unit found on the managed system. system unit 9119_MME-1-0 planned hardware in this system unit not found on the managed system in any unit of type MME.*"
- Fixed a problem that caused the removal of a virtual I/O adapter from a Virtual I/O Server (VIOS) to fail with the message "*HSCLAB10 There is not a virtual NIC adapter in slot <slot number>.*" This problem only occurs when the VIOS is hosting virtual NICs and when the virtual I/O adapter being removed is in slot 128 or higher.
- Corrected the syslog syntax in the chmc command man page to remove the port specification, which has never been supported.
- Fixed a problem that sometimes causes the deploy of a system plan created using the System Planning Tool for some server models, including 8286-41A and 8286-42A, to fail with error "*One of the I/O slots specified using the io_slots attribute has a missing or invalid DRC index. The value specified was "null".*". With this fix, the deploy will no longer fail since any I/O slots with a missing DRC index will be skipped. Therefore, after the system plan has been deployed, ensure that your partitions have been configured with all of their I/O slots.
- Prevent the generation and call home of SRC E3551231 every time a CR5 or CR6 model HMC is restarted.
- Fixed a problem that sometimes causes the Performance and Capacity Monitoring (PCM) data collection state (enabled or disabled) for a managed system to change following an HMC upgrade. This problem only occurs if you enable or disable PCM data collection for the managed system just prior to performing an HMC upgrade and the change is not yet saved in persistent storage before the upgrade occurs. This fix prevents the issue from occurring on future upgrades.
- Fixed a problem causing error 403 and error message "*The User does not have the authority to access the object LogicalPartition*" to be displayed when attempting to display the partitions of any server on the Enhanced+ GUI. This error occurs when there is a powered off server connected to the HMC and that server has never been connected to any HMC while it is in Standby or Operating state. To work around this problem, power on the server or remove it from the HMC. With this fix, the partitions on a powered off server that has never been connected to an HMC while it is in Standby or Operating state will not be displayed, but the partitions on all other servers will be displayed.
- Improved the warning message displayed during a system template deploy operation when VIOS installation fails.
- Fixed a problem that prevented a partition that was created using the classic GUI from being activated using the Enhanced+ GUI.
- Improved the error message received when trying to activate a remote restart capable IBM i partition which has a virtual SCSI adapter that is not hosted by a VIOS.
- Enhanced the handling of problem data files to prevent a possible root (/) file system full issue.
- Fixed a problem causing a mostly blank window to be opened when the ASM interface for a server is launched. This problem only occurs for servers which have newer versions of POWER 8 system firmware installed.
- Added DST timezone changes for Turkey, leap second to 31 Dec 2016.
- Changed the HMC install process to report the error SRC E3558801 when the installation of a service pack or iFix fails due to a rare RPM installation failure. Prior to this fix, the service pack or iFix installation appeared to finish successfully.
- Fixed another issue to prevent call home SRC E3D46FFF combined with System_Auth SRC E3D43104 due to a scheduled change credential password task that no longer is needed.

- Fixed a rare problem that caused a server to return to the Save Area Version Mismatch state immediately after the partition data for the server was successfully recovered.

Security fix

- Fixed multiple OpenSSL vulnerabilities: CVE-2016-2180, CVE-2016-2182, and CVE-2016-6306

Command line changes

- The **chhmcencr** and **lshmcencr** commands have been enhanced to support user configuration of the encryption ciphers and Message Authentication Code (MAC) algorithms used by the HMC Secure Shell (SSH) interface.
- A new option has been added to the **chhmc** command to allow a grub password to be set at bootup.
- The **chhmc** command no longer allows the HMC time zone to be set to the value "none".
- The **chhmc** command has been enhanced to allow IPv6 to be enabled or disabled on the HMC.
- The following commands have been enhanced to support multiple virtual NIC backing devices and virtual NIC backing device failover: **chsycsf**, **lssycsf**, **mksycsf**, **chhwres**, **lshwres**, **migrpar**, **lslparmigr**, and **rrstartlpar**.
- The **rrstartlpar** command has been enhanced to allow virtual SCSI mappings and virtual NIC mappings to be specified for remotely restarted partitions.
- The **migrpar** and **lslparmigr** commands have been enhanced to provide support for redundant MSPs for active partition migrations.
- The **migrpar** command has been enhanced to allow the user to specify that disk validation be performed in addition to port validation for NPIV devices during partition migration validation operations. This is supported for validation operations only. Only port validation is performed for NPIV devices during migration operations.
- The **chsycsf** and **lssycsf** commands have been enhanced to allow the user to modify and display the boot list for AIX, Linux, and VIOS partitions.
- The **chsacfg** command has been enhanced to allow enhanced information for SNMP traps to be enabled and disabled, and to allow a port number to be specified when adding SNMP trap notification addresses. The **lssacfg** command has been enhanced to display this new information.
- The ViosAdminOp access control task to allow users to use the **--admin** option on the **viosvr cmd** command can now be added to custom task roles that are based off the hmcsuperadmin task role (previously only the hmcoperator task role was supported).

[Back to top](#)

Known issues and Limitations

- If the HMC is upgraded from the V8 R8.4.0 or V8 R8.5.0 release, please install the mandatory PTF and reboot the HMC a second time in order to initialize the swap space. Otherwise the HMC will report serviceable event SRC E212E11C.
- If the HMC is configured to use LDAP authentication and the LDAP server uses the rfc2307aix LDAP schema, ensure that the LDAP server is configured so that all HMC LDAP users have permission to search and read their own entries. Without these permissions, HMC LDAP users will not be able to log in to the HMC after upgrading the HMC to V8 R8.6.0. For information on how to validate the configuration prior to upgrading see IBM Support document "V8R8.6 HMC: Changes to LDAP authentication" at <http://www.ibm.com/support/docview.wss?uid=nas8N1021717>
- After installing or upgrading to HMC V8 R8.6.0, remote command execution via SSH is always enabled. No firewall settings are affected. The remote SSH firewall setting is disabled by default.
- To configure the HMC to obtain an IP address automatically from a DHCP server, do not use the Guided Setup wizard to configure the network settings for the HMC. Use the HMC Management -> Change Network Settings task instead.
- A system plan that contains a UESLL.001 or UESLS.001 ESLS disk drive enclosure cannot be deployed. The deploy will fail with an error message that indicates that the hardware cannot be found on the system.
- In NIST mode:
 - 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.
 - HMC uses RSA 2048 type keys to communicate with LPARs. When user removes HMC V8 R8.6.0 and connects an earlier level of HMC (i.e HMC V8 R8.2.0, or earlier), it will drive NIST mode on the LPARs to be disabled. However, the LPARs would continue to use RSA 2048 type keys so there would be connection establishment issue. To resolve this problem, the LPAR admin should run **'/usr/sbin/rsct/bin/chsecmode -c none -m rsa512'** command on all the corresponding LPARs (This command can't be run if LPAR is running any HA software such as TSA, PowerHA).
- In non-NIST mode:
 - 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

- HMC V8 R8.4.0 to HMC V8 R8.6.0 upgrade script replaces the default templates during the upgrade process. Any changes performed on the HMC V8 R8.4.0 default templates will be overwritten. HMC V8 R8.4.0 to HMC V8 R8.6.0 upgrade script will add the Quick Start Templates to the existing template library and the user can delete the older Starter Templates manually.
- When the Safari browser is used, the ASM menu does not open properly.
- VIOS installation is supported only through the Add VIOS function.
- In the Enhanced+ GUI, on the Manage VIOS -> Add Logical Host Ethernet Adapter page, after the user has performed add and remove of the same HEA port, the HMC does not display the port again for addition. As a workaround, launch the Add Logical Host Ethernet Adapter page again. The Enhanced+ GUI login mode does not support disconnected sessions such as the Classic GUI mode. In the Enhanced+ GUI mode, a session logoff is a logoff and a session disconnect is also a logoff. This means that the user cannot reconnect to the Enhanced+ GUI session to resume the task(s) from where it had left off. Every login via the Enhanced+ GUI creates a new session. For more details about long running tasks, please see [Session handling](#).
- The "All Shared Storage Pool Clusters" will not launch successfully if any of the Virtual I/O Servers managed by the HMC are not configured properly. This includes the Virtual I/O Servers that are not nodes in the Shared Storage Pool Clusters in the HMC.
- Use the ALL Systems relational view to view all the partitions grouped by system. In this view, you can easily see the partition that have been migrated from one system to the other. In some rare situations, especially with a Firefox browser, the user may be redirected to a second login page after having provided and validated credentials. Then, providing the credentials again will fail. If this issue occurs the user should close and re-launch the browser to make it work.
- Enabling or disabling service processor redundancy is permitted only when both primary and secondary service processors are at standby with the primary service processor in position A. The workaround is to set up service processor failover by using the following command:
chsyscfg -m <server name> -r sys -i "sp_failover_enabled=1"
- Opening multiple PCM dashboard windows for the same managed server on the same browser or a different browser might lead to a communication error on the window that was opened first. This is a known issue and the support for multiple PCM dashboard windows is planned for a future release.
- After Templates copy to Templates Library/OS image page, the dashboard navigation is disabled. The work around is to open another window from the context menu and click Cancel. This action will clear the navigation issue.
- If a system template deploy fails due to the installed VIOS going to Open Firmware state, the user can open a virtual terminal for the VIOS and execute "boot" at the Open Firmware prompt to boot the VIOS.
- The virtual terminal (vterm) applet will not launch in the supported version of Chrome (48 or higher).
- When installing a VIOS using the activate option in the Enhanced+ GUI, the VIOS installation will fail if the VIOS does not have a profile named "default_profile".
- For the Virtual HMC offering, call home for serviceable events with a failing MTMS of the HMC itself is disabled. Those serviceable events should be manually reported to IBM software support.
- If you enable or disable Performance and Capacity Monitoring (PCM) data collection for a managed system just prior to performing an HMC upgrade, it is possible that the change will no longer be in effect following the HMC upgrade. Please confirm that the PCM data collection state for your managed systems is correct following the HMC upgrade.
- When a user modifies the memory settings of a partition as part of a DLPAR operation through the Enhanced+ GUI, if there is any error, please do a browser refresh by pressing F5 or logoff/login again before navigating to other tabs.
- On initial load of PCM Dashboard, it is possible that some of the graphs in Current Resource Utilization and Server Overview could be blank. In such case to load graphs in Current Resource Utilization, change the Auto update interval and in Server Overview, click the Refresh icon on Server Overview Header.
- On the local HMC console, if you click the System Status, Attention LEDs, or Serviceable Events link to bring up the HMC Welcome page, you will receive the error "Not Found The requested URL /dashboard/ not found on this server" when you try to log in to the Enhanced+ GUI. This only occurs on the first login after booting the HMC. To circumvent this problem, click the "Log on and launch the Hardware Management Console web application" link to bring up the HMC Welcome page.
- A few of the diacritic keys on Polish, Hungarian, Slovakian, Dutch, Slovenian, and Czechoslovakian keyboards are not functioning when typing into a vterm console window on the local HMC console.
- During a restore management console data operation, you may see the following error messages when restoring database files: "[<num>] systemd-journald[<num>]: Failed to write entry (<num> items, <num> bytes), ignoring: Invalid argument". These messages can be ignored. The restore management console data operation will complete successful.
- Live Kernel Update may fail if any partition on any server managed by the HMC has one or more virtual NICs configured.
- All Systems view in the enhanced GUI may be unresponsive and eventually display the error "The HMC information could not be displayed because of an error while retrieving the information." when there is an RMC issue between the HMC and one or more Mover Service Partitions managed by the HMC.
- During active partition migration and validation operations you may experience performance degradation due to extra ping tests between MSPs. You can avoid these extra ping tests by doing one of the following:
 - If you want to use redundant MSPs for the operation, specify both MSP pairs including the IP address for each MSP. For example:
**migrpar -o m -m sourceSys -t destSys -p lp1 -i
"\redundant_msp=1/srcvios1//9.53.78.1/dstvios1//9.53.78.25,1/srcvios2//9.53.78.2/dstvios2//9.53.78.26\""**
 - If you don't want to use redundant MSPs for the operation, specify the MSP pair including the MSP IP addresses you want to use and specify that you do not want to use redundant MSPs. For example:
migrpar -o m -m sourceSys -t destSys -p lp1 --redundantmsps 0 -i "source_msp=srcvios1//9.53.78.1,dest_msp=dstvios2//9.53.78.26"

[Back to top](#)

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 U71, 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. It is necessary to clear the browser cache during upgrade as javascript and css information is cached.

The following browsers have been tested:

Google Chrome

HMC Version 8.6.0 supports Google Chrome Version 48.

Safari

HMC version 8.6.0 supports Safari Version 9.1.1 (11601.6.17).

Microsoft Internet Explorer

HMC V8 R8.6.0 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:
 - 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.
 - Browser zoom setting to 100%.

Mozilla Firefox

HMC Version 8.6.0 supports Mozilla Firefox Version 38 Extended Support Release (ESR) and Mozilla Firefox Version 45 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](#).

Browser Cache Clearing

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 "**the 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.

Installation

Special Install Instructions for mandatory fix MH01655: This fix must be installed using either the classic GUI or the HMC updhmc command; not the enhanced GUI. See the updhmc "man" page (e.g. man updhmc) for further information and examples on using the command.

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

[Upgrading or restoring HMC Version 8](#)

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

[HMC V8 network installation images and installation instructions](#)

Installation methods for vHMC

http://www-01.ibm.com/support/knowledgecenter/HW4M4/p8hai/p8hai_installvhmc.htm

After the upgrade, install the mandatory fix using the instructions at:

[Installation methods for HMC Version 8 fixes](#)

Virtual HMC (vHMC)

The vHMC provides images in 3 additional formats to allow for quick deployment of the vHMC on either ESXi, KVM or Xen hypervisors. These images are snapshots of the virtual machine and allow for quick deployment of the HMC.

The mandatory PTF (MH01655) that is referenced earlier in this document is required in order to be in a supported configuration

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](#).

- 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:

```
Ishmc -v
"vpd=*FC ????????"
*VC 20.0
*N2 Wed Aug 26 13:36:06 UTC 2015
*FC ????????"
*DS Hardware Management Console
*TM Vb07-f21
*SE 6b4b9a5
*MN IBM
*PN N/A
*SZ 1044881408
*OS Embedded Operating Systems
*NA 127.0.0.1
*FC ????????"
*DS Platform Firmware
*RM V8R8.5.0.0
*UVMID b07f:216b:4ce7:b9a5
"
```

- 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.

vHMC 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-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 are available at IBM [Fix Central](#).

The splash panel information (Ishmc -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 are found in the online [Knowledge Center](#). Installation procedures may vary depending on the operating system you use and the hypervisor you use.

The mandatory PTF must be installed immediately after installing the virtual machine image. The Mandatory PTF is available on Fix Central.

[Back to top](#)

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

Copyright and Trademark Information

<http://www.ibm.com/legal/copytrade.shtml>

Notices

This information was developed for products and services offered in the US.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive, MD-NC119
Armonk, NY 10504-1785
US

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you provide in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Director of Licensing
IBM Corporation
North Castle Drive, MD-NC119
Armonk, NY 10504-1785
US

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to actual people or business enterprises is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

Each copy or any portion of these sample programs or any derivative work must include a copyright notice as follows:

© (your company name) (year).

Portions of this code are derived from IBM Corp. Sample Programs.

© Copyright IBM Corp. _enter the year or years_.

If you are viewing this information in softcopy, the photographs and color illustrations may not appear.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at [Copyright and trademark information at www.ibm.com/legal/copytrade.shtml](http://www.ibm.com/legal/copytrade.shtml).

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft is a trademarks of Microsoft Corporation in the United States, other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.