Hardware Management Console Readme

For use with Version 8 Release 8.1.0

Date: 2 June 2014

Contents

The information in this Readme contains fix list and other package information about the Hardware Management Console.

PTF MH01419 HMC V8 R8.1.0 Recovery Media and Mandatory PTF MH01421

This package represents the Recovery image that can be used to upgrade your HMC from HMC V7R7.8.0 or higher to HMC V8R8.1.0. This package can also be used to install a clean version of HMC V8R8.1.0. You can also reference this package by APAR MB03793 and MB03795.

Package information				
Package name	**Size**	**Checksum (sha1sum)**	**APAR#**	**PTF#**
HMC_Recovery_V8R810_1.iso	3546474496	012849df9cbd439a78d70dad38eaf5654090786d	MB03793	MH01419
MH01421.iso Mandatory PTF	1563348992	0fe5fc8265e2efdab91809a6a5ba8367f7d36c4e	MB03795	MH01421
Splash Panel information (or lshmc -V output)				
After installing the Recovery package				
Version: 8 Release: 8.1.0 Service Pack: 0 HMC Build level 20140524.3 ","base_version=V8R8.1.0 "				
After installing the Mandatory PTF				
Version: 8 Release: 8.1.0 Service Pack: 0 HMC Build level 20140602.3 MH01421: Required fix for HMC V8R8.1.0 (06-03-2014) ","base_version=V8R8.1.0 "				

Upgrade notes

- Upgrading from HMC V7.780.0 to HMC Version 8.1.0 requires a minimum level of V7R7.8.0.0 plus PTF MH01402, V7R7.8.0.1, or later.
- HMC Version 8.1.0 requires model CR5 or later model rack-mount HMC or C08 deskside HMC. Models CR2, CR3, CR4 and C03, C04, C05, C06, C07 are not supported.
- HMC Version 8.1.0 requires 2Gig of memory; 4Gig is recommended.
- Additional memory requirements include:
  - 3Gig minimum when using IBM Systems Director to manage an HMC or if the HMC manages more than 254 partitions.
- The HMC must be version V7.780 or later to be upgraded to HMC V8.810.0. This requirement is enforced at install.
- POWER5 servers are not supported with HMC V8.810.0. Attempts to manage POWER5 servers will result in a connection state of Version Mismatch and connection_error_code **"Connection not allowed 0009-0008-00000000"**.
- When two HMCs manage the same server, both HMCs must be at the same version. Once the server is connected to the higher version of management console, the partition configuration will be migrated to the latest version. Lower management consoles will not be able to understand the data properly. Once the server is managed by N level of management console version and if user wants to go back with N-1 management console version, then user must initialize the server. Users can restore a backup

taken at the older level or re-create the partitions. If the server is not initialized, partition configuration corruption may occur when used with lower levels of management consoles and Incomplete or Recovery state may be displayed as a result.

- HMC Version 8.1.0 no longer supports IBM i partitions using the HMC modem for Electronic Customer Service (ECS). The 12tp protocol has been removed from the firewall.
- HMC Version 8.1.0 supports managing a maximum of 48 servers (non Power 595/795 models) or 32 IBM Power 595/795 servers with a maximum of 1024 partitions across the managed servers.
- The following HMC System plan functions are not implemented for POWER7 or POWER8 servers:
  - Create system plan (mksysplan) capture of VIOS provisioning info (storage pools, etherchannels, shared ethernet adapters)
  - Deploy system plan Auto-install of VIOS, AIX, and Linux partitions.
  - Auto-provisioning of storage pools, shared ethernet adapters and etherchannels by system plan deployment.
  - Power blades are not supported for any system plan operation.
- Remove any USB flash drive that contains HMC Backup Management Console Data prior to performing a network upgrade. Failure to remove the drive will result in failed network upgrade.

Enhancements and new function

- HMC Version 8 enhances support for server firmware entitlement validation. IBM began implementing entitlement validation on Fix Central in January 2014. Customers must have a valid service contract with IBM to download and install Power firmware. For further information see:
  http://www.ibm.com/support/docview.wss?uid=isg3T1020750
- With HMC V8 R8.1.0, HMC introduces support for the more secure cipher sets defined in NIST 800-131a. The more secure cipher sets are supported on the HMC user web and SSH interfaces, as well as the HMC REST API interface used by PowerVC. In addition, the more secure ciphers are also used for communications to all supporting servers (HMC ports). Support for the secure cipher sets on the RMC interfaces will be added in a future version of the HMC.
- HMC V8 R8.1.0 also introduces the Event Manager for Call Home intended to be used by system administrators to monitor and approve any data being transmitted from a HMC to IBM. The Event Manager allows the user to register other HMCs. Once registered, the Event Manager will query the registered HMC for any events that are waiting to be called home to IBM. The Event Manager allows the user to see what data is being sent back to IBM, and approve these events. After approval, the Event Manager notifies the registered HMC that it can proceed with the call home.
  - The Event Manager for Call Home can be used with the event manager mode disabled. The user can still register the HMC and see the events on the Event Manager; however, with this configuration the Event Manager does not control when the events are called home.
  - The Event Manager for Call Home can be run from any HMC, or even multiple HMCs. First, the HMC event manager mode must be set. Event manager mode is set via the command line. Turning on event manager mode will block the HMC from automatically calling home events as they occur. To prevent events being called home without approval, all HMCs running in this environment must have the event manager mode set.
- Replaced the IBM i Access for Linux Emulator (ibm5250) with the IBM i Access Client Solutions (ACS) 5250 emulator. Existing customized user settings (keyboard, colors, etc.) are not migrated.
- With HMC V8 R8.1.0, HMC introduces a new "Performance and Capacity Monitoring" GUI task that provides reports of Managed System's resources (CPU, Memory, IO) utilization. Virtual IO Server 2.2.3 or later and System Firmware 780 or later are required to view the System Firmware and IO utilization reports through this new task.

General fixes

This package provides the following fixes:

- Fixed an issue where users with servicerep role had privileges to edit some profile settings that should have been restricted.
- Fixed an issue with the **lshwres** command output displaying duplicates for the feature_code field for physical I/O adapters.
- Fixed an issue that resulted in error HSCL2916: The partition could not be found in the database when attempting to delete multiple partitions.
- Added a COD history log message for Active Memory Expansion enablement.
- Fixed an issue so the HMC will allow 20 additional VLANs instead of only 19 for IVM migration to HMC including CLI and profile modification support.
- Enhanced code update function to prevent unsupported server firmware from being installed onto some models such as 8412-EAD, 9179-MHD, and 9117-MMD resulting in a server IPL failure of B181346.
- Fixed a problem where an lpar would be left in "Migrating" state after a failed cross-hmc migration operation with error HSCLA335: The unsupported capability codes are as follows: lpar_uuid where the target HMC was running at 770 or older level.
- Fixed issue with CEC going into incomplete state when in Power Off.
- Fixed an issue with deploying a partition that could result in an Unknown internal error with details of "One or more logical partitions have not been assigned UUID values".

- Fixed an issue where numerous B7005120's were generated when running **lshwres** topology commands while one or more IBM i partitions are powered off.
- Fixed an issue to ensure all EED data is called home.
- Fixed an issue with backup over FTP so active mode would be tried when passive FTP is blocked by firewall.
- Fixed an issue so IBM Systems Director can now connect to the HMC using automanaged LDAP users.
- Fixed an issue where a user profile that does not have ssh access granted was able to log on via ssh.
- Fixed an issue that caused Save Current Configuration to fail with error HSCL19A2.
- Fixed an issue to allow users from a non-default Kerberos realm to authenticate and login to the HMC.
- Fixed an issue to prevent call home of SRC E3550046 when the HMC fails to read the label of a USB device.

Repair and Verify fixes for POWER 750, 755, 770, and 780 servers (POWER7-based technology)

- Fixed an unexpected exception with RV on a POWER 795 system during AC line cord repair resulting in message "HSCL3077: This operation is not allowed in the Frame's current state.
- Fixed an issue when performing Concurrent Maintenance Operation on the PowerDomain containing SRIOV Adapters in shared mode to prevent failure when varying on the resources if any of the adapters in SR-IOV mode don't have the VFs configured.
- Fixed an issue on POWER 770 and POWER 570 servers where during OCA exchange relevant SRCs (10001511 and 10001521) indicating failure may not all be reported.
- Fixed an issue to prevent an exception when clicking delay or retry from a failure if the GUI R&V panel has remained open for days waiting on input which could result in a non-concurrent procedure progressing unintentionally.

Command line changes

- The **diagrmc** command has been added to check the HMC for possible problems that can prevent the HMC from establishing RMC connections to partitions.
- The **rrstartlpar** command has been added to perform partition remote restart operations.
- The **chsyscfg** command has been enhanced for POWER8 servers to allow the remote restart capability for a partition to be changed after the partition has been created.
- The **chhwres** command has been enhanced to allow the user to perform a processor or memory DLPAR operation by specifying a set operation and the total number of processor or memory resources the user wants the partition to have when the operation completes.
- A new option (**--allnonvios**) has been added to the **chsysstate** command to allow all partitions, except virtual I/O server partitions, to be shut down or restart.
- The **lssyscfg** command has been enhanced to display whether or not a managed system supports AIX partitions.
- The **lslparutil** command has been enhanced to show new partition sampling event attributes. The new attributes are **total_instructions** and **total_instructions_execution_time** and are available for POWER8 servers only. These new attributes replace the **run_latch_cycles** and **run_latch_instructions** attributes, which are available for POWER6 and POWER7 servers only.
- The **lslic** command has been enhanced to display the expiration date of the update access key for POWER8 servers.
- The **lscod** command has been enhanced to display CoD code generation information for update access keys for POWER8 servers.
- The **chhmc** command has been enhanced to allow NIST SP 800-131A mode to be enabled for the HMC, and the **lshmc** command has been enhanced to display the current mode.
- A new option (**--weakcrypto**) has been added to the **chhmc** command to specify whether or not Kerveros is allowed to use weak encryption types when the HMC is not in NIST SP800-131A mode.
- The **rstupgdata** command has been enhanced to support USB flash memory devices.
- The **netboot** option to configure the network as a startup device has been removed from **chhmc**. Use the **getupgfiles** and **chhmc - c altdiskboot** commands to perform network installation and upgrade.
- To list the current security mode, run the following command: **lshmc -r**
  In the command output, look for the **security** attribute:

  $ If it shows **security=legacy**, then you are in legacy mode.
  $ If it shows **security=nist_sp800_131a**, then you are in NIST mode.
- To change the security mode, run the following command to change specifying the desired mode. **Note**: A reboot of the HMC is required to activate the new setting: **chhmc -c security -s modify -mode legacy**.

Event Manager for call home command line enhancements:

- To enable Event Manager for call home mode, run the following command:
  chhmc -c sem -s {enable | disable]
  Note: Enabling this will turn off automatic call home. However, if you disable Event Manager for call home, it will not automatically enable call home. This is to prevent the unintended call home of data back to IBM.
- To turn automatic call home back on, enable call home via the command line, run the following command:
  chhmc -c callhome -s {enable}
- To verify Event Manager for call home is enabled run the following command: **lshmc -s**

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- To view serviceable events that are queued up for the Event Manager for call home, run the following command:
lssvcevents -t hardware -F problem_num,approval_state,enclosure_mtms
- If the Events Manager for call home is not enabled, then **approval_state** is empty.

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Known issues in HMC

- The following PowerVM functionality has been excluded from the initial introduction of the following Power machine model types 8286–41A, 8286–42A, 8247–21L, and 8247–22L.
  o Suspend/Resume or hibernation of a LPAR
  o Live Partition Mobility when used with Active Memory Sharing configurations
  o Live Partition Mobility for IBM i LPARs
  o Note these functions are fully supported for all other Power systems assuming that the appropriate HMC, firmware, and PowerVM levels are met.
- Serviceable events E3550046 and E212E121 may be created during the initial install/upgrade if the HMC is rebooted when no servers are attached. These events can be ignored and closed.
- Serviceable events generated by the HMC incorrectly link to the POWER7 Knowledge Center pages. This will be fixed in a future service pack.
- DVD support has been removed from the **bkconsdata** command. V8R1 is the last release to support DVD-RAM media any other tasks including:
  o manage problem data
  o dump management
  o save upgrade data
  o pedbg
  o format media
- When NIST compliant ciphers are enabled the local HMC GUI console will not be available, the admin should ensure remote connectivity is available via "ssh" and remote browser prior to enabling NIST mode. Firefox is not supported with NIST compliant ciphers enabled.
- Only POWER8 and POWER7 servers with server firmware levels that support NIST compliant ciphers are supported. POWER7 servers require 770_062, 773_051, 780_040 or later. For further information see support document at [HMC V8R8.1 NIST mode](#)
- Some GUI panels will not render with the correct size to display the entire content of the panel and require the user to either resize the panel or use the scroll bars.
- Starting with HMC V7R780, a new port, 12443, is opened in the HMC firewall when 'remote access" is enabled. This port must also be opened in any firewall that is between a remote client and the HMC.
- The HMC GUI and the HMC CLI do not show all the available power modes. Refer to **ASMI under System Configuration** -> **Power Management** -> **Power Mode Setup** for changes.
- IE 10 on Windows 7 may disconnect the HMC session forcibly.
- When attempting to change the sampling rate of Utilization Data Collection, **the first time** it is set to a value (ex. 30 seconds); the following error will be displayed.
There was an unknown error while querying the object manager database. HSC1585
Attempting the procedure again will show the previously selected value. To effect the change, press the "OK" button a second time.
- A change in the DHCP range, in a private interface, on the HMC will not change the IP address on the FSPs connected. As a result, the systems will not reconnect on the new range. Apply mandatory fix prior to attempting a range change.
- Power Enterprise Pools:
When the master HMC is down, attempting to set the backup HMC as mast succeeds via the CLI, but fails via the GUI. The GUI operation fails with the error message: *"This operation must be done from the master HMC."* The state of the pool will show as "Not Available". you can perform this operation by running one of the following HMC commands:
chcodpool -o setmaster -mc this -p *<pool name>* -v -f *<file>*
or
chcodpool -o setmaster -mc this -id *<pool ID>* -v -f *<file>*
- You cannot use the GUI to remove Mobile CoD resources from a server that has a state of *No Connection*, *Pending Authentication*, or *Failed Authentication*. You can use the HMC **chcodpool** command to perform the operation.
- The initial release of the Event Manager for call home is limited to serviceable events.
- Files being called home by an event cannot be viewed through the Event Manager.
- On a fresh install of HMC V8, ssh defaults to an older ssh1 protocol, and the additional steps below are suggested. This procedure will change the ssh protocol to 2.

  1. Enable only SSH protocol 2:
  chhmc -c ssh --sshprotocol 2 -s modify

  2. Restart the SSH daemon:
  Either reboot the HMC OR restart the SSH daemon using the commands:

  chhmc -c ssh -s disable
  chhmc -c ssh -s enable

- The new Performance and Capacity Monitor task is initially available in English only. There are additional known issues/limitations. For further information, see:
  http://www.ibm.com/support/docview.wss?uid=nas8N1020114

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Web browser requirements

- Internet Explorer 9 and 11 are supported.
- Use the latest available Firefox ESR 17.x and 24.x version, as it may have security fixes.
  Users should check this page for recommendations: Security Advisories for Firefox ESR
- Chrome 33
- For all browsers, JAVA Runtime Version 7 is required.

Installation

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

Upgrading or restoring HMC Version 8

Installation methods for HMC Version 8 fixes

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

HMC V8 network installation images and installation instructions

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National Language Support (Supported languages)

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

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