Oracle® Communications

HP Solutions Firmware Upgrade Pack

Release Notes

Release 2.2.11

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Oracle Communications HP Solutions Firmware Upgrade Pack Release Notes, Release 2.2.11

CAUTION: MOS (https://support.oracle.com) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the My Oracle Support (MOS) main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at https://www.oracle.com/us/support/contact/index.html.

See more information on My Oracle Support (MOS) in the Appendix B:

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1. Introduction

This document describes the content of the HP Solutions Firmware Upgrade Pack. The HP Solutions Firmware Upgrade Pack (HP FUP) is provided only to customers who bought HP hardware through Oracle or Tekelec. It describes new functionalities, fixed bugs, known bugs, and any additional installation and configuration instructions required relative to this release.

For customers who have purchased their own HP hardware, refer to the HP FUP Software Centric release notes at docs.oracle.com under **Tekelec Platform** documentation.

1.1 References

[1] HP Solutions Firmware Upgrade Pack Upgrade Procedure

1.2 Acronyms

Table 1. Acronyms

Acronym	Definition
BIOS	Basic Input Output System
FC	Fiber Channel
FUP	Firmware Upgrade Pack
GPS	Global Product Solutions
HP	Hewlett-Packard Development Company, LP
iLO	Integrated Lights-Out
IOS	Internetwork Operating System
IP	Internet Protocol
IPM	Initial Product Manufacture
ISO	ISO 9660 file system (when used in the context of this document)
MD5	The MD5 algorithm is a widely used hash function. It is commonly used to produce hashes of files that can then be verified against the original file by the md5sum program.
MOP	Method of Procedure
MOS	My Oracle Support
MSA	Modular Smart Array
OA	Onboard Administrator
OTN	Oracle Technical Network
POST	Power On Self-Test
RMS	Rack Mount Server
ROM	Read Only Memory
SAN	Storage Area Network
SAS	Serial attached SCSI
SPP	Service Pack for ProLiant

Acronym	Definition
TPD	Telecom Platform Distribution
UEFI	Unified Extensible Firmware Interface
UI	User Interface

1.3 Terminology

Table 2. Terminology

Acronym	Definition
Firmware	Coded instructions and data programmed directly into the circuitry of read-only memory for controlling the operation of the server or one of its devices.
Blade System	The HP c-Class blade system that refers to the c7000 enclosure and all of its contained server and storage blades, including its management software and firmware.
Upgrade	The process of converting an HP hardware component from its current firmware release to a newer release.

2. HP Solutions Firmware Content

2.1 HP Solutions Firmware Baselines and Exceptions

Firmware packages in this document have a specified **Minimum Supported Version**, **Current Supported Version**, and **Maximum Supported Version**. The Current Supported Version is the version currently provided by this HP FUP Release. Systems should be upgraded to at least the Minimum Supported Version where the presently-installed firmware is of an earlier version. In some cases, versions, newer than the Current Supported Version, may be available. While installing these newer versions is typically acceptable, there are several known incompatibilities that should be considered. Please consult all footnotes, the Compatibility section, and the Additional Firmware Installation and Configuration section for further details on these known incompatibilities.

After publication of the HP FUP, HP may release firmware for a specific component and an associated advisory indicating the need to pick up the newer version of component firmware. If this happens, the release notes are updated with this information, pointing to an addendum, or patch ISO to apply these firmware versions. After application of the FUP, review and apply necessary updates defined in Appendix A Updates and Remediation.

2.2 HP Solutions Firmware Upgrade Pack Content

Warning: Creating/using bootable USB SPP media to upgrade HP RMS firmware is currently unsupported. All other methods for upgrading HP RMS firmware detailed in the HP FUP Upgrade Procedures document are still supported. See Known Bugs for more details.

This release of the HP Solutions Firmware Upgrade Pack contains the media and documentation items described in the following sections.

2.2.1 Checksums

Checksums are provided, as md5 checksum values, to verify integrity of ISO image files.

Table 3. Media Name

Media File/Partition	MD5 Checksum
HP Service Pack for ProLiant ISO 2.2.11	
FW2_SPP-2.2.11.0.0_11.4.0.iso	3373272f3fe821b6c3a8fd5fb37e1dea
HP Misc Firmware ISO 2.2.11	
FW2_MISC-2.2.11.0.0_10.47.0.iso	b79176c476bc440599e1841f3d5d47bd

2.2.2 Documentation

Table 4 lists the documentation content with this release.

Table 4. Documentation Content

Documentation	Part Number
HP Solutions Firmware Upgrade Pack, Upgrade Procedure	E82948, Revision 03
HP Solutions Firmware Upgrade Pack, Release Notes (this document)	E82949, Revision 03

2.3 HP Solutions Firmware Components Upgraded

The HP Solutions Firmware Upgrade Pack contains multiple firmware components contained in two different software images included in the pack. The following sections identify the main firmware items and versions supported on each piece of media. Refer to the HP Solutions Firmware Upgrade Pack Upgrade Guide document, included with this release, for details on media usage and firmware installation procedures.

Important: For the versions indicated below here are guidelines for reading the Table 5:

- **Minimum Supported FW Version** — If a component has a firmware version older than this, it must be upgraded.
- **Current Supported FW Version** — This is the version of firmware contained in this HP FUP release.
- **Maximum Supported FW Version** — If a component has a firmware version newer than this, it must be downgraded.

2.3.1 HP SPP Server Firmware Components

Warning: Creating/using bootable USB SPP media to upgrade HP RMS firmware is currently unsupported. All other methods for upgrading HP RMS firmware detailed in the HP FUP Upgrade Procedures Document are still supported. See Known Bugs for more details.

Table 5 lists the main firmware components relating to Oracle-supported HP ProLiant Rack Mount and Blade servers which are updated automatically, if applicable, using the HP Service Pack for ProLiant ISO.

Note: System ROM versions are often interchangeably written with either a **yyyy.mm.dd** format or a **mm/dd/yyyy** format. For example, **05/02/2011** is equivalent to **2011.05.02**.

Note: Gen9v1 servers use the Intel E5-XXXX v3 processors.

Note: The minimum version of iLO4 firmware has been changed to specify the latest version available at HPE.com. This is in response to the critical bug 25305878 and the related HPE Advisory.

HPE continues to put out versions of firmware that provide more fixes for this issue after stating the last version was fixed necessitating always using the latest iLO4 firmware version. See bug 25305878 in the Fixed Bugs section and iLO4 NAND Fix Procedures in section 6.

Table 5. Firmware Components

Component	Minimum Supported FW Version	Current Supported FW Version[1]	Maximum Supported FW Version
System ROM for DL360 G7	2015.08.16	2015.08.16	no maximum
(MISC ISO Errata Item) System ROM for DL360p Gen8 w/ TPD builds 82.29 and lower	2013.09.08	2013.09.08[2]	2013.09.18
System ROM for DL360p Gen8 w/ TPD builds 82.30 and above	2013.09.08	2015.07.01	no maximum
System ROM for DL360 Gen9v1	2016.09.13	2016.09.13	no maximum
(MISC ISO Errata Item) System ROM for DL380p Gen8 w/ TPD builds 82.29 and lower	2013.09.08	2013.09.08[3]	2013.09.18
System ROM for DL380p Gen8 w/ TPD builds 82.30 and above	2013.09.08	2015.07.01	no maximum
System ROM for DL380 Gen9v1	2016.09.13	2016.09.13	no maximum
(MISC ISO Errata Item) System ROM for BL460c Gen8 w/ TPD builds 82.29 and lower	2013.09.08	2013.09.08[4]	2013.09.18
System ROM for BL460c Gen8 w/ TPD builds 82.30 and above	2013.09.08	2015.06.01	no maximum
System ROM for BL460c Gen9v1	2016.05.05	2016.09.12	no maximum
System ROM for BL620c G7	2015.08.16	2015.08.16	no maximum
Power Management Controller for DL360 G7 and BL460c G7 Servers	1.6	not included	no maximum
Power Management Controller for BL620c G7 Servers	1.7	not included	no maximum
Power Management Controller for all Gen8 Servers	3.0	3.3	no maximum
Power Management Controller for all Gen9 Servers	1.0.7	1.0.9	no maximum
HP NC365T Intel Quad Port 1GbE	no minimum	not included[5]	no maximum

[1] These are the firmware versions contained in this release. See Appendix A for potential post-publication updates.

[2] This firmware version requires the installation of Firmware Errata ID CP021629 contained in the MISC ISO.

[3] This firmware version requires the installation of Firmware Errata ID CP021628 contained in the MISC ISO.

[4] This firmware version requires the installation of Firmware Errata ID CP021603 contained in the MISC ISO.

Component	Minimum Supported FW Version	Current Supported FW Version[1]	Maximum Supported FW Version
HP NC364T Intel Quad Port 1GbE	no minimum	not included[6]	no maximum
HP NC364m Intel Quad Port 1GbE	no minimum	not included[6]	no maximum
HP 366M Intel Quad Port 1GbE	1.349.0	1.1446.0	no maximum
HP 331i Broadcom 4-port 1Gb	1.37	1.46	no maximum
HP 331FLR Broadcom 4-port 1Gb	1.37	1.46	no maximum
HP 331T Broadcom 4-port 1Gb	1.37	1.46	no maximum
HP 530FLB Broadcom 2-port 10Gb	7.4.22	7.13.75	no maximum
HP 530M Broadcom 2-port 10Gb	7.4.22	7.13.75	no maximum
HP 560FLB Intel 2-port 10Gb	0x8000080b	0x80000872	no maximum
HP 560M Intel 2-port 10Gb	0x8000080b	0x8000083D	no maximum
HP 560SFP+ Intel 2-port 10Gb	0x80000811	0x80000835	no maximum
HP 560FLR-SFP+ Intel 2-port 10Gb	0x80000838	0x80000838	no maximum
HP NC553i Emulex 2-port 10Gb	4.6.247.5	10.7.316.0	no maximum
Smart Array P410i/P411 Controller for DL/BL G7 Servers	6.40	6.64	no maximum
Smart Array P220i/P420i/P420/P421	8.00	8.00[6]	no maximum
Smart Array P244br/P246br/P440ar/P840	4.52	4.52	no maximum
HP 12Gb SAS Expander	2.09	2.10	no maximum
Direct Attached D2700	0070(B)	0150	no maximum
D2200sb Storage Blade (internal P410i)	6.40	6.64	no maximum
D2220sb Storage Blade (internal P420i)	8.00	8.00	no maximum
iLO3 for all G7 DL/ML/BL Servers	1.88	1.88	no maximum
iLO4 for all Gen8 and Gen9 DL/BL Servers	Latest from HPE (See iLO4 NAND Fix Procedures in section 6)	Latest from HPE (See iLO4 NAND Fix Procedures in section 6)	no maximum
SAS Storage Disks (Multiple Part Numbers included)	Various	Various	no maximum

[5] The NC364m, NC364T, and NC365T NICs do not have firmware on the SPP. HP has never released updated firmware for these NICs. They do not need to be upgraded. The firmware they ship with is approved.

[6] Check Appendix A for updates.

2.3.2 HP Miscellaneous Firmware Components

Table 6 lists various HP and non-HP firmware components related to the HP Solutions that are updated manually from the HP Misc Firmware ISO.

Important: Mated switches of the same model must have matching firmware versions.

Table 6. HP and Non-HP Firmware Components

Component	Minimum Supported FW Version	Current Approved FW Version	Maximum Supported FW Version	Physical File Name[7]
OA (Use with PM&C versions 5.7 and greater)	4.60	4.60	4.60	hpoa460.bin
OA (Use with PM&C versions 4.x to 5.5)	3.71	3.71	3.71	hpoa371.bin
OA (Use with PM&C versions 2.x to 3.x)	3.31	3.31	3.31	hpoa331.bin
1Gb Ethernet Pass-Thru Module	3.0.3	3.0.3[8]	no maximum	No file. This is contained in the OA firmware.
MSA2012fc Disk Controller	J200P50-02	J201R09	no maximum	neptunesw-J201R09-01.bin
P2000 G3 MSA Disk Controller	TS201P004	TS201P007	no maximum	TS201P007.bin
P2000 MSA USB Driver (Windows 32bit)	1.0.0.5	1.0.2.8	no maximum	cp014957.exe
P2000 MSA USB Driver (Windows 64bit)	1.0.2.8	1.0.2.8	no maximum	cp014959.exe
Cascaded D2700	0070(B)	0147	no maximum	(not included)[9]
Brocade SAN Switch	6.2.2b	6.2.2b	no maximum	v6.2.2b.tar.gz
Cisco 9372TX-E Switch NXOS	7.0.3.I4.2	7.0.3.I4.2	7.0.3.I4.2	nxos.7.0.3.I4.2.bin
Cisco 4948E-F Switch IOS	12.2(54)WO	12.2(54)WO	12.2(54)WO	cat4500e-entservicesk9-mz.122-54.WO.bin
Cisco 4948E-F Switch PROM	12.2(44r)SG9	12.2(44r)SG9	no maximum	N/A[10]

[7] All files are located off the root of the ISO in the **/files** directory.
[8] This firmware version is included in the "Current Approved FW Version" of the OA firmware for use with PM&C 4.x and greater.

[9] See Bug 19106000 in Section **Error! Reference source not found.**, **Error! Reference source not found.**.

Component	Minimum Supported FW Version	Current Approved FW Version	Maximum Supported FW Version	Physical File Name[7]
Cisco 4948E Switch IOS	12.2(54)XO	12.2(54)XO	12.2(54)XO	cat4500e-entservicesk9-mz.122-54.XO.bin
Cisco 4948E Switch PROM	12.2(44r)SG8	12.2(44r)SG8	no maximum	N/A[10]
Cisco 4948 Switch IOS	12.2(53)SG2	12.2(53)SG2	12.2(53)SG2	cat4500-ipbasek9-mz.122-53.SG2.bin
Cisco 4948 Switch PROM	12.2(31r)SGA1	12.2(31r)SGA1	no maximum	cat4500-ios-promupgrade-122_31r_SGA1
Cisco 3020 Switch IOS (For SwitchConfig Systems Only)	12.2(50)SE3	12.2(50)SE3	12.2(50)SE3	cbs30x0-ipbasek9-tar.122-50.SE3.tar
Cisco 3020 Switch IOS (For NetConfig Systems Only)	12.2(58)SE1[11]	12.2(58)SE1[11]	12.2(58)SE1[11]	cbs30x0-ipbasek9-tar.122-58.SE1.tar
HP 6120XG Switch	Z.14.51	Z.14.51	Z.14.51	Z_14_51.swi
HP 6125G Switch (with PM&C below 6.0.1.0.0_60.21.0)	5.20.99, Release 2105	5.20.99, Release 2105	5.20.99, Release 2105	6125-CMW520-R2105.bin
HP 6125XLG Switch (with PM&C below 6.5.0.0.0_65.6.0)	7.1.045, Release 2403	7.1.045, Release 2403	7.1.045, Release 2403	6125XLG-CMW710-R2403.ipe

2.3.3 HP Errata Firmware Components

Table 7 lists important HP ProLiant Server firmware updates that are installed manually from the HP Miscellaneous Firmware ISO. Using the **Scope** and **Description/Comments** columns from Table 7, determine if any of the errata is applicable to the hardware being updated. Unless stated otherwise, apply the applicable errata firmware immediately following the installation of HP's service pack for ProLiant.

More information about each firmware update and the issues it resolves can be found in its associated readme file (included on the media) or by searching on the HP Advisory number on the HP Website at http://welcome.hp.com/country/us/en/support_task.html.

[10] There is no file included for these PROM versions as they are the first supported PROM version for their particular switch from CISCO. Because of this all switches will be at least at the specified version.

[11] This firmware version requires that OA firmware version 3.70 or greater is already installed before a 3020 upgrade.

Table 7. ProLiant Server Firmware Updates

Errata ID[12]	Scope	HP Advisory Number	Chainable?	Description/Comments
CP021629	ProLiant DL360p Gen8 Servers needing to install TPD build 82.29 and lower	N/A	N/A	There is a change in newer Gen8 System ROMs that keeps TPD builds 82.29 and lower from successfully installing. Use this errata item to downgrade the DL360p Gen8 System ROM if an affected TPD version is to be used.
CP021628	ProLiant DL380p Gen8 Servers needing to install TPD build 82.29 and lower	N/A	N/A	There is a change in newer Gen8 System ROMs that keeps TPD builds 82.29 and lower from successfully installing. Use this errata item to downgrade the DL380p Gen8 System ROM if an affected TPD version is to be used.
CP021603	ProLiant BL460p Gen8 Servers needing to install TPD build 82.29 and lower	N/A	N/A	There is a change in newer Gen8 System ROMs that keeps TPD builds 82.29 and lower from successfully installing. Use this errata item to downgrade the BL460c Gen8 System ROM if an affected TPD version should be used.

2.3.4 MIB Files)

The HP Miscellaneous Firmware ISO contains MIB files included as a convenience to our customers who use HP and Cisco hardware. The **tar.gz** files containing the MIB are located in the **/mibs** directory off the HP Miscellaneous Firmware ISO. For those applications that use the MIB files, refer to the application specific documentation on MIB file usage.

File Name	Description
hp-upd10.50mib.tar.gz	Version 10.50 of HP's Insight Management MIB Update Kit for Linux. Contains MIB files pertaining to HP ProLiant servers and c-Class enclosure devices including the Onboard Administrator, HP 6125G switch, HP 6125XLG switch, and Cisco 3020 switch.
Cisco-MIBS-tklc_1.1.tar.gz	This contains the SNMP V2 MIB files pertaining to the IOS versions for the 4948, 4948E, and 4948E-F switches contained in this HP Solutions Firmware Upgrade Pack.
HPProCurve6120mibs082013.zip	This contains the MIBs for the HP ProCurve 6120XG c7000 Enclosure Switch.
MIBs_V7.zip	This contains the full set of MIBs for the HP 6125G switch.

[12] All errata items are in subdirectories located off the root of the ISO in the **/errata** directory.

3. Upgrade Order

3.1 Recommended Order of Firmware Upgrades — Platform 6.5 and Below

The following is the recommended order of firmware upgrades to reduce possible issues during the process of upgrading a system's firmware.

1. 1. The iLO4 of all Gen8 and Gen9 servers. See iLO4 NAND Fix Procedures in section 6.
2. Cisco 4948, Cisco 4948E, and Cisco 4948E-F switches.
3. Onboard Administrator (OA).
4. 1Gb Ethernet Pass-Thru Modules.
5. Cisco 3020, HP 6125G, HP 6120XG, and Brocade SAN enclosure switches.
6. BL460 and BL620 blade servers.
7. P2000 and MSA2012fc external storage controllers.
8. D2700 enclosure cascaded from a P2000.
9. DL380 and DL360 rack mount servers.

Note: It is recommended that rack mount servers be upgraded last. If you choose to upgrade them at any other time, please make sure to adhere to the rules in the Important Rules on Simultaneous Firmware Upgrades section.

Note: Mated switches must run the same firmware version. Make sure both switches are running the same firmware version before proceeding with the recommended order of firmware upgrades

3.2 Recommended Order of Firmware Upgrades — Platform 6. 7 to 7.x

The following is the recommended order of firmware upgrades when on or upgrading to Platform 6.7 to 7.x it is meant to reduce possible issues during the process of upgrading a system's firmware.

1. The iLO4 of all Gen8 and Gen9 servers. See iLO4 NAND Fix Procedures in section 6.
2. PM&C host server and PM&C application (PM&C 5.7 or greater must be installed before upgrading OA firmware to version 4.60).
3. Cisco 9372TX-E, Cisco 4948, Cisco 4948E, and Cisco 4948E-F switches.
4. Onboard Administrator (OA).
5. 1Gb Ethernet Pass-Thru Modules.
6. Cisco 3020, HP 6125G, HP 6120XG, 6125XLG and Brocade SAN enclosure switches.
7. BL460 and BL620 blade servers.
8. P2000 and MSA2012fc external storage controllers.
9. D2700 enclosure cascaded from a P2000.
10. DL380 and DL360 rack mount servers.

Note: It is recommended that rack mount servers (other than the PM&C host) be upgraded last. If you choose to upgrade them at any other time, please make sure to adhere to the rules in the Important Rules on Simultaneous Firmware Upgrades section.

Note: Mated switch pairs must run the same firmware version. Make sure both switches are running the same firmware version before proceeding with the recommended order of firmware upgrades.

3.3 Important Rules on Simultaneous Firmware Upgrades

Below are important rules to follow when attempting to upgrade more than one type of hardware at a time.

- Do not upgrade an Onboard Administrator to version 4.60 until the associated PM&C is at version 5.7 or greater.
- When upgrading any firmware component do not simultaneously upgrade any network hardware between you and the component being upgraded.
- Do not upgrade anything else when upgrading Cisco 9372TX-E, Cisco 4948, Cisco 4948E, and Cisco 4948E-F switches.
- Do not upgrade anything else within the c7000 enclosure when upgrading Cisco 3020, HP 6125G, HP 6120XG, HP 6125XLG, and Brocade SAN enclosure switches.
- When upgrading an Onboard Administrator (OA) do not upgrade anything else within the c7000 enclosure.

4. Compatibility

4.1 With Previous HP FUP Releases

HP FUP releases are generally compatible with previous HP FUP releases, but previous HP FUP releases may not be compatible with the TPD version being used.

Each downgrade situation is different and My Oracle Support (MOS) should be consulted for more details.

4.2 With Oracle Application Software

PM&C, version 6.4 or newer, is needed for managing the Cisco 9372TX-E switch including upgrading its firmware.

Before upgrading the Onboard Administrator to firmware version 4.60, PM&C must be at version 5.7 or greater.

If using PM&C 5.7 or greater, use Onboard Administrator firmware version 4.60 or greater.

If using PM&C 4.x or 5.5, use Onboard Administrator firmware version 3.71.

If using PM&C 2.x to 3.x use Onboard Administrator firmware version 3.31.

All HP Gen8 servers require either TPD 5.1.0 or TPD 6.0.0 build 80.20 or higher (for example, TPD 6.0.0-80.20.0) when installing TPD and this firmware release. See Bug 19089118 in the Known Bugs section).

Install TPD and TVOE builds older than 82.30 fails on Gen8 servers when system ROMs newer than 2013.09.18 are used. This problem only occurs during install.

After an older, affected version of TPD (build 82.29 and lower) has been installed system ROM versions newer than 2013.09.18 can be installed and run without issue.

This problem would only occur if there were some reason to re-install that older version of TPD such as a disaster recovery scenario. This means that before you upgrade to TPD build 82.30 or newer, you should upgrade the firmware on the server to the latest approved system ROM version

4.3 Firmware Version Restrictions

Table 8 includes all conditional restrictions on firmware versions. If a system meets the condition then the listed component must comply with the version restrictions. For more information, read the description or reference the listed bug number.

Table 8. Component Restrictions

Bug	Condition	Component	Version	Description
19086459	PM&C version ≤ 3.2.x	OA	3.31 only	HP OA Firmware version 3.5 or higher is incompatible with older PM&C versions resulting in an inability to IPM enclosure blades.
19112768	TPD/TVOE build less than 82.30	Gen8 Blade and RMS System ROMs	2013.09.18 maximum	TPD/TVOE builds before 82.30 will not install with Gen8 System ROMs newer than version 2013.09.18
19108903 19108452	OA firmware version ≥ 4.01	PM&C	5.7 minimum	Before an OA can be upgraded to firmware version 4.01 or later the PM&C must be at version 5.7 or greater.
19108903 19108452	PM&C version 4.x to 5.5	OA	3.71 only	If a PM&C, version 4.x to 5.5, is being used the OA firmware must be version 3.71.
N/A	Mated switches of the same model	All Switches	N/A	Mated switches of the same model must have the same firmware version(s) as each other.
N/A	OA needs to be upgraded to version 4.60	OA and PM&C	N/A	The PM&C must be at version 5.7 or greater before upgrading to OA firmware version 4.60.
N/A	Cisco 3020 must be upgraded	OA and Cisco 3020	N/A	When upgrading a Cisco 3020 switch, the OA must first be upgraded to firmware version 3.70 or newer.

4.4 Fixed Bugs

HP includes many fixes in their firmware releases. This table includes issues that have been reported in the field or fixes that are for particularly bad issues and that have been fixed by this HP FUP release.

Table 9. Fixed Bugs

Bug	Component	CSR	Title	Description / Comments
25299812	DL360/DL380 Gen9 System ROM	--	DL360/DL380 Gen9 System ROM and iLO combination causes storage battery issues	DL360/DL380 Gen9 Systems ROMs 2016-07-18 and newer fix an issue where: "...a system that experiences an HPE Smart Storage Battery failure may become unresponsive when configured with iLO Firmware 2.40."

Bug	Component	CSR	Title	Description / Comments
25299862	OA	--	OA EFM Discovery and Update failure when EFM configured to "must be off"	HP OA firmware version 4.60 fixes the issue below. "Resolved EFM discovery/update failure when the server power policy in the EFM configuration is set to "must be off"."
19086459	PM&C version ≤ 3.2.x	OA	3.31 only	HP OA Firmware version 3.5 or higher is incompatible with older PM&C versions resulting in an inability to IPM enclosure blades.
25305456	Smart Array P244br/P246br/P440ar/P840	--	Gen9 Smart Array firmware fixes after HP FUP 2.2.10	The following firmware fixes have been released since the version 3.56 included in HP FUP 2.2.10. More fixes exist, but these are the ones that concern us. **Version 4.52**: System might hang at POST following a reboot. System might lockup at POST following a reboot (POST Lockup 0x13). System might stop responding in response to a rare error (POST Lockup 0x13). **Version 4.02**: Flash-backed write cache might fail on embedded controllers following an unexpected power down event. Detection of all physical drives behind the same expander might fail if a single drive did not spin up. Controller might stop responding when running Linux and an abort command is issued by the host. Reduced likelihood of POST Lockup 0x13 occurrence due to intermittent memory errors.
25305635	Smart Array P220i/P420i/P420/P421	--	Gen8 Smart Array fixes in firmware version 8.00	Smart Array P220i/P420i/P420/P421 controller firmware version 8.00 introduces the following fixes. More fixes exist, but these are the ones that concern us. System might hang at POST following a reboot. System fans might go to 100% if connected drives were spun down.

Bug	Component	CSR	Title	Description / Comments
25305785	iLO4	--	iLO4 firmware fixes after HP FUP 2.2.10	The following firmware fixes have been released since iLO4 firmware version 2.40 included in HP FUP 2.2.10. More fixes exist, but these are the ones that concern us. **Version 2.50**: This version adds protection to the lifespan of the embedded 4GB non-volatile storage (NAND) by implementing a daily write count limit that is well above the normal daily activity. This ensures a runaway process will not inadvertently write to the NAND excessively leading to eventual failure. Dynamic Power Capping still works when set to disabled. **Version 2.44**: Fixed loss of communication with Onboard Administrator.
25305878	iLO4	--	iLO4 NAND flash device may not initialize or mount properly	iLO4 firmware older than the latest from HPE.com could possibly cause the iLO4 NAND device to not initialize or mount properly which can cause many varied issues. See iLO4 NAND Fix Procedures in section 6. The HP Advisory covering the issue and resulting problems is located at: http://h20564.www2.hpe.com/hpsc/doc/public/display?docId=emr_na-c04996097 In addition to the listed problems the issue can cause the hp-health daemon to hang or crash. If using a TPD build prior to 7.2.0.0.0_88.17.0 this will cause syscheck to inaccurately indicate all DIMMs on the system have ECC errors.

4.5 Known Bugs

Important: Read for additional information on avoiding these known issues.

Bug	Title	Description/Comments
25347846	HP FUP 2.2.11 SPP bootable USB is only reliable with System ROMs utilizing UEFI	Bootable USB media created with the 2016.10.0 SPP base included with HP FUP 2.2.11 is only reliable when used with a System ROM set to UEFI mode. It has been found that the majority of the time that SPP 2016.10.0 (HP FUP 2.2.11 SPP) bootable USB media is used with servers utilizing a legacy BIOS there are problems including hanging of the updater (HP SUM) and possible bad firmware flashes. HP G7 servers do not have a UEFI mode at all and UEFI mode bootable USB upgrades are not suggested for Gen8/Gen9 servers either until a resolution is found.

Bug	Title	Description/Comments
19112722	TPD/TVOE builds before 82.30 will not install with Gen8 System ROMs newer than version 2013.09.18	Installing TPD and TVOE builds older than 82.30 fails on Gen8 servers when System ROMs newer than 2013.09.18 are used. This problem only occurs during install. After an older, affected version of TPD (build 82.29 and lower) has been installed System ROM versions newer than 2013.09.18 can be installed and run without issue. This problem would only occur if there were some reason to re-install that older version of TPD such as a disaster recovery scenario. This means that before you upgrade to TPD build 82.30 or newer you can and should upgrade the firmware on the server to the latest approved System ROM version.
19108903 19108452	PM&C 5.5 and below incompatibility with OA firmware version 4.01 and greater.	The PM&C must at version 5.7 or greater before upgrading the Onboard Administrator to firmware version 4.30. PM&C 5.5 and below is incompatible with OA firmware version 4.01 and greater. This incompatibility can result in slowness or unresponsiveness from the OA and Blade iLOs. Also, this issue can cause TPD install attempts, and other actions that cause the PM&C to reset a blade, to fail.
19106000	Firmware Flash of D2700 firmware version 0146, 0147, or 0147(B) can result in data loss.	D2700 firmware has been removed from the MISC ISO. Updating the firmware for an HP D2600/D2700 6Gb SAS Disk Enclosure may cause existing logical volumes to become inaccessible and result in the loss of data. This can occur when applying D2700 firmware versions 0146, 0147, or 0147(B). HP Customer Advisory c03883900.
19089118	Gen8 servers won't reboot/shutdown.	All Gen8 servers (RMS and Blades) require TPD or TVOE build 80.20 or higher (eg. TPD 6.0.0-80.20.0 or TVOE 2.0.0_80.20.0) when using TPD 6.0 or TVOE 2.0 and this firmware release. Do not apply this firmware release to a server running an earlier build of TPD 6.0 or TVOE 2.0. This prevents an issue where the server will not reboot/shutdown and display an error message reading "INFO: task reboot:XXXX blocked...".
19092216	OA firmware must be at version 3.70 or later before upgrading a Cisco 3020 Blade Switch.	When the firmware of a Cisco Catalyst Blade Switch CBS3020 is upgraded or downgraded between version 12.2(55)SE4 (or earlier) and version 12.2(58)SE1 (or later), after the firmware flash is completed and the module restarts, if Enclosure Bay IP Addressing (EBIPA) is in use, HP Onboard Administrator (OA) will fail to assign an IP address to the module.
19086459	PM&C OA Version Incompatibilities.	HP OA Firmware version 3.50 or higher is incompatible with PM&C versions 2.x/3.x resulting in an inability to IPM enclosure blades.

5. Additional Firmware Installation and Configuration

The following are additional installation and configuration instructions for this release outside of the procedures documented in the HP Solutions Firmware Upgrade Pack, Upgrade Procedures document, reference [1].

- For known Bug 19112768, if upgrading a Gen8 RMS or Blade to a TPD build at or greater than 82.30 the System ROM may be upgraded past version 2013.09.18 while still on the older build as the issue

only happens during install. However, if the software upgrade must be backed out the firmware must also be downgraded using the errata firmware Gen8 System ROMs.

- For SDS RMS systems running TPD 5.x with no PM&C and using NetConfig on the Management Servers: If upgrading Cisco 4948, 4948E, or 4948E-F switch PROM firmware, then the following change to the “Upgrade Cisco 4948, 4948E, and 4948E-F PROM Firmware (NetConfig)” procedure must be made for upgrading the second 4948 series switch (Switch1B)::
  - On Step 10, when upgrading Switch1B, the following should be used for the first command of Step 10:

    /usr/bin/console -M <mgmt_server_B_IP> -l platcfg <switch1B_console_name>
- All Gen8 servers (RMS and Blades) require TPD or TVOE build 80.20 or higher (eg. TPD 6.0.0-80.20.0 or TVOE 2.0.0_80.20.0) when using TPD 6.0 or TVOE 2.0 and this firmware release. Do not apply this firmware release to a server using an earlier build of TPD 6.0 or TVOE 2.0. This prevents an issue where the server will not reboot/shutdown and display an error message reading “INFO: task reboot:XXXX blocked...”.
- Mated switches of the same model must have the same firmware version(s) as each other.

6. iLO4 NAND Fix Procedures

Note: If either procedure fails there are instructions at the bottom for removing power to the server in an attempt to reset the iLO4 to a good enough state to re-attempt the procedure.

Note: HPE continues to put out versions of iLO4 firmware that provide more fixes for this issue after stating the last version was fixed. Because of this, we recommend always using the latest iLO4 firmware version.

All Gen8 and Gen9 servers (Blades and RMSs) have a critical iLO4 firmware issue that can result in the iLO4 becoming unusable and unrecoverable. The HPE advisory linked to below, at the time of this document's creation (11 October 2017) states versions below 2.54 are affected. However, we recommend using the latest available iLO4 firmware version because HPE continues to put out versions of firmware that provide more fixes for this issue after stating the last version was fixed. This issue can cause other, less serious iLO4 issues too. See Bug 25305878.

To obtain the latest iLO4 firmware version please go to the link below and make sure to select the newest version available at the top of the revision history page. Download and execute it from a windows workstation, click the "Extract" button, and use the "ilo4_xxx.bin" file from the extracted location where "xxx" is the version (for example, ilo4_255.bin). Record this filename as <firmware_file> for use in the procedures below.

http://h20566.www2.hpe.com/hpsc/swd/public/detail?swItemId=MTX_de47e686656047698a91ca6f5c#tab-history

HP Advisory:

http://h20564.www2.hpe.com/hpsc/doc/public/display?docId=emr_na-c04996097

6.1 Simple RMS or Blade Procedure

1. Obtain the **iLO4 <firmware_file>** as detailed at the start of section 6.
2. Log into the iLO4 CLI via SSH.
3. Reset the iLO4 with the **reset /map1** command.

   This disconnects the SSH session.
4. Log into the iLO4 Web GUI after it has become available again after the reset.
5. Navigate to **Administration > Firmware**.

6. Click **Browse** and select the <firmware_file>.
7. Click **Upload** and click **OK** on the pop-up. Do not leave this screen while the firmware is upgrading.
8. Once the upgrade has completed the iLO4 Web GUI returns to the login screen. Clear your web browser history including cookies, temporary files, and website data.
9. Reload the iLO4 Web GUI and login again. Verify the Information screen seen after login displays **iLO Firmware Version X.XX** where X.XX is the firmware version being applied.
10. Log into TPD/TVOE as **admusr**.
11. Create a file named **nand-reformat.xml** with the contents:

    <RIBCL VERSION="2.0">

    <LOGIN USER_LOGIN="Administrator" PASSWORD="Password">

    <RIB_INFO MODE="write">

    <FORCE_FORMAT VALUE="all" />

    </RIB_INFO>

    </LOGIN>

    </RIBCL>
12. Run the hponcfg command **sudo hponcfg -f nand-reformat.xml**. Expect the following output:

    HP Lights-Out Online Configuration utility

    Version 4.6.0 Date 09/28/2015 (c) Hewlett-Packard Company, 2015

    Firmware Revision = X.XX Device type = iLO 4 Driver name = hpilo

    Forcing a format of the partition after the iLO reset.

    Script succeeded
13. Wait 3 minutes.
14. Log into the iLO4 Web GUI after it has become available again after the reformat.
15. Check the **iLO Event Log** for a message reading **Embedded Flash/SD-CARD: One or more storage devices have been formatted**. This indicates the reformat of the NAND was successful.

    If this message does not display, the procedure failed and the iLO4 is unrecoverable.
16. Log into TPD/TVOE as **admusr**.
17. Kill the hpasmlited daemon with the **sudo pkill -9 hpasmlited** command.

    There is no output.
18. Start the hpasmlited daemon with the **sudo service hp-health start** command. The following output is expected.

    Using Proliant Standard

        IPMI based System Health Monitor

    Starting Proliant Standard

        IPMI based System Health Monitor (hpasmlited):

                [OK]
19. The recovery procedure is done. Repeat for any servers that have not had the fix applied.

6.2 Multiple Blades Procedure

Note: In this procedure the **hponcfg** command is used from the OA CLI. When specifying the blades to run the RIBCL script on, this procedure assumes all blades in the enclosure are BL460c Gen8 blades that need to be upgraded. To accomplish this, the command starts **hponcfg all**. If a subset of the blades need to be addressed, replace **all** with the number of the blade being upgraded such as **hponcfg 1,3,8** or **hponcfg 4-8** or **hponcfg 2,4,6-9,11,13**,.

1. Obtain the **iLO4 <firmware_file>** as detailed at the start of section 6.
2. As the **admusr** user, SCP or otherwise, copy the **iLO4 <firmware_file>** to the **/home/admusr** directory on the PM&C that controls the blades being upgraded.
3. Log into the PM&C as **admusr**.
4. Run **sudo cp /home/admusr/<firmware_file> /usr/TKLC/smac/html/TPD/** to copy the firmware file to the http share.
5. Run **sudo chmod 644 /usr/TKLC/smac/html/TPD/<firmware_file>** to set the proper permissions.
6. SSH to the active OA of the enclosure housing the blades being upgraded.
7. Type **hponcfg all << EOF** and press **Enter**.
8. Paste the following RIBCL script for resetting the iLO4s:

   <RIBCL VERSION="2.0">

   <LOGIN USER_LOGIN="" PASSWORD="">

   <RIB_INFO MODE="write">

   <RESET_RIB/>

   </RIB_INFO>

   </LOGIN>

   </RIBCL>
9. Press **Enter**, type **EOF**, and press **Enter** again.

   This runs the RIBCL script on the blades specified. Following is an example of the full command:

   OA-XXX> hponcfg all << EOF

   <RIBCL VERSION="2.0">

   <LOGIN USER_LOGIN="" PASSWORD="">

   <RIB_INFO MODE="write">

   <RESET_RIB/>

   </RIB_INFO>

   </LOGIN>

   </RIBCL>

   EOF
10. In the middle of the output for each blade is the message **Integrated Lights-Out will reset at the end of the script.** to indicate the command succeeded.
11. Wait 3 minutes after the last hponcfg command for iLO4 resets completed.

12. Type **hponcfg 1-8 << EOF** and press **Enter**.

    As described before this procedure, you can specify the exact blades to target. In this example 1-8 is used and it assumes 9-16 would be used on a second run of the procedure. A maximum of 8 blades should be upgraded at a time. Adjust the blade numbers used to suit your needs.

13. Paste the following RIBCL script for upgrading the iLO4s. Replace <PM&C_IP> with the IP address of the PM&C and <firmware_file> with the iLO4 firmware filename (for example, **ilo4_255.bin**):

    <RIBCL VERSION="2.0">

    <LOGIN USER_LOGIN="" PASSWORD="">

    <RIB_INFO MODE="write">

    <UPDATE_RIB_FIRMWARE IMAGE_LOCATION="http://<PM&C_IP>/TPD/<firmware_file>"/>

    </RIB_INFO>

    </LOGIN>

    </RIBCL>

14. Press **Enter**, type **EOF**, and press **Enter** again. This runs the RIBCL script on the blades specified.

    There is a large amount of output indicating the progress of the firmware upgrades.

15. Wait 3 minutes after the last hponcfg command for iLO4 upgrades completed.

16. Type **show server firmware all** and press **Enter**.

17. Check the output for each blade upgraded and make sure the iLO4 firmware component shows the expected version provided by the <firmware_file> under the **Current Version** column.

18. Type **hponcfg 1-8 << EOF** and press **Enter**. Specify the same bay numbers here that were used in step 12.

19. Paste the following RIBCL script for reformatting the iLO4s' NAND flash device:

    <RIBCL VERSION="2.0">

    <LOGIN USER_LOGIN="" PASSWORD="">

    <RIB_INFO MODE="write">

    <FORCE_FORMAT VALUE="all" />

    </RIB_INFO>

    </LOGIN>

    </RIBCL>

20. Press **Enter**, type **EOF**, and press **Enter** again. This runs the RIBCL script on the blades specified.

21. In the middle of the output for each blade id the message **Forcing a format of the partition after the iLO reset.** to indicate the command succeeded.

22. Wait 3 minutes.

23. Log into the iLO4 Web GUI after it has become available again after the reformat.

24. Check the **iLO Event Log** for a message reading **Embedded Flash/SD-CARD: One or more storage devices have been formatted**. This indicates the reformat of the NAND was successful.

    If this message is not seen the iLO4 NAND reformat did not succeed. See section 6.3 to remove power temporarily from the server and re-attempt steps 20-24 for the servers that did not succeed.

25. Log into TPD/TVOE as **admusr**.

26. Kill the hpasmlited daemon with the **sudo pkill -9 hpasmlited** command.

There is no output.

27. Start the hpasmlited daemon with the **sudo service hp-health start** command. The following output is expected.

    Using Proliant Standard

        IPMI based System Health Monitor

    Starting Proliant Standard

        IPMI based System Health Monitor (hpasmlited):

                [OK]

28. The recovery procedure is done. Repeat for any servers that have not had the fix applied.

6.3 Temporarily Remove Power Before Fix Re-Attempt

In the event that either procedure fails for a given server, these steps temporarily remove power to the server to reset the iLO4 to a good enough state to re-attempt the procedure.

6.3.1 RMS

1. Properly shutdown the server.
2. Unplug both power cords from the power supplies.
3. Wait 10 seconds.
4. Plug the power cords back into the power supplies
5. Wait 3 minutes.
6. Re-attempt the procedure.

6.3.2 Blade

1. Properly shutdown the server.
2. Unseat the blade.

   Alternatively, if there is no physical access to the blade, log into the OA CLI and run **reset server X** where **X** is the bay number of the blade. Answer **YES** when prompted and skip to step 5.
3. Wait 10 seconds.
4. Reseat the blade.
5. Wait 3 minutes.
6. Re-attempt the procedure.

6.4 Optional De-Activation of AHS Logging

There is concern that the errors caused by the issue impact the life of the iLO4 NAND due to excessive logging. Optionally, to reduce the number of writes to the iLO4 NAND you can turn off the AHS logging on the iLO4 which should allow the iLO4 NAND to last longer than if AHS logging is enabled. If you turn off AHS logging, the end user loses nothing, but the AHS logs is unavailable for HPE support to analyze if the server has an HPE support case opened against it.

Note: This procedure is performed after the iLO4 upgrade and NAND reformat procedure.

1. Log into the iLO4 Web GUI.
2. Navigate to **Information > Active Health System Log**.
3. Click **Show Advanced Settings** at the bottom of the page.
4. Uncheck the box next to **Enable Active Health System Logging**.
5. Click **Apply**.

Appendix A. Updates and Remediation

This section pertains to updates and remediation that affect CGBU applications and come after the initial publication of the HP FW FUP ISO.

Appendix A.1 Advisory a00029265

Issue Description. Supplemental Update / Online ROM Flash Component for Linux - Smart Array P220i, P222, P420i, P420, P421, P721m, and P822. System can potentially stop responding with no lockup code due to livelock condition where the RAID Stack thread is polling a queue for a completion to be returned by the base code firmware.

This issue was experienced in the field and documented in Bug 27715675, which drove a new bootable ISO to be created to be applied after HP FW FUP installation completed.

Appendix A.1.1 Checksums

Checksums are provided, as md5 checksum values, to verify integrity of ISO image files.

Note: The following ISO is to be installed after the HP FUP 2.2.11 upgrade is complete.

Table 10. Media Name

Media File/Partition	MD5 Checksum
HP Smart Array Controller Update	
hpGen8_smartArray_fw_832.iso	e43a8261f61b677dcb7f29eb98e875a5

Appendix A.1.2 Documentation

Use the HP Solutions Firmware Upgrade Pack Upgrade Procedure [1] to install the Smart Array Firmware bootable ISO. Where the upgrade procedure references **<spp_ISO>**, use the ISO referenced in Appendix A.1.1.

Appendix B. My Oracle Support (MOS)

MOS (https://support.oracle.com) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the CAS main number at **1-800-223-1711** (toll-free in the US), or call the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html. When calling, make the selections in the sequence shown below on the Support telephone menu:

1. Select **2** for New Service Request.
2. Select **3** for Hardware, Networking, and Solaris Operating System Support.
3. Select one of the following options:

   For technical issues such as creating a new Service Request (SR), select **1**.

   For non-technical issues such as registration or assistance with MOS, select **2**.

You are connected to a live agent who can assist you with MOS registration and opening a support ticket. MOS is available 24 hours a day, 7 days a week, 365 days a year.

Emergency Response

In the event of a critical service situation, emergency response is offered by the CAS main number at 1-800-223-1711 (toll-free in the US), or by calling the Oracle Support hotline for your local country from the list at **http://www.oracle.com/us/support/contact/index.html**. The emergency response provides immediate coverage, automatic escalation, and other features to ensure that the critical situation is resolved as rapidly as possible.

A critical situation is defined as a problem with the installed equipment that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical situations affect service and/or system operation resulting in one or several of these situations:

- A total system failure that results in loss of all transaction processing capability
- Significant reduction in system capacity or traffic handling capability
- Loss of the system's ability to perform automatic system reconfiguration
- Inability to restart a processor or the system
- Corruption of system databases that requires service affecting corrective actions
- Loss of access for maintenance or recovery operations
- Loss of the system ability to provide any required critical or major trouble notification

Any other problem severely affecting service, capacity/traffic, billing, and maintenance capabilities may be defined as critical by prior discussion and agreement with Oracle.

Locate Product Documentation on the Oracle Help Center

Oracle Communications customer documentation is available on the web at the Oracle Help Center (OHC) site, http://docs.oracle.com. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at http://www.adobe.com.

1. Access the **Oracle Help Center** site at http://docs.oracle.com.
2. Click **Industries**.
3. Under the **Oracle Communications** subheading, click the **Oracle Communications documentation** link. The Communications Documentation page appears. Most products covered by these documentation sets display under the headings **Network Session Delivery and Control Infrastructure** or **Platforms**.
4. Click on your Product and then the Release Number. A list of the entire documentation set for the selected product and release displays. To download a file to your location, right-click the PDF link, select `Save target as` (or similar command based on your browser), and save to a local folder.