Hewlett Packard
Enterprise

SPP
Gen9.0 Post Production
Release Notes

April 2022

Document History:

Released	Description
April 2022	Final Version

Table of Contents

Overview

The Service Pack for ProLiant (SPP) is a comprehensive systems software and firmware update solution, which is delivered as a single ISO image. This solution uses Smart Update Manager (SUM) as the deployment tool and is tested on all HPE ProLiant Gen9 servers as defined in the Server Support Guide.

For a full list of SPP Documentation, please review the Documentation Tab on the SPP Download Page.

Documentation	Description
Release Notes	Release notes for this SPP, containing important notes and known issues.
Component Release Notes	Release Notes for each component contained in this SPP, containing Fixes, Enhancements and important notes for each component contained in the SPP.
Contents Report	List of software and firmware on this SPP with filename and version.
Server Support Guide	List of software and firmware used by each HPE Server.
OS Guide	List of Operating Systems support included in each SPP.

Summary of Changes

Important Notes

Starting from SPP 2021.10.0 onwards, two SPPs will be released, one for Gen9 only products and the other one for Gen10/Gen10 Plus products. Entitlement verification is no longer required for the "Gen10/Gen10 Plus" SPP versions but is still required for the Gen9 only (2021.10.0 and later) and Gen9/Gen10/Gen10 Plus SPP version (2021.05.1 and earlier).

HPE Gen9 servers running Linux with secure-boot enabled must install the HPE-DB-2016 secure-boot key in NVRAM in order to load HPE published Linux drivers released after December, 2020.

- The HPE-DB-2016 DB key is available in the HPE "hexane" package. Enroll the key contained in the hexane package manually via the ROM-based Setup Utility (RBSU) or run "hexane.sh --flash" to apply all the latest secure-boot hashes and keys from HPE.
- This includes Linux drivers contained in the Service Pack for ProLiant (SPP) version 2021.05.0. If the HPE-DB-2016 key is not installed in the secure-boot DB, Linux drivers from HPE will fail.
- HPE StoreOnce Customers – Installation of the SPP can cause problems on StoreOnce systems. Please go to the HPE Support Center to find the appropriate StoreOnce update.

In order to reduce the frequency at which servers need to be updated, HPE has changed the packaging and delivery of the SPP. There are two types of SPPs:

- Individual **"Production SPPs"** that contain the firmware and drivers for the all of the production server generations, and
- Server generation specific **"Post-Production SPPs"** that contain the firmware and drivers for a specific post-production server generation (e.g., Gen8 only Post-Production SPP that contains the firmware and drivers for all of Gen8 server models).

The 2017.04.0 SPP was the last production SPP to contain components for the G6, G7 and Gen8 server platforms. For additional information on the changes, see "Reducing Server Updates".

NOTE: Products sold prior to the November 1, 2015 separation of Hewlett-Packard Company into Hewlett Packard Enterprise Company and HP Inc. may have older product names and model numbers that differ from current models.

Enhancements

The Gen9.0 SPP Post Production release contains components supporting the ProLiant and Apollo Gen9 server platforms and options. This SPP release contains Smart Update Manager (SUM) 8.9.5 and driver support for:

> RedHat Enterprise Linux 8.5

For a complete list of components on the ISO, see the SPP Contents Report on the ISO or the SPP page (documentation tab).

Support Removed

- Red Hat Enterprise Linux 7.7
- Red Hat Enterprise Linux 8.1, 8.2, 8.3
- SUSE Linux Enterprise Server 12 SP4
- SUSE Linux Enterprise Server 15 (initial version & SP1)
- ESXi 6.7 U2
- No BladeSystem in March 2022 MSB

Driver Update Disks (DUD) for Linux

DUDs for the HPE Dynamic Smart Array B140i SATA RAID Controller for supported Red Hat and SUSE operating systems can be found in the 'DUD' directory at the root of the ISO.

Supported Operating Systems

The following operating systems are supported for system software and firmware:

- Microsoft Windows Sever 2019 - All Editions
- Microsoft Windows Sever 2016 - All Editions
- Microsoft Windows Server 2012 R2 - All Editions
- Red Hat Enterprise Linux 8.4, 8.5
- Red Hat Enterprise Linux 7.8, 7.9
- SUSE Linux Enterprise Server 12 SP5
- SUSE Linux Enterprise Server 15 SP2, 15 SP3
- VMware vSphere 6.5 U3
- VMware vSphere 6.7 U2, U3

- VMware vSphere 7.0 U2, 7.0 U3 (Offline update only)

BladeSystem Adapters (Truncated OS Support)

Operating System Support for the HPE ProLiant BladeSystem portfolio is frozen starting from Service Pack for ProLiant (SPP) Version 2021.10.0, released in October 2021. Starting with March 2022 MSB, there will be no updated firmware nor driver releases across the ProLiant BladeSystem platform. HPE will not be testing new operating systems nor validating existing OS support with newer SPP or MSBs. No updated firmware nor driver releases later than SPP version 2021.10.0 may be applied on HPE ProLiant BladeSystem products. Even though there are BladeSystem-specific components listed in this March 2022 MSB, they are not supported on BladeSystem. The table below includes a summary of the OS version supported by these BladeSystem adapters from SPP 2021.10.0.

Adapter SKU Description	Adapter SKU Ordering Number	Adapter Vendor	RHEL Version NOT Supported	RHEL Version Supported	SUSE Version NOT Supported	SUSE Version Supported
HPE Ethernet 10Gb 2-port 560M Adapter	665246-B21	Intel	8.4	7.8, 7.9, 8.3	SLES 15 SP3	SLES 12 SP5
						SLES 15 SP2
HPE Ethernet 10Gb 2-port 560FLB Adapter	655639-B21	Intel	8.4	7.8, 7.9, 8.3	SLES 15 SP3	SLES 12 SP5
						SLES 15 SP2
HPE FlexFabric 20Gb 2-port 650M Adapter	700767-B21	Broadcom	8.4	7.8, 7.9, 8.3	SLES 15 SP3	SLES 12 SP5
						SLES 15 SP2
HPE FlexFabric 20Gb 2-port 650FLB Adapter	700763-B21	Broadcom	8.4	7.8, 7.9, 8.3	SLES 15 SP3	SLES 12 SP5
						SLES 15 SP2

Customers can use supported versions of RHEL (7.8, 7.9, and 8.3) and supported versions of SUSE (SLES 12 SP5, SLES 15 SP2) for these adapters.
There is currently no planned or committed date to support RHEL 8.4 or SLES 15 SP3 for the 560 and 650 adapters on BladeSystems.

For more information on HPE Operating Systems and Virtualization Software Support for ProLiant Servers, please visit our OS Support Site.

SPP Support for Client Operating System on HPE ProLiant WS460c Graphics Server

SPP software is an HPE ProLiant technology designed for server OS platforms but also supports certain client operating systems on HPE WS460c Graphics Server Blade and HPE Synergy 480

Compute Modules. Support for the SPP when used with Windows 10/7/8.1 on HPE ProLiant WS460c Graphics Server Blade is listed below:

Microsoft Windows Client operating systems on Bare Metal Support Matrix for HPE ProLiant WS460c and Synergy 480 compute module. This table is a reference for Microsoft Windows client operating systems only (Microsoft Windows 7/8.1/10) and is not a reference for Microsoft Server, Hypervisors or other operating systems

	Embedded System GPU	NVIDIA Quadro M3000SE MXM	NVIDIA Quadro RTX6000 P6000	NVIDIA Quadro RTX4000	NVIDIA Quadro M6000 M5000	NVIDIA Quadro K3100 MXM	NVIDIA Quadro K6000 K5000 K4000	NVIDIA Tesla M6 MXM	NVIDIA Tesla V100 T4 P6 P40 M10 M60	AMD FirePro S7100X MXM
WS460c Gen9	NO	10[1]	10[1,2] (P6000 Only)	NO[3]	7, 10[1,2]	7[1]	7[1]	10[1,4]	NO[3]	7, 10[1]

[1] Only supported in the single-wide configuration with GPU as a Mezzanine option or as a single GPU installed in graphics expansion. Not supported in HPE MultiGPU configurations when used with bare metal client OS configurations (Windows 7/10)

[2] Requires the HPE Graphics Expansion to support full-size cards. Only tested and support with a single card on Bare Metal Client OS (Windows 10)

[3] These cards are supported in certain configurations of WS460 Gen9 and Synergy 480 Gen9/10 but are not supported for bare metal client operating systems configurations, they are supported only in virtualized environments or when used in compute mode only (NVIDIA Tesla Cards)

[4] For Bare Metal NVIDIA Tesla M6 deployments. HP Inc. RGS is the only tested and supported remoting protocol and special configuration is required.

Support update - HPE WS460c Gen9 with Microsoft Windows 7

IMPORTANT- The following only applies to specific configuration of HPE ProLiant WS460c Gen9 with Microsoft Windows 7 installed on bare metal (Not Virtualized)

With support for Microsoft Windows 7 deprecated, HPE is moving support for Windows 7 to a "Post-Production" state. When a server generation and/or operating system transitions to "Post-Production", the firmware and drivers for that server generation and operating system are frozen, packaged together on a "Post-Production SPP" and released. The "Post-Production" firmware and drivers are supported through the EOS (end of support) for that server generation, and all future firmware and driver updates are released as hot fixes.

The HPE SPP Version 2017.04.0 is the last production SPP to contain components for:

- ProLiant BL460c and ProLiant WS460c G7 and Gen8 server platforms
- Support Windows 7 and Windows Server 2008 R2

HPE has released a custom post-production release set specifically for Windows 7 on ProLiant WS460c Gen9 systems. This will be the final Release Set/SPP that will support Windows 7 on HPE BladeSystems. This release set contains the final set of firmware, drivers and software (Except Graphics Drivers) supported in this configuration, all future firmware and driver updates are released as hot fixes via the HPE support website.

You can download the HPE ProLiant WS460c Gen9 Post-Production Release Set for Microsoft Windows 7 from Hewlett Packard Enterprise Support Center.

See this Customer A for more details explaining changes to Windows 7 support.

Prerequisites

Component Prerequisites

Pre-requisite for nfc-host-agent components

The following libraries which are part of Operating System distro are to be installed for the successful installation of nfc-host-agent rpm.

- libhugetlbfs.so
- libuuid.so - libuuid-devel is the library which has to be installed. For SuSE Linux Enterprise Server 12 service pack 4 and SuSE Linux Enterprise Server 12 service pack 5, this is part of Software Development Kit (SDK)

For NFC agent to work seamlessly, the following ports are required to be enabled on firewall:

- RDMA/4420
- tcp/3205
- udp/3206

nvme-cli package is part of this rpm and it may conflict with preinstalled nvme-cli, hence it is recommended to uninstall the default nvme-cli package before installing this rpm.

NVMe-Rdma Drivers are required to be installed for NFC agent to work seamlessly.

To determine prerequisite information, check the individual components.

SUM Prerequisites

The most current prerequisites for SUM can be found at the SUM documentation page https://www.hpe.com/info/sum-docs.

Limitations

Known Limitations

The following is a select list of known issues and limitations relating to the smart components and SUM version delivered with this SPP. For a full list, please visit the SPP Download page, select the "Hot Fixes & Advisories" tab, and the "Known Limitations" heading. This procedure can be followed for any currently listed SPP by selecting the preferred SPP version listed next to 'Currently Supported Versions' to open its version specific page.

- Drivers and/or enablement kits must be installed prior to detecting and updating some hardware and firmware. You may have to run SUM twice to ensure all the firmware components required for the installation is present.
- There are several scenarios when SUM is run twice. SUM requires drivers to discover the needed hardware and firmware for installation. After the drivers are installed for the first time

and the system rebooted, SUM must be run again to ensure that all the firmware components for the installation are present. The scenarios are:

- Network Adapters (NIC's), Host Bus Adapters (HBA's), and iLO require a driver or enablement kit to be installed in order to be recognized by SUM.
  The Linux firmware component for Emulex Fiber Channel Adapters and Linux firmware component for Marvell Fiber Channel Adapters requires that the target environment have the libHBAAPI package installed from your OS installation media.

- On Emulex systems, install the Fibre Channel Enablement Kit for Emulex HBAs prior to installing OneCommand Manager. If OneCommand Manager is already installed on the system and the Enablement Kit is not installed, uninstall OneCommand Manager, install the Enablement Kit, and then install the OneCommand Manager again.

- When running SUM on Windows, if the iLO Channel Interface Driver is not installed, the iLO firmware will show a version of 'None' as the installed version and 'Ready for Installation' as the status on the Select Bundle or Select Component page. This applies to firmware for iLO4 and iLO5. When attempting to update the firmware, it may fail to update if it is already up to date. Downgrade of iLO from 2017.10.0 to 2017.06.1 is not supported and will fail to update.

- When using SUM on Linux, the iLO Channel Interface Driver needs to be loaded from the operating system for the iLO firmware to display for installation.

- Broadcom NICs are not discovered by SUM unless the appropriate driver is installed, and all Ethernet ports are up. The Ethernet port can be brought up by using the following command:

      # ifup ethx

       or

      # ifconfig ethx up

To update the firmware for Broadcom NIC, use the following steps:

- o   Install the appropriate Windows or Linux driver found in the SPP.
- o   Enable all the Ethernet ports
- o   Run the Broadcom FW upgrade component

- Operating System support on the following HPE Converged Network Adapters is now frozen. There will be no Out-of-Box Drivers shipped or Online Firmware flash components provided for these adapters for the new Operating Systems listed below starting from Gen9.0 Post Production Service Pack for ProLiant. The only way to have the firmware updated in these Operating Systems is by launching the Service Pack for ProLiant in offline mode.

HPE Converged Network Adapters:

- ➢ HPE CN1200E Dual Port Converged Network Adapter
- ➢ HPE CN1200E-T Dual Port Converged Network Adapter
- ➢ HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- ➢ HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- ➢ HPE FlexFabric 20Gb 2-port 650FLB Adapter
- ➢ HPE FlexFabric 20Gb 2-port 650M Adapter

Operating Systems not limited to:

- Red Hat Enterprise Linux 8 Update 4 or later
- SuSE Linux Enterprise Server 15 Service Pack 3 or later

- Microsoft Windows Server 2022 or later
- VMware vSphere 7.0 or later

Resolved Limitations

The following is a list of known issues and limitations that no longer occur with this SPP.

VMware vSAN environment is not supported with the HPE ProLiant Gen9 Smart Array Controller nhpsa driver version 2.0.42-1 and firmware version 7.0.

Download & Deployment

The SPP can be downloaded from either the SPP Download page or the SPP Custom Download service. Both options require HPE Passport login and an active warranty or HPE support agreement.

To ensure the integrity of your download, HPE recommends verifying your results with the following SHA-256 Checksum values:

acc84328d93c9ebb9e74b6c845606d84fa8ab1d41fd450c48fa31207b4ae8cb4	Gen9SPPGen90.18.iso
04f950e43e6387f8a5bdf8e9fcc86bf5be499d3ce77fb2376b546c1e5fc7fdfa	Gen9SPPGen90.18.iso.sha2sum

SPP Download Page

The SPP Download page enables downloading through the HPE Support Center and contains SPP specific information, including:

- A "Hot Fixes and Advisory" section listing Hot Fixes and Customer Advisories for the selected SPP.
- A "Documentation" section which contains a variety of SPP documentation, including Release Notes, Component Release Notes, Contents Report, Server Support Guide, and the SPP OS Guide.
- Navigation to the SPP Custom Download service

SPP Custom Download (https://www.hpe.com/servers/spp/custom)

SPP Custom Download provides an easy-to-use interface and facilitates reducing the size of the SPP by allowing filtering/customizing before downloading. Additionally, it offers convenient downloading of the SPP and the SPP plus related Supplements.
The Gen9 post production SPP can be downloaded using HPE passport account, without the need for active warranty or support agreement.
The production SPP and post-production SPP downloads require an active warranty or support agreement covering a relevant product must be linked to the User's HPE Support Centre Profile.

Customizing the SPP download, can be done by:

- Select the appropriate SPP
- Click on the "Create a new bundle" tile (plus sign tile)
- Complete the "Configure Your Bundle" step with the applicable information of your choice and press "Next: Select Filters" button

- Example: To download only Supplements, deselect the SPP and ensure only the desired Supplement is selected.
- Select filters as needed (no selection in any given category means everything in that category will be included)
- Click the "Build" button
- Preview selected components and click "Submit Build" button
- Upon submission the build request is queued and will be processed as soon as possible
- Build completion is indicated on the new tile or through email notification, if selected

Installation

There are two methods for using the Service Pack for ProLiant to update your ProLiant servers: Online mode and Offline mode.

Online mode
1. Local host update - Runs on a Windows or Linux hosted operating system.
   - Interactive mode - Follow the onscreen steps to update firmware components
     To initiate deployment in interactive mode, run the launch_sum.bat (windows) or launch_sum.sh (Linux) script which is found in the root of the .iso image.
   - Automatic mode – Drivers, software and firmware components will be updated without user interaction.
2. Remote Update- Runs on Windows or Linux hosted Operating System for remotely update client Operating system.
   - Interactive mode - Follow the onscreen steps to update firmware components.
     To initiate deployment in interactive mode, run the launch_sum.bat (windows) or launch_sum.sh (Linux) script which is found in the root of the .iso image through client.

Offline mode - Server is booted to the .iso image

- Interactive mode - Follow the onscreen steps to update firmware components.
- Automatic mode - Firmware components will be updated without interaction. Automatic mode will by default run firmware update without any user interaction after sitting 10 seconds at the menu screen when an SPP .iso image is used to boot the server.

Installation Instructions

Follow these steps to install the components found on this SPP:

1. Download the SPP Gen9.0.iso file from the SPP download page.
2. Determine how to access the data on the ISO – bootable USB key, mounted ISO, etc. Use the appropriate tool to obtain the ISO in the desired format.
3. Determine how to initiate deployment to the targets using the SPP – Offline mode or Online mode:
   - a   Online mode - Runs on a Windows® or Linux hosted operating system
   - b   Offline mode - Server boots from the SPP ISO (Bootable ISO only)
     - i   Automatic mode - Firmware components update without interaction
     - ii   Interactive mode - Onscreen instructions guide the user to update firmware components
4. Initiate deployment.

To initiate deployment in **online mode**:

- From the SPP folder:
  - o   Windows: launch_sum.bat
  - o   Linux: ./launch_sum

- For VMware hosts, select the host to update as a remote target. Online firmware update on a Gen9 VMware host requires the HPE Insight Management WBEM providers to be installed on the VMware host.
- Gen9 online updates on ESXi 7.0 and later are not supported.

- To review the EULA, locate README.html which is found in the root of the ISO.

For more information, see the SUM User Guide and HPE ProLiant Best Practices Implementation Guide. https://www.hpe.com/servers/spp/documentation

To initiate deployment in **Offline mode**:

- Boot the server to the SPP using one of the supported methods including mounting the ISO or using a bootable USB key.
- Select either Automatic mode or Interactive mode.
  - o   If Automatic mode is selected, the firmware will be automatically updated on the server without any further interaction.
  - o   If Interactive mode is selected, follow the instructions on the screen.
- Select the Firmware Update option on the screen to start SUM.

Additional Information for using the SPP on Linux Operating Systems

Please refer to the following links for Technical Exception matrices for minimum OS support:

- Red Hat Enterprise Linux - Red Hat Enterprise Linux
- SUSE Linux Enterprise Server - SUSE Linux Enterprise Server

In the SLES15 distribution, the net-tools-deprecated utilities (arp, ifconfig, netstat and route) are not installed by default. Please install these utilities if you are using the SUM RPM. They are available at https://software.opensuse.org/package/net-tools-deprecated.
The SPP contains Linux drivers, agent software and firmware in a single ISO image. Alternatively, the SDR contains software repositories that may be used with software configuration managers (Yum, Zypper or Apt).

- For drivers and agent software, subscribe your system to the "spp" repository
- For firmware, subscribe your system to the "fwpp" repository

Additional Information for using the SPP on VMware Operating Systems

The SPP can deploy drivers and firmware to a Gen 9 system running a supported VMware operating system in an online mode. Drivers are also available at Software Delivery Repository - vibsdepot.

Additional Resources

Hot Fixes

The Hot Fixes and the Customer Advisories for this SPP can be found by selecting the "Hot Fixes & Advisories" tab on the SPP Download page. The Customer Advisory can be reviewed to determine if the Hot Fix applies and determine which component(s) need to be downloaded. Individual Hot Fixes can be downloaded by selecting:

1. The grey + expander to the left of the Hot Fix Advisory to expand the list of associated downloadable component(s).
2. The title of the desired component to reveal its detail and download page.

All applicable Hot Fixes for this SPP are available for download on the SPP Custom Download page through the "SPP + Supplements" selection. To download only Hot Fixes:

- Select the "plus sign"
- Deselect the SPP and ensure only the Hot Fix Supplement Bundle is selected
- Provide name, version, description and format, and then proceed with customization as desired

SPP Supplements

A supplement is an add-on bundle containing firmware, drivers, and/or applications released between SPPs. If the Supplement´s contents include Linux components, the components will also be available on the SDR. The components in the supplement are rolled into the next release of the SPP.

- SPP Supplements can be downloaded from the SPP Download page (https://www.hpe.com/servers/spp/download).
- The Release Notes can be found on the SPP Download page Documentation Tab.

OS Supplements: An OS Supplement is a bundle containing software and/or firmware components. It includes support for a new operating system update but works with the components in the SPP. Supplements allow HPE to deliver support when it is needed so customers do not have to wait on a full SPP´s availability. Support for OS Supplements is included as part of the associated SPP's support period.

Using a PXE Server to Deploy Components from the full SPP ISO over a network

Follow these steps to use a PXE server to deploy components from the full SPP ISO over a network.

⚠️ The files needed to configure the menu system for use with a 'pxe' server can be found in the PXE directory on the full SPP ISO.

Prerequisites

The following is required before proceeding with the configuration:

- The user must have a good working knowledge of PXE and TFTP.
- A network with a DHCP server on it.
- A TFTP server configured on the same network as the DHCP server.
- A network file server hosting the ISO images that can be accessed by a PXE booted system.
- Either PXELINUX (https://syslinux.zytor.com/wiki/index.php/PXELINUX) [For legacy boot mode] or GRUB2 (https://www.gnu.org/software/grub/) [For UEFI and legacy boot mode]

The use of a Linux TFTP server and the TFTP package https://www.kernel.org/pub/software/network/tftp/ is assumed. Other TFTP servers should work similarly.

Setup

Before proceeding with the configuration, ensure that the TFTP server as well as the PXELINUX or GRUB2 configuration are setup and configured properly. ELILO (https://sourceforge.net/projects/elilo/files/) may be used also. GRUB2 is recommended for UEFI boot mode, legacy boot mode, or mixed environments where both legacy and UEFI boot mode support are required.

To set up PXE boot for the SPP:

1. Copy the SPP ISO image to the network file system, and note its location. NFS and Windows® file shares as well as HTTP connections are supported.
2. For this example, the NFS path to the ISO image used is 192.168.0.99/path/to/spp/image/(SPPfilename).iso. Test the network file system to ensure that it is accessible before proceeding.
3. The /pxe directory of the ISO image will need to be accessed, either by burning the ISO image, mounting the ISO image, or extracting it using a third-party tool.
4. Copy all the files from the /pxe directory of the ISO image to the TFTP server so that they are accessible by the TFTP software. See important instructions and information in the /pxe/README.txt file (for legacy boot mode PXELINUX configuration).

Configuring GRUB2

Follow these steps to configure GRUB2:

1. Run the command grub2-mknetdir --net-directory=DIR where DIR is the root of the TFTP server.
2. Configure DHCP using the helpful output of the grub2-mknetdir command above (arch = 00:07 for UEFI boot mode and arch = 00:00 for legacy boot mode).
3. Edit the grub.cfg files on the TFTP server to set the appropriate paths to the kernel vmlinuz image file and the initial ramdisk initrd.img image file which were copied to the TFTP server from the SPP ISO /pxe directory.

Configuring ELILO

Follow these steps to configure ELILO:

1. Add an EFI folder on the TFTP server which contains bootx64.efi, elilomenu.msg, and elilo.conf.
2. Add details in elilo.conf as it is given for configuring pxelinux.cfg (see below).
3. Change the DHCP configuration as given below:

```
if option arch = 00:07 {
        filename "pxelinux/bootx64.efi";
    } else {
        filename "pxelinux.0";
    }
```

Configuring PXELINUX

Follow these steps to configure PXELINUX:

1. Using the isolinux.cfg file from the /system/ directory of the ISO as a guide, copy the labeled targets to the PXELINUX configuration file. The entire file does not need to be included:

label sos

MENU LABEL Automatic Firmware Update Version Gen9.0

kernel vmlinuz

append initrd=initrd.img media=cdrom root=/dev/ram0 splash quiet hp_fibre cdcache showopts TYPE=AUTOMATIC AUTOPOWEROFFONSUCCESS=no AUTOREBOOTONSUCCESS=yes

label vsos

MENU LABEL Interactive Firmware Update Version Gen9.0

kernel vmlinuz

append initrd=initrd.img media=cdrom root=/dev/ram0 splash quiet hp_fibre cdcache showopts TYPE=MANUAL AUTOPOWEROFFONSUCCESS=no

label sos_poweroff

MENU HIDE Automatic & POWEROFF Firmware Update Version Gen9.0

kernel vmlinuz

append initrd=initrd.img media=cdrom root=/dev/ram0 splash quiet hp_fibre cdcache showopts TYPE=AUTOMATIC hp_poweroff

⚠️ The paths to files on the TFTP server are vmlinuz and initrd.img. They must be modified to include any directories or naming conventions that are on the TFTP server.

2. Replace "media=cdrom" with "media=net" on the append line
3. Specify the ISO image path. For the PXE booted server to find the ISO Image, add the ISO Image path to the append line in the PXELINUX configuration file. Add the following arguments:

    iso1=nfs://192.168.0.99/path/to/spp/image/(SPPfilename).iso

    iso1mnt=/mnt/bootdevice

The iso1 parameter helps the PXE booted SPP locate the ISO image. The iso1mnt parameter tells the PXE booted SPP where the iso1 image must be mounted.

The final configuration file must be similar to the following example:

label sos

MENU LABEL Automatic Firmware Update Version Gen9.0

kernel vmlinuz

append initrd=initrd.img media=net root=/dev/ram0 splash quiet hp_fibre showopts TYPE=AUTOMATIC AUTOPOWEROFFONSUCCESS=no AUTOREBOOTONSUCCESS=yes iso1=nfs://192.168.0.99:/path/to/spp/image/(SPPfilename).iso

iso1mnt=/mnt/bootdevice

label vsos

MENU LABEL Interactive Firmware Update Version Gen9.0

kernel vmlinuz

append initrd=initrd.img media=net root=/dev/ram0 splash quiet hp_fibre showopts
TYPE=MANUAL AUTOPOWEROFFONSUCCESS=no iso1=nfs://
192.168.0.99:/path/to/spp/image/(SPPfilename).iso

iso1mnt=/mnt/bootdevice

label sos_poweroff

MENU HIDE Automatic & POWEROFF Firmware Update Version Gen9.0

kernel vmlinuz

append initrd=initrd.img media=net root=/dev/ram0 splash quiet hp_fibre showopts
TYPE=AUTOMATIC hp_poweroff
iso1=nfs://192.168.0.99:/path/to/spp/image/(SPPfilename).iso

iso1mnt=/mnt/bootdevice

Additional ISO images can be added by specifying the additional iso# and iso#mnt arguments,
for example, iso2=/path/to/iso2.iso iso2mnt=/mnt/iso2.

Supported network file system protocols

The following network file system protocols are supported for use with PXE booting:

NFS:

iso1=nfs://192.168.0.99/path/to/spp/image/(SPPfilename).iso

iso*1mnt=/mnt/bootdevice*

NFS volumes are mounted with the following options:

- o -o ro
- o nolock

The mount options can be explicitly set with the iso#opts parameter

iso1opts="rsize=32768,ro,nolock"

Windows® operating systems:

iso1=cifs://192.168.0.99/share/path/to/spp/image/ (SPPfilename).iso

iso1mnt=/mnt/bootdevice

Windows® operating systems with login credentials:

iso1=cifs://user:password@192.168.0.99/share/path/to/spp/image/(SPPfilename).iso
iso1mnt=/mnt/bootdevice

HTTP:

iso1=http://192.168.0.99/path/to/spp/image/(SPPfilename).iso

iso1mnt=/mnt/bootdevice

Once these steps have been completed, the SPP components are ready to be deployed using the
PXE boot functionality.

Common Abbreviations

Abbreviations	Name
AMS	Agentless Management Service
CAN	Converged Network Adapter
CNU	Converged Network Utility
HBA	Host Bus Adapter
iLO	Integrated Lights-Out
MSB	Maintenance Supplement Bundle
OA	Onboard Administrator
RHEL	Red Hat Enterprise Linux
SIM	Systems Insight Manager
SLES	SUSE Linux Enterprise Server
SPP	Service Pack for ProLiant
SUT	Smart Update Tool
SUM	Smart Update Manager
UEFI	Unified Extensible Firmware Interface