SPP 2018.03.0
Release Notes

Legal and notice information

Document History:

Released	Description
March 2018	Initial Version

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Overview

The Service Pack for ProLiant (SPP) is a systems software and firmware solution delivered as a bootable ISO. This solution uses Smart Update Manager (SUM) as the deployment tool and is tested on supported HPE servers and infrastructure, including ProLiant, BladeSystem, Synergy, and Apollo. Synergy is supported by the Synergy Software Release Set, tailored for Synergy customers from the SPP. Before installing this SPP on Synergy, please review the information at www.hpe.com/downloads/synergy.

Summary of Changes

Important Notes

SPP 2018.03.0 includes a majority of HPE Gen10 and Gen9 server firmware associated with the Microprocessor Vulnerability. For more details on the vulnerability, see https://www.hpe.com/us/en/services/security-vulnerability.html and http://h22208.www2.hpe.com/eginfolib/securityalerts/SCAM/Side_Channel_Analysis_Method.html.

HPE OneView Customers - Please review HPE OneView - OneView Reports "The Firmware Bundle Information Is Unavailable" When Uploading the Service Pack for ProLiant 2017.07.1 (or Later) prior to using the SPP. Before installing this SPP on Synergy, please review the information at www.hpe.com/downloads/synergy.

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".

Release Summary
This SPP 2018.03.0 release supersedes the SPP 2017.10.1.

Enhancements

The 2018.03.0 SPP Production release contains components supporting the ProLiant, Synergy and Apollo Gen9 and Gen10 server platforms and options. SPP Release Notes, Server Support Guide, OS Support Guide, as well as other release documentation can be found on Documentation tab.

Smart Update Manager (SUM) 8.2.0 has added new security features for the Gen10 server family. As a result, each Gen10 component file will have a corresponding file with the same name

and a ".compsig" extension. Gen9 specific component files may not have a matching ".compsig" file. These components are safe to install and are signed; they simply lack the corresponding .compsig files.

Added Firmware/Software

- Windows Software & Drivers:
  - iLO 5 Automatic Server Recovery Driver for Windows Server 2012 R2
  - iLO 5 Automatic Server Recovery Driver for Windows Server 2016
  - HPE Intel v40e Driver for Windows Server 2012
  - HPE Intel v40e Driver for Windows Server 2012 R2
  - HPE Intel v40e Driver for Windows Server 2016
  - HPE MegaRAID Storage Administrator (HPE MRSA) for Windows 64-bit
  - HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2012 R2 edition.
  - HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2016 edition.
  - HPE MegaRAID Storage Administrator StorCLI for Windows 64-bit
  - HPE MegaRAID Storage Administrator (HPE MRSA) for Windows 64-bit
- Linux Software & Drivers:
  - HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 4 (x86_64)
  - HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP3 (AMD64/EM64T)
  - HPE Smart Array P824i-p MR controller Driver for 64-bit Red Hat Enterprise Linux 6
  - HPE Smart Array P824i-p MR controller Driver for 64-bit Red Hat Enterprise Linux 7
  - HPE Smart Array P824i-p MR controller Driver for 64-bit SUSE LINUX Enterprise Server 11
  - HPE Smart Array P824i-p MR controller Driver for 64-bit SUSE LINUX Enterprise Server 12
  - HPE MegaRAID Storage Administrator (HPE MRSA) for Linux 64-bit
  - HPE MegaRAID Storage Administrator StorCLI for Linux 64-bit
- VMware Software & Drivers:
  - HPE Broadcom NetXtreme-E Driver for VMware vSphere 6.0
  - HPE Broadcom NetXtreme-E Driver for VMware vSphere 6.5
  - HPE Broadcom NetXtreme-E RoCE Driver for VMware vSphere 6.5
  - HPE Intel i40en Driver for VMware vSphere 6.5
  - HPE Intel igbn Driver for VMware vSphere 6.5
  - HPE Intel ixgben Driver for VMware vSphere 6.5
  - HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.5
  - HPE Utilities Bundle Smart Component for ESXi 6.0
  - HPE Utilities Bundle Smart Component for ESXi 6.5
  - Management Bundle Smart Component for ESXi 6.0
  - Management Bundle Smart Component for ESXi 6.5
- Firmware:
  - Online ROM Flash Component - HPE Smart Array P824i-p MR Gen10
  - Online Firmware Upgrade Utility for HPE Intel OPA adapters
  - Supplemental Update / Online ROM Flash Component - MB4000GEFNA and MB6000GEFNB Drives
  - Supplemental Update / Online ROM Flash Component - EG0300JEHLV, EG0600JEHMA, EG0900JEHMB, and EG1200JEHMC Drives
  - Supplemental Update / Online ROM Flash Component - EG1800JEHMD Drive

- o Supplemental Update / Online ROM Flash Component - EH0300JDYTH, EH0450JDYTK, and EH0600JDYTL Drives
- o Supplemental Update / Online ROM Flash Component - EG1800JFHMH Drives

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

Driver Update Disks (DUD) for Linux

DUDs for the following controllers for all Red Hat and SUSE supported operating systems can be found in the 'DUD' directory at the root of the ISO.

- HPE ProLiant Smart Array Controller
- HPE Smart Array P824i-p MR Controller
- HPE ProLiant Gen10 Smart Array Controller (64-bit)

Supported Operating Systems

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

- Microsoft Windows Sever 2016- All Editions
- Microsoft Windows Server 2012 R2 - All Editions
- Microsoft Windows Server 2012 - All Editions
- Microsoft Windows Server 2012 Essentials
- Red Hat Enterprise Linux 7.4, 7.3
- Red Hat Enterprise Linux 6.9, 6.8 (x86-64)
- SUSE Linux Enterprise Server 12 SP3, 12 SP2
- SUSE Linux Enterprise Server 11 SP4, SP3 (AMD64/EM64T)
- VMware vSphere 6.5 U1, 6.5
- VMware vSphere 6.0 U3, 6.0 U2

For more information on HPE Operating Systems and Virtualization Software Support for ProLiant Servers, please visit our OS Support Site at: https://www.hpe.com/info/ossupport

SPP Support for Client Operating System on HPE ProLiant WS460c Graphics Server and Synergy SY480 Compute Module

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:

Note:

The following components will be detected for install/update by SPP online mode. These utilities are administration tools intended for server operating systems and may not be appropriate for client operating systems.

- o HPE ProLiant Integrated Management Log Viewer (Gen 9 only)
- o HPE Lights-Out Online Configuration Utility
- o HPE Smart Storage Administrator (HPE SSA) for Windows 64-bit
- o HPE ProLiant Smart Array SAS/SATA Event Notification Service (Gen 9 only)

The following components may be detected by SPP online mode for installation/update. These utilities have not been tested on HPE ProLiant WS460c Graphics Server Blade or Synergy 480 Compute Modules with Client and are not recommended. The stability of the system will not be affected if these utilities are inadvertently installed, however, de-selecting these components during the SPP component install process is recommended.

- o HPE Insight Diagnostics Online Edition for Windows
- o HPE Insight Management WBEM Providers

Microsoft Windows Client OS 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 ATI or Matrox GPU	NVIDIA Quadro K3100 MXM	NVIDIA Quadro K6000 K5000	NVIDIA Quadro M3000SE MXM	NVIDIA Quadro M6000 M5000	NVIDIA Tesla M6 MXM	NVIDIA Tesla P6 MXM	NVIDIA Quadro P6000	NVIDIA Tesla M10 M60 K1	AMD FirePro S4000X MXM	AMD FirePro S7100X MXM
WS460c Gen9	NO	7, 8.1[1]	7, 8.1	10[1]	7, 10[2]	10[1]	NO[4]	7, 10[2]	NO[4]	7[1]	7, 10[1]
Synergy 480 Gen10	NO	NO	NO	10[1]	NO	10[1]	NO[4]	10[1,2]	NO[4]	NO	10[1]
Synergy 480 Gen9	NO	NO	NO	10[1]	10[2] (M5000 Only)	10[1]	NO[4]	10[1,2]	NO[4]	NO	10[1]
WS460c Gen8	NO	7	7	NO	NO	NO	NO[4]	NO	NO[4]	7[1]	NO

[1] Only supported in the single wide configuration with GPU as Mezzanine option or as single GPU installed in graphics expansion version of product. Not supported in HPE MultiGPU configurations.

[2] Requires the HPE Graphics Expansion to support full size cards. Only tested and support with single card.

[3] NVIDIA GRID K1/K2 and Tesla M60 and P6 are supported in certain configurations of WS460 Gen9 and Synergy 480 Gen9/10 but are not supported for bare metal client operating systems, only in virtualized environments.

IMPORTANT NOTE: End of Windows 7 support on HPE WS460c

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 2017.04.0 SPP was the last production SPP to contain components for:

- BL460c and WS460c G7 and Gen8 server platforms.
- Support Windows 7 and Server 2008r2.

The HPE ProLiant WS460c Gen9 operating system support is impacted in follow ways:

- HPE SPP support for Windows 7 is deprecated with the last supported version being HPE SPP 2017.04.0 with some supplemental updates on HPE SPP Gen8.1
- HPE SPP Gen8.1 was releases after HPE SPP 2017.04.0 and is last SPP to have updates for WS460c Gen8 as well as WS460c Gen9 (Windows 7 only)
- A new custom HPE SPP is being created for the specific configuration of HPE WS460c with Windows. This is being provided as a customer convenience and can be found at support webpage for WS460c at following address.

  SPP Name - Service Pack for ProLiant (SPP) - Custom Post-Production HPE WS460c Gen9 with Microsoft Windows 7

  Location - https://support.hpe.com/hpesc/public/home/driverHome?sp4ts.oid=7835029

- Future SPP's will no longer have Windows 7 support.
- Windows 7 is the only operating systems impacted by this change, support for Windows 10 will continue on in future SPP releases.

Prerequisites

Component Prerequisites
Some components have prerequisites. Check the individual components for their prerequisites.

SUM Prerequisites
The most current prerequisites for SUM can be found at the SUM documentation page https://www.hpe.com/servers/hpsum/documentation.

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.

Rewrite of FCoE/FC Driver Kit for HPE QLogic CNAs fails with "update returned an error" due to product name change.
Initial install will work successfully.

Offline update of HPE B140i in legacy BIOS mode is not supported.
Configure the Boot Mode to UEFI Mode if using HPE SW RAID**.**

Drivers and/or enablement kits must be installed prior to detecting and updating some hardware and firmware - SUM may need to be run twice for all firmware components to be presented for an installation.

Drivers and/or enablement kits must be installed prior to detecting and updating some hardware and firmware. There are several scenarios when SUM may need to be run twice for all firmware components to be presented for installation. This is due to a requirement that drivers are needed in order for SUM to discover some hardware and thus the needed firmware. After the drivers are installed for the first time and the system rebooted, SUM needs to be run again for all of the firmware components to be presented for installation. 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.
- 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 2017.07.1 is not supported and will fail to update. (ask about iLO4 or iLO5-which version)
- 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.
- The Power Management Controller, the Advanced Power Capping Microcontroller Firmware for HPE ProLiant BL/DL/MLGen9 Servers, and the Smart Array H240ar, H240, H241, H244br, P244br, P246br, P440ar, P440, P441, P741m, P840, and P841 firmware also require the iLO Channel Interface Driver for firmware 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:

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

Tape components not listed on Gen10 server when installing from the iLO repository.

When running from this SPP on Gen10 servers, tape components will not show up when using the iLO. Components can be installed using SUM.

HPE Broadcom NetXtreme-E RoCE Kernel Driver (bnxt_re) Does Not Load on SUSE Linux Enterprise Server 11 SP4 and has been removed from this SPP. It is available on HPE Support Center for download. Any driver installed after HPE Broadcom NetXtreme-E RoCE Kernel Driver for SUSE Linux Enterprise Server 11 SP4 (bnxt_re) fails to load during OS boot.

On any HPE ProLiant Gen10 server or HPE Synergy Gen10 compute module with any network adapter listed in the Scope section below, configured for RoCE the HPEBroadcom NetXtreme-E RoCE Kernel Driver (bnxt_re) versions 20.6.1.6 and 20.6.3.1 does not load either manually or automatically by modprobe command on SUSE Linux Enterprise Server 11 SP4. This is targeted to be resolved in a future version of the bnxt_re driver.

As a workaround, perform either of the following:

To allow loading of the bnxt_re driver set 'allow_unsupported_modules 1' in /etc/modprobe.d/unsupported-modules.

OR

Load the driver using modprobe with option --allow- unsupported. Note: The OpenFabrics Enterprise Distribution, version 3.18-2, must be installed Otherwise the bnxt_re driver fails to load with error unknown symbols. The OFED package is available at following URL: http://downloads.openfabrics.org/downloads/OFED/release_notes/OFED_3.18-2_release_notes Note: The link above will take you outside the HPE website. HPE is not responsible for content outside of the HPE website.

Scope:
HPE Ethernet 10Gb 2-port 535FLR-T Adapter
HPE Ethernet 10Gb 2-port 535T Adapter
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter

Emulex and QLogic HBA Firmware is flashed in online mode using Service Pack for ProLiant. Please see the Customer Notice link for details.

On Gen10 servers with S100i SW RAID enabled, while in offline interactive mode with SPP, SATA HDD firmware revisions will not be reviewable or upgradeable, unless logical drive was created with offline Smart Storage Administrator (SSA).

Management for Gen10 Linux platforms: For Linux distributions, the hp-ams, hp-health, hp-snmp-agents and hp-smh-templates used on Gen9 platforms have been replaced in Gen10 with the HPE Agentless Management Service (Daemon) (AMSD). Supported Linux distributions on Gen10 platforms should install only AMSD for full management capabilities.

Deployment fails through Absaroka on 2nd launch with popup ilorest.exe has stopped working. On launching launch_sum.exe in Win2016 STD on DL580 Gen10 server through Absaroka, deployment error is seen with popup "ilorest.exe has stopped working". It is also observed that Component state shows as "Exception" in Installation Queue with Result as. "The update

operation failed because the component repository is unavailable" [PFA: exception.jpg]. And iLO repository contains the components in locked state.

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:

```
870a7ba9bbcbcf061b1cbeda1280dece336c5477ea24a5bbd8b2199eec75bd5f     filename.iso
bb6e5c7b2bc422598b8217efd35948068eb6860d2cf7b3cdeeb84d8bd216ccea     filename.iso.md5sum
```

SPP Download Page (https://www.hpe.com/servers/spp/download)
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 is HPE's preferred option for downloading both Production and Post-Production SPPs.

In addition to providing an easy-to-use interface, SPP Custom Download facilitates reducing the size of the SPP by allowing filtering/customizing before downloading.

SPP Custom Download offers "Base" and "Full" SPP downloads:
- Base SPP–published in conjunction with and has the same content as the Production.
- Full SPP – only published when one or more Hot Fixes or OS Supplements are released. The Full SPP ISO is made up of the Base SPP along with Hot Fixes or OS Supplements that released after the SPP (Full SPP = Base SPP + Hot Fix + OS Supplements)

Customizing Base or Full SPPs, can be done by:
- Selecting the tile containing only a "plus sign", then make the desired selections (Please Note: Choosing item(s) to filter removes the unchosen items accordingly and therefore, reduces the number of files in the output) to create a customized output.
- Selecting "view details" on either the Base or Full SPP tile, select "clone", then make desired selections** to create a customized output.

Example: to download only Hot Fixes, select "View Details" and then "Clone" on the Full SPP tile.
For Step 1, 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:

Create Download

Step 1: Configure Your Bundle

Fields marked with * are mandatory entries.

Select base packages*	☐ Service Pack for ProLiant 2017.10.1
	☑ Hot Fix Supplement Bundle 2017.10.1
Bundle Name*	[Cloned] Full SPP
Version*	2017.10.1 A
Description*	Full SPP - no filters applied. Includes: Service Pack for ProLiant 2017.10.1 and Hot Fix Supplement Bundle 2017.10.1
Bundle Format	○ ZIP Package ○ ISO ◉ Bootable ISO (SUM included)

** Choosing item(s) to filter removes the unchosen items accordingly and therefore, reduces the
number of files in the output

Installation
There are two methods for using the Service Pack for ProLiant to update your ProLiant servers:

- Online mode - Runs on a Windows or Linux hosted operating system
- Offline mode - Server is booted to the ISO

  - Automatic mode - Firmware components will be updated without interaction
  - 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

Automatic mode will by default run firmware update without any user interaction after sitting 30
seconds at the menu screen when an SPP .iso image is used to boot the server.

Booting the SPP from iLO virtual media is only supported in Automatic Firmware Update mode.
Users attempting this in any other mode may experience hangs from connection timeouts, difficulties
updating iLO firmware, and mouse syncing issues.

Note: If you install software from the SPP and then install a Microsoft Windows operating system Service Pack or other operating system updates, HPE recommends reinstalling the software from the SPP.

Installation Instructions

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

1. Download the SPP 2018.03.0.iso file from the SPP download page
   https://www.hpe.com/servers/spp/download
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 VMware host requires the HPE Insight Management WBEM providers to be installed on the VMware host.
- 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

The SPP contains Linux drivers, agent software and firmware in a single ISO image. Alternatively, downloads.linux.hpe.com 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:
http://downloads.linux.hpe.com/SDR/project/spp/

For firmware, subscribe your system to the "fwpp" repository:
http://downloads.linux.hpe.com/SDR/project/fwpp/

Additional Information for using the SPP on VMware Operating Systems

The SPP can deploy drivers and firmware to a system running a supported VMware operating system in an online mode. Drivers are also available at Software Delivery Repository - vibsdepot. For a consolidated recipe of firmware and driver support, please review the VMware FW and Software Recipe document.

NOTE: The SPP does not support online VMware Gen10 firmware and drivers since they cannot be deployed from the SPP. The SPP will support VMware Gen10 platforms with offline firmware updates only.

The SPP will carry vSphere 6.5 and vSphere 6.0 U3 drivers and firmware smart components for Gen9 which can be deployed by SUM. The SPP will carry vSphere 6.5, vSphere 6.5 (U1) and vSphere 6.0 (U2/U3).

To determine support for these operating systems, see the HPE ProLiant Server VMware Support Matrix at: HPE Servers Support and Certification Matrices

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, https://www.hpe.com/servers/spp/download. 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 "Full SPP" tile. Either all Hot Fixes or a customized subset thereof can be downloaded by:

1. Hovering over the "Full SPP" tile and selecting "View Details":
2. For the "Full SPP", which consists of the Base SPP and all Hot Fixes, select "Download"

3. For a customized download, select "clone" to create the desired download
    a. In "Step 1", ensure only the Hot Fix Supplement Bundle is selected
    b. Fill in the requested information and select "Next: Select Filters"
    c. Further customize by selecting filters and/or select "Build"
    d. Follow the remaining prompts to create and download a customized set of Hot Fixes

SPP Supplements

A supplement is an add-on bundle that may contain firmware, drivers, and/or applications which is 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 (http://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 http://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

(http://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 and 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).
5. 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 2018.03.0

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 2018.03.0

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 2018.03.0

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

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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 2018.03.0

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 2018.03.0

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*

> *iso1mnt=/mnt/bootdevice*

NFS volumes are mounted with the following options:

- *-o ro*
- *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
CNA	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
SUM	Smart Update Manager