HP OneView 2.0 Installation Guide

Abstract

This document provides instructions for installing new HP OneView appliances and for updating HP OneView appliances.

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Acknowledgments

Warranty

HP will replace defective delivery media for a period of 90 days from the date of purchase.

Contents

1 Preparing for installation

This chapter describes the VM host requirements for installing HP OneView on a new appliance.

For other HP OneView 2.0 documentation, including release notes and the user guide, see http://www.hp.com/go/oneview/docs.

1.1 Appliance VM and host requirements

HP OneView is a virtual appliance running on the following supported hypervisor hosts.

Table 1 Supported hypervisors and versions

Hypervisor	Version
VMware vSphere ESXi	• 5.0 • 5.0 update 1 • 5.0 update 2 • 5.0 update 3 • 5.1 • 5.1 update 1 • 5.1 update 2 • 5.1 update 3 • 5.5 • 5.5 update 1 • 5.5 update 2 • 5.5 update 3 • 6.0 • 6.0 update 1
Microsoft Hyper-V	Hyper-V is supported on the following Microsoft Windows platforms with the Hyper-V role installed: • Windows Server 2012 • Windows Server 2012 R2 • Windows Hyper-V Server 2012 • Windows Hyper-V Server 2012 R2

The appliance virtual machine (VM) must run on a VM host with ProLiant G7–class CPUs or later. The appliance VM requires the following:

- Two 2 GHz or greater virtual CPUs.
- 10 GB of memory dedicated to the appliance.
- 170 GB of thick-provisioned disk space.
- A connection to the management LAN. HP recommends that you have separate networks for management and data.

In addition, the clock on the VM host must be set to the correct time. If NTP (Network Time Protocol) is not used to synchronize the time on the VM host, HP recommends configuring the appliance to use NTP directly.

An HP OneView VM host must have the following requirements:

- At least two ProLiant Gen 7-class CPUs of at least 2.0 GHz.
- Ensure the hypervisor host meets the minimum system requirements:

  Minimum system requirements for installing ESXi/ESX (1003661), VMware Knowledge Base

  Review Prerequisites for Installation (Hyper-V Server 2012, Hyper-V Server 2012 R2), Microsoft TechNet

  Install Hyper-V and Configure a Virtual Machine (Windows Server 2012), Microsoft Windows Server
- For power management options under BIOS settings:

  Set HP Power Regulator to HP Static High Performance Mode.

  Set Power Profile to Maximum Performance.

1.2 Where to deploy the virtual machine

You can deploy HP OneView on any Proliant hardware that meets the requirements in "Appliance VM and host requirements" (page 5). Specific restrictions apply to hardware that is managed or monitored by HP OneView.

You can deploy HP OneView to a hypervisor in the following hardware environments:

- Rack-mount ProLiant DL
- BladeSystem

Restrictions apply to both environments if you want to use HP OneView to manage the hypervisor host on which it is executing.

IMPORTANT: HP recommends that you deploy the HP OneView virtual appliance on a hypervisor environment that is dedicated to management functions and separate from the production hypervisor environment.

1.2.1 Deploying in a DL-based hypervisor environment

Deploying HP OneView using a DL-based hypervisor configuration environment is typically the simplest choice. Deploying to a hypervisor cluster configuration for high availability (HA) is the best practice.

In a non-high availability (HA) configuration with a single DL server hypervisor host, adding the DL server hypervisor host into HP OneView as managed server hardware is not supported. Add the host in monitored mode. In monitored mode, do not power off the hypervisor host from HP OneView, because doing so would inadvertently power off the virtual appliance.

In an HA configuration, where the HP OneView virtual appliance can be migrated between hosts, the above restriction still applies but can be worked around using VM migration. Note that this approach is error prone. The virtual appliance cannot detect the hypervisor host on which it is running and therefore cannot warn the user regarding an unsupported operation.

The best practice is to use HP OneView to monitor, not manage, the DL hypervisor hosts in the cluster. In monitored mode, before powering off a host using HP OneView, make sure that the appliance is not running on that host. If it is, the HP OneView appliance needs to be migrated to a different cluster member.

If the DL hypervisor hosts are added into HP OneView in managed mode, the following additional restrictions apply:

- You cannot apply or edit the server profile for the hypervisor host on which the HP OneView virtual appliance is currently executing.
- You must migrate the appliance to a different host in the cluster before applying the server profile.

1.2.2 Deploying in a BladeSystem hypervisor environment

A BladeSystem configuration has the same restrictions as DL servers above and adds the additional considerations of server profile connection management for managed enclosures.

For BladeSystems, the server profile encapsulates all the network connectivity for the blade server and works in conjunction with the interconnect modules in the enclosure.

For a single enclosure, non-HA hypervisor BladeSystem environment, when deploying HP OneView on ESXi hosts in the enclosure, the best practice is to monitor but not manage the enclosure. The same restrictions above still apply. Do not power off the VM host where the HP OneView appliance is currently executing.

For a single enclosure or multi-enclosure environment where the enclosures are added to HP OneView in managed mode, the enclosure must include non-VC interconnect modules. The storage and network connectivity for the hypervisor hosts supporting the HP OneView virtual appliance must be restricted to using these non-VC interconnect modules. When performing server profile operations and power operations, refrains from having HP OneView execute on the specific host where those operations are being performed.

1.3 Planning for high availability

To use HP OneView in an HA (high availability) configuration, see the hypervisor documentation for specific requirements.

VMware vSphere ESXi	http://www.vmware.com/products/datacenter-virtualization/vsphere/high-availability.html
Microsoft Hyper-V	http://technet.microsoft.com/en-us/library/cc753787.aspx

2 Installing HP OneView on a VM host

HP OneView is delivered in the following formats:

Hypervisor host	File format
VMware vSphere Hypervisor	Open Virtual Appliance (OVA) file containing an Open Virtual Format (OVF) package. To install the OVA file, you need: 1. The VMware vSphere Client (a Microsoft Windows application) or the vSphere Web Client installed on the host system. 2. Access to a VMware vCenter server to install HP OneView. The vSphere Web Client requires vCenter 5.1 Update 2 or higher to download the OVA file.
Microsoft Hyper-V hypervisor	Image zip file. To install HP OneView with this .zip file, the Hyper-V role must be installed on the Windows Server.

2.1 Validating the authenticity and integrity of the .ova download

When you download the HP OneView appliance file from the HP Software Depot website at https://www.software.hp.com, you can trust that the virtual appliance image is from HP because HTTPS connection uses trusted security certificates.

You can additionally use the freely available GPG tools to validate the authenticity and integrity of the file. For example:

```
gpg --verify HP_OneView_<version>.ova.sig HP_OneView_<version>.ova
```

NOTE: This digital signature verification step is not required for upgrade installations. The upgrade file (the `*.bin` file) is already digitally signed, and the digital signature is automatically validated during the upgrade procedure.

See the following web page for detailed verification instructions: http://www.hp.com/go/codeverify

2.2 Installing the HP OneView virtual appliance on a VMware vSphere hypervisor host

Follow these instructions to install HP OneView on a VMware vSphere hypervisor host.

2.2.1 Downloading the OVA file

If you do not have the OVA file on physical media, download the OVA file from the HP Software Depot.

The OVA file size is approximately 3.5 GB. Download time varies depending on your network connection. HP recommends using a download manager that supports resuming downloads, such as the one provided by the HP Software Depot.

1. Open a browser on a system running the hypervisor client.
2. Go to the HP Software Depot at http://software.hp.com and select **HP OneView**.

   NOTE: If you have an account with HP Software Depot, you must log in before downloading files. If you have not registered, you will be prompted to do so.

3. Download the OVA file to a local directory.

   The local directory must be located on the system running the vSphere client or must be accessible through a web address.

NOTE: The OVA file is digitally signed. You have the option to validate the authenticity and integrity of the download by following the instructions at http://www.hp.com/go/codeverify. See "Validating the authenticity and integrity of the .ova download" (page 8) for more information.

2.2.2 Deploying the OVA file

1. Start the vSphere client and log into vCenter.
2. From the menu, select **File→Deploy OVF Template** to launch the **Deploy OVF Template** wizard.
   a. On the **Source** screen, specify one of the following:
      - The path to the OVA file
      - Web address (URL) of the OVA file, if you made it accessible via a web server
   b. Verify the information on the **OVF Template Details** screen.
   c. On the **Name and Location** screen, enter a name and location for the deployed template that is unique within the inventory folder, and then select the inventory location.
   d. On the **Host / Cluster** screen, select the host or cluster on which to run the deployed template.
   e. On the **Storage** screen, select a storage destination for the VM files.
   f. On the **Disk Format** screen, select the format for storing the virtual disks.

   IMPORTANT: HP highly recommends that you select **Thick Provisioning** because if you select thin provisioning, the appliance VM is suspended if the VM host runs out of disk space. If this occurs during actions such as upgrading firmware, applying a profile, or performing a backup of appliance updates, it can result in failures that are difficult to diagnose and might require a service call to resolve..

   HP also ecommends that you select **Eager Zeroed**.

   g. On the **Network Mapping** screen, select a network that has connectivity to your management LAN.
   h. On the **Ready to Complete** screen, verify your selections. Use the **Back** button to make changes, if necessary. Click **Finish** to complete the template and start deployment.

   When the deployment is complete, the VM is available for use.

   NOTE: If you are planning on using the hypervisor host to set the time, you should configure the host with NTP. Or you can configure the appliance to reference NTP servers.

3. On the **Summary** tab, click **Power on the virtual machine**. Click the **Console** tab to watch the appliance start.

   It takes approximately 10 minutes, depending on your hardware, from the time the appliance is powered on until it is ready to accept browser connections. During this time, the vSphere virtual console displays the message `Please wait while the appliance starts.` When startup is complete, the virtual console displays the **HP OneView EULA** screen.
4. See "Connecting to the appliance in DHCP and non-DHCP environments" (page 11) to connect to the appliance.

2.3 Installing the HP OneView virtual appliance on a Hyper-V host

Follow these instructions to install the HP OneView virtual appliance on a Microsoft Hyper-V host.

2.3.1 Downloading the zip file

If you do not have the Hyper-V zip file on physical media, download the zip file from the HP Software Depot.

The zip file is approximately 3.5 GB. Download time varies depending on your network connection. HP recommends using a download manager that supports resuming downloads, such as the one provided by the HP Software Depot.

1. Open a browser on a system running the hypervisor client.
2. Go to the HP Software Depot at http://software.hp.com and select HP OneView.

   NOTE: If you have an account with HP Software Depot, you must log in before downloading files. If you have not registered, you will be prompted to do so.

3. Download the zip file to a local directory.

NOTE: The zip file is digitally signed. You have the option to validate the authenticity and integrity by following the instructions at http://www.hp.com/go/codeverify.

2.3.2 Deploying the Hyper-V zip file

1. Extract the Hyper-V image zip file (`HPOneView_<version number>.zip`) to a location accessible from the Hyper-V host.
2. Open the Hyper-V Manager. Right-click on the Hyper-V host and select **Import Virtual Machines**.
3. In the Import Virtual Machine wizard, browse to where you unpacked the Hyper-V image zip file and click through until you see the directories called Snapshots, Virtual Hard Disks and Virtual Machines. Select the parent directory of those three directories.
4. Continue through the steps in the wizard to import the appliance virtual machine.

IMPORTANT: Be sure to select **Copy the virtual machine (create a new unique ID)** option.

5. Verify that the VM is configured to meet the host requirements (see "Appliance VM and host requirements" (page 5)), set up thick provisioning, and set up network adapters on your VM host.

   To edit settings on the VM, right-click on the appliance VM and select **Settings**.

   - **For appliance VM and host requirements:** See "Appliance VM and host requirements" (page 5).
   - **For thick provisioning:** To use a fixed size disk in Hyper-V after the VM is imported, select **Settings** and select the virtual hard disk. Edit the current disk, select **Convert**, and then select **Fixed size**. Change the size of the VM hard disk to the new fixed size disk you just created.

     IMPORTANT: HP recommends using a fixed size disk, otherwise, if your VM host disk runs out of space, the appliance will likely encounter errors and terminate unexpectedly and might not recover. If this happens, you will need to install a new appliance and restore it from a backup file.

   - **For network adapters:** Use the hypervisor UI to set the VM network adapters. The appliance supports one NIC on the management LAN.

     You will normally connect the network adapter to one or more virtual switches, depending on your networking configuration.

     IMPORTANT: Be sure to uncheck the VLAN ID box if you are not using VLANs and VLAN identifiers.

6. Before powering on your virtual appliance, verify the date and time are set properly on your VM host system. Maintain an accurate time on the VM host system, using tools such as NTP,

because the VM guest will synchronize with that time. If your VM host does not have the time set properly, the following message can be displayed when you boot the appliance:

```
The time and date on your hypervisor appears to be incorrect. Please power off your appliance, correct the time and date on your hypervisor, and power on your appliance.
```

If you encounter this problem, follow the instructions in the message.

7. Power on the virtual machine for the first time.

   In the Hyper-V Manager, right-click on the appliance VM and power it on.

8. On the console you will see the appliance license and support screens. You are now ready to log into your appliance for the first time.

2.4 Connecting to the appliance in DHCP and non-DHCP environments

Connect to the appliance for the first time using one of the following methods, depending on how your host environment is configured:

Environment	Description	
With DHCP	**VMware vSphere**	Use the **Summary** tab on the vSphere virtual console to determine the initial IP address for the appliance. Then, connect to the appliance using the appliance IP address in a browser running on your local computer.
	Microsoft Hyper-V	If you have DHCP and Dynamic DNS available on the management LAN, the appliance registers a DNS name at startup with the format: `ci-<MAC address>`. You can determine the Ethernet MAC address of the appliance using the **Network** tab of Hyper-V Manager. Use the name in the browser's address bar. For example: `https://ci-<MAC address>.example.com` If you do not have dynamic DNS, use the virtual console to connect to the appliance. Select **Connect** in Hyper-V Manager to connect to the appliance console to perform the first time setup steps.
Without DHCP	**VMware vSphere**	Use the vSphere virtual console to connect to the appliance using the browser running on the virtual console. Press **Ctrl+Alt** to exit from the virtual console.
	Microsoft Hyper-V	Select **Connect** in Hyper-V Manager to connect to the appliance console to perform the first time setup steps.

Connect to the appliance using the assigned host name or IP address.

NOTE: If there are networking issues and you cannot connect to the appliance, use the hypervisor virtual console to log on to the appliance to verify or change network settings.

2.5 Completing appliance startup tasks

Complete these steps to start the appliance for the first time.

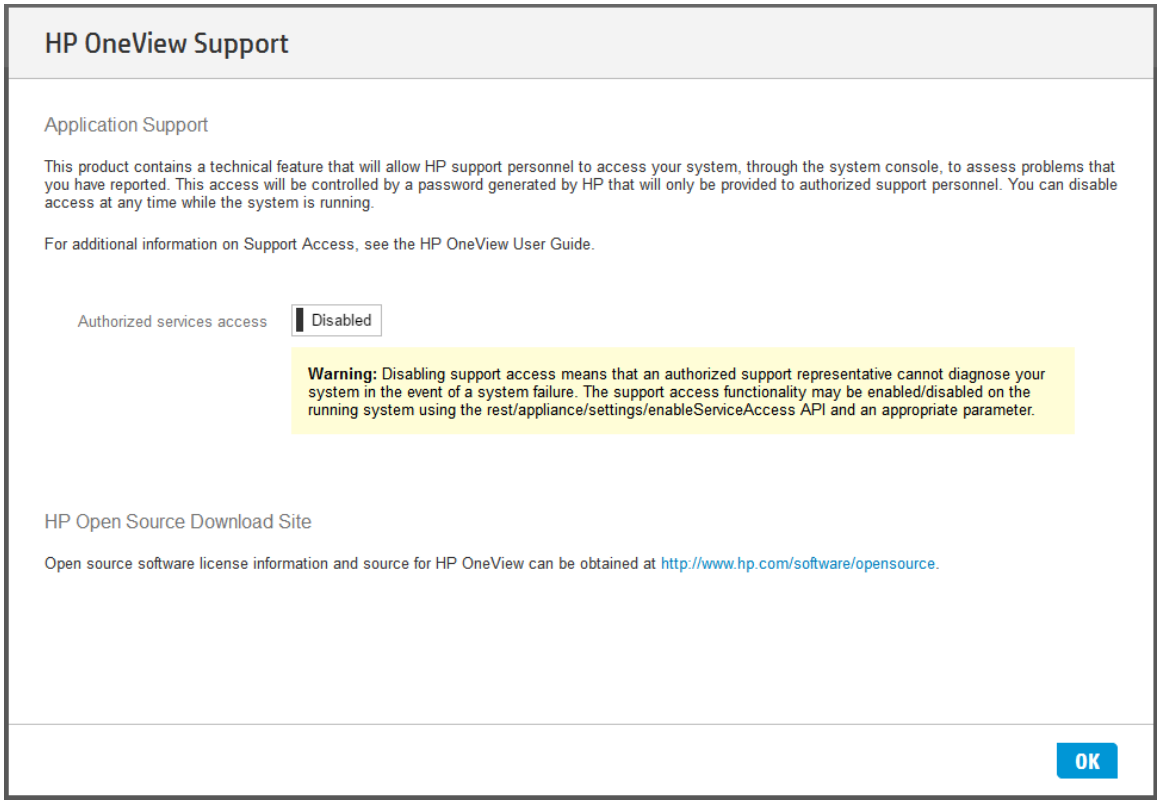
1. If you have not already done so, connect to the appliance using one of the methods described in "Connecting to the appliance in DHCP and non-DHCP environments" (page 11).

   NOTE: You can also use REST APIs to complete the remaining installation steps. For more information, see the Quick Start for initial configuration in the REST API scripting help.

2. On the **HP OneView EULA** screen, review the end user license agreement, and click **Agree** to continue.

   NOTE: If you click **Disagree**, the installation process is cancelled.

3. On the **HP OneView Support** screen, decide if you want to **Enable** or **Disable** authorized services access to your appliance. See the *HP OneView User Guide* for information about the implications of disabling services access to your appliance.



4. Click **OK** to continue.

2.6 Enable or disable authorized services access

When you first start up the appliance, you can choose to enable or disable access by on-site authorized support representatives. By default, on-site authorized support representatives are allowed to access your system through the appliance console and diagnose issues that you have reported.

Support access is a root-level shell, which enables the on-site authorized support representative to debug any problems on the appliance and obtain a one-time password using a challenge/response mechanism similar to the one for a password reset.

Any time after the initial configuration of the appliance, an Infrastructure administrator can enable or disable services access through the UI with the following procedure:

Prerequisites

- Minimum required privileges: Infrastructure administrator

Enabling or disabling authorized services access

1. From the main menu, select **Settings**.
2. Click the **Edit** icon in the **Security** panel.

   The **Edit Security** window opens.
3. Select the appropriate setting for **Service console access**:
   - **Disabled** to prevent access to the console.
   - **Enabled** to allow access to the console.
4. Click **OK**.

You can also use an `appliance/settings` REST API to enable or disable services access.

NOTE: HP recommends that you enable access. Otherwise, the authorized support representative will not be able to access the appliance to correct troubleshoot issues.

2.7 Logging in to the appliance for the first time

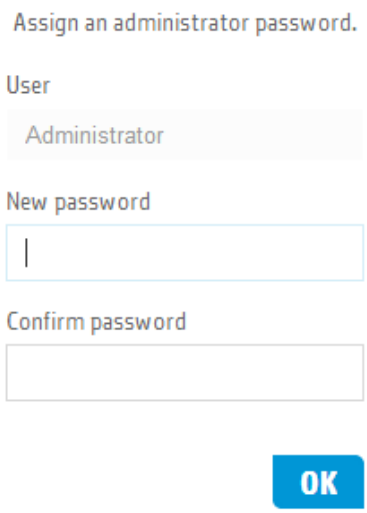
When the appliance starts up, use the default credentials to log in to the appliance. This is typically done using the special restricted browser running in your VM Console window.

1. Use the following default credentials the first time you log in to the appliance:

   User name: **`Administrator`**

   Password: **`admin`**

   If you cannot log in using the default credentials, see "You cannot log in" (page 24).
2. Change the default password to a password of your choice that contains at least 8 characters.



2.8 Configuring the appliance network

The next step in the process is to use the UI to configure the appliance network.

NOTE: For Hyper-V VMs, you must configure the appliance network from the virtual console.

2.8.1 Using the HP OneView UI to configure the appliance network

After you log in as the `Administrator` for the first time, the **Appliance Networking** screen appears.

Most of the information on this screen is provided for you. However, you must enter the following information:

- **Appliance host name -** A default name appears in the appliance host name field, but you can change the default name to a host name of your choice.

  NOTE: If you specify DNS (Domain Name Service) either directly or indirectly, you must specify the fully qualified host name.

- **The IPv4 address -** HP OneView requires an IPv4 address. You can configure an IPv6 address on the appliance and use it to connect to the appliance from your browser; however, HP OneView requires IPv4 to communicate with managed resources.
- **DNS server addresses -** If you are using DNS, enter the DNS server addresses here.
- **IPv6 address information -** If you are using IPv6 for address assignment, select `Manual` or `DHCPv6`.

For more information about the options available for configuring the appliance networking settings, click  to access help.

2.8.2 Using REST APIs to configure appliance networking

You can use a REST API `POST` operation with the `/rest/appliance/network-interfaces` API that includes all of the networking settings to configure appliance networking for the first time. For more information, click  to view the REST API scripting help and the *HP OneView REST API Reference*. These documents are also available from the http://www.hp.com/go/oneview/docs.

2.9 Next steps

After the installation is complete and you have configured the appliance network, the next step is to bring your data center resources under appliance management. First time configuration tasks are documented in the online help and the *HP OneView User Guide*, which also contains illustrated step-by-step instructions for configuring an example data center.

3 Appliance update

3.1 Appliance update instructions

3.1.1 Upgrade paths

You can upgrade directly to version 2.0 from any 1.10 or later version of HP OneView.

3.1.2 Update time

The update requires an appliance reboot and the time to complete an update, including the reboot, takes approximately 60 minutes.

3.1.3 Update prerequisites

NOTE: Microsoft Internet Explorer (IE) cannot transfer files larger than 4 GB. For those files, use Mozilla Firefox or Google Chrome browsers to upload updates or patches to HP OneView, or use the REST APIs. The REST APIs are easily accessible using HP OneView's community-supported **Powershell** or **Python** integrations.

NOTE: When updating from releases earlier than V1.20, note that this update contains a custom Software Pack for Proliant containing critical firmware updates. Ensure there is at least 3.4 GB of free space in the appliance firmware bundle repository before installing this update. When deleting existing SPPs, first make sure they are not currently in use by any server profiles.

- You must be logged in to the appliance as a user with Infrastructure administrator privileges.
- No other users are logged in to the appliance and no one logs in during the update.
- Before you begin the update process, use the appliance UI or REST APIs to back up the appliance:
  - Appliance UI: **Settings→Actions→Create backup** and **Settings→Actions →Download backup**
  - REST APIs: `/rest/backups` and `/rest/backups/archive`

  NOTE: See the HP OneView online help topic "*Back up an appliance*" if you need assistance.
- Before you begin, create a VM snapshot of your appliance.

3.1.4 Update instructions

To update an appliance to version :

1. Download the *HP OneView Update* (`Z7550-96195.bin`) image file from HP Software Depot (https://www.software.hp.com) to your local computer.
2. Log in to your appliance and select **Settings→Actions→Update appliance**.
3. Move the `Z7550-96195.bin` file to the appliance UI screen either by dragging and dropping or browsing to it.

   NOTE: See the HP OneView online help topic "*Update the appliance*" if you need assistance.
4. Click **Upload and Install** to start the update process.

3.1.5 Back up the appliance after the update

After upgrading your appliance to HP OneView version 2.0, remember to create a new backup file. If you need to restore a 2.0 appliance, you can only do so from a backup file that was created on a 2.0 appliance.

4 Support and other resources

The following topics provide information about authorized technical support as well as the other resources and documentation that are available to assist you in the use of HP OneView.

4.1 Gather information before contacting an authorized support representative

If you need to contact authorized technical support , be sure to have the following information available:

- Your Service Agreement Identifier (SAID)
- Software product name — HP OneView
- Hypervisor virtualization platform and version
- Messages generated by the appliance
- Other HP or third-party software in use
- A support dump if a message recommended that you create a support dump for analysis purposes

4.2 How to contact HP

- See the Contact HP Worldwide website to obtain contact information for any country:
  http://www.hp.com/go/assistance
- See the contact information provided on the HP Support Center website:
  http://www.hp.com/go/hpsc
- In the United States, call +1 800 334 5144 to contact HP by telephone. This service is available 24 hours a day, 7 days a week. For continuous quality improvement, conversations might be recorded or monitored. Say *OneView* when prompted for the product name.

4.3 Get connected to the HP OneView online user forum

The HP OneView interactive online forum enables you to share your experiences and pose and answer questions related to using HP OneView.

See http://www.hp.com/go/oneviewcommunity to join the discussion.

4.4 Software technical support and software updates

HP OneView software products with an Advanced license include three years of 24 x 7 software technical support and update services, which provides access to technical assistance to resolve software implementation or operations problems. A Standard license includes three years of 9 x 5 software technical support and update services.

With this service, you benefit from expedited problem resolution as well as proactive notification and delivery of software updates.

See http://www.hp.com/go/hpsc for more information.

4.4.1 Registering for software technical support

When you order HP OneView, you receive a license entitlement certificate by physical shipment or email, which you must redeem online in order to obtain the license activation key.

After redeeming your license certificate activation key, you are prompted to register for software technical support and update services. Licenses that are embedded in the hardware are automatically registered.

See https://myhplicensing.hp.com for more information.

4.4.2 Using your software technical support and update service

Once registered, you receive a service contract in the mail containing the customer service phone number and your Service Agreement Identifier (SAID). You need the SAID when you phone for technical support.

4.4.3 Obtaining HP OneView software and firmware updates

See http://www.hp.com/go/oneviewupdates to obtain HP OneView software updates and product-specific firmware bundles.

4.4.4 Obtaining software and drivers for HP ProLiant products

See http://www.hp.com/go/support for the latest software and drivers for your HP ProLiant products.

4.4.5 Warranty

HP will replace defective delivery media for a period of 90 days from the date of purchase. This warranty applies to all products found on the delivery media.

4.5 Related information

To learn about the technical documentation, websites, and other resources that are available for HP OneView and related products, see the following topics:

- "Product bulletins and Quick Specs for all HP products" (page 18)
- "HP OneView documentation and websites" (page 18)
- "Enclosure, iLO, and server hardware documentation and websites" (page 19)
- "HP 3PAR StoreServ Storage documentation and websites" (page 19)
- "HP Virtual Connect documentation and websites" (page 19)
- "Finding documents on the HP Support Center website" (page 19)

4.5.1 Product bulletins and Quick Specs for all HP products

The HP product bulletin website http://www.hp.com/go/productbulletin, accessible from your desktop or mobile device, is a convenient central resource providing technical overviews and specifications for HP hardware and software products.

4.5.2 HP OneView documentation and websites

See the HP Enterprise Information Library at http://www.hp.com/go/oneview/docs to download the latest versions of the following HP OneView documentation:

- *HP OneView Release Notes*
- *HP OneView Support Matrix*
- *HP OneView REST API Reference*
- `zip` file of HP OneView user interface HTML help files

- *HP OneView Installation Guide*
- *HP OneView User Guide*
- zip file of HP OneView REST API HTML help files
- Technical white papers

HP OneView help	HP OneView websites
To view help on the appliance, click  to open the Help sidebar. Links in the sidebar open help in a new browser window or tab: • **Help on this page** opens help for the current screen • **Browse help** opens the top of the help system where you decide which help topics you want to read about • **Browse REST API help** opens help for API scripting and reference information • Clicking  on a screen or dialog box opens context-sensitive help for that dialog box	• Primary website: http://www.hp.com/go/oneview • Software updates: http://www.hp.com/go/oneviewupdates • User community forum: http://www.hp.com/go/oneviewcommunity • Videos: http://www.hp.com/go/oneviewdemos

NOTE: See the online help for instructions to enable users and developers to browse the HP OneView help and *HP OneView REST API Reference* on their local computers or a web server.

4.5.3 Enclosure, iLO, and server hardware documentation and websites

You can download the latest versions of hardware manuals from the HP Servers Information Library http://www.hp.com/go/enterprise/docs.

For more information about hardware products, see the following websites:

Enclosure and iLO websites	HP ProLiant server hardware websites
• HP BladeSystem enclosures: http://www.hp.com/go/bladesystem • HP Integrated Lights-Out : http://www.hp.com/go/ilo	• General information: http://www.hp.com/go/proliant • BL series server blades: http://www.hp.com/go/blades • DL series rack mount servers: http://www8.hp.com/us/en/products/proliant-servers/index.html?facet=ProLiant-DL-Rack

4.5.4 HP 3PAR StoreServ Storage documentation and websites

You can download the latest versions of HP 3PAR StoreServ Storage manuals from the HP Storage Information Library http://www.hp.com/go/storage/docs.

For more information about HP 3PAR StoreServ Storage products, see http://www.hp.com/go/storage.

4.5.5 HP Virtual Connect documentation and websites

You can download the latest versions of HP Virtual Connect manuals from the HP Support Center.

Document type	HP Virtual Connect website
• HP Virtual Connect user guides • HP Virtual Connect command line references See "Finding documents on the HP Support Center website" (page 19)	http://www.hp.com/go/virtualconnect

4.5.6 Finding documents on the HP Support Center website

Follow these instructions to access technical manuals hosted on the HP Support Center.

1. Go to the HP Support Center website at http://www.hp.com/go/hpsc.
2. Under **Knowledge Base** in the left navigation pane, select **Manuals**.
3. Type a product name in the **Find an HP product by search** box (for example, `Storage 3PAR` or `HP Virtual Connect`) and click **Go**.
4. If more than one product name is returned in the results, select the product you want.
5. On the **Manuals** page for that product, select your **Language**.
6. Next, select the type of document you are looking for to narrow down the list of documents that are offered to you. For example, select getting started information, user guides, setup and installation guides, general reference information, or white papers.

   If the list of documents is long, it might take a few seconds to load the page. You can use the sorting options in the table headings to sort the list of documents alphabetically by title or by publication date.
7. Select a document title to download to your local computer or to view online.

4.6 Submit documentation feedback

HP is committed to providing documentation that meets your needs. To help us improve our documentation, send your suggestions and comments to this email address:

docsfeedback@hp.com

For UI and REST API help

In your email message, include the section title where the content is located. Also include the product name, product version, help edition, and publication date located on the legal notices page.

For user guides and other manuals

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A About using your appliance

A.1 Using the virtual appliance console

The virtual appliance console has a restricted browser interface that supports the following:

- Appliance networking configuration in non-DHCP environments
- Password reset requests for the Administrator account
- Advanced diagnostics for authorized support representatives

Use the virtual appliance console to access the appliance and configure the appliance network for the first time. The virtual appliance console enables you to bootstrap an appliance onto the network in non-DHCP environments. The virtual appliance console is not intended to be a full-featured replacement for your browser.

The virtual appliance console starts a browser session; The browser takes up the full screen; you cannot add tabs. You cannot perform any operation that requires you to select a file from a dialog box, including uploading software updates and firmware bundles (SPPs). Only basic browsing, including forward and backward navigation, are enabled.

Table 2 Key combinations for the virtual appliance console

Key combination		Function
Alt-←	(**Alt** and left arrow)	Browse backward
Alt-→	(**Alt** and right arrow)	Browse forward
Ctrl-+	(**Ctrl** and plus sign)	Zoom in
Ctrl--	(**Ctrl** and hyphen)	Zoom out
Ctrl-0	(**Ctrl** and zero)	Reset zoom
Ctrl-F		Search
Ctrl-R or **F5**		Reload/Refresh
Ctrl-Alt-Backspace		Restart the browser interface

A.2 Controlling access to the appliance console

Use the hypervisor management software to restrict access to the appliance, which prevents unauthorized users from accessing the password reset and service access features. See "Restricting console access" (page 22).

Typical legitimate uses for access to the console are:

- Troubleshooting network configuration issues
- Resetting an appliance administrator password
- Enabling service access by an on-site authorized support representative

The virtual appliance console is displayed in a graphical console; password reset and HP Services access use a non-graphical console.

Switching from one console to another (VMware vSphere)

1. Open the virtual appliance console.
2. Press and hold **Ctrl+Alt**.
3. Press and release the space bar.
4. Press and release **F1** to select the non-graphical console or **F2** to select the graphical console.

A.2.1 Restricting console access

You can restrict console access to the virtual appliance through secure management practices of the hypervisor itself.

For VMware vSphere, this information is available from the VMware website:

http://www.vmware.com

In particular, search for topics related to vSphere's Console Interaction privilege and best practices for managing VMware's roles and permissions.

A.3 Best practices for managing a VM appliance

HP recommends the following guidelines for managing your VM appliance from the virtual console:

Table 3 Best practices for managing a VMware vSphere virtual machine

Do	Do not
• Use thick provisioning. • Use shares and reservations to ensure adequate CPU performance.	• Use thin provisioning. • Update the VMware tools. If VMware Tools show **Out of Date** or **Unmanaged**, they are running correctly. These status messages are not a problem, because the tools are available and running. VMware tools are updated with each HP OneView software update. • Revert to a VM snapshot (unless under specific circumstances, as instructed by your authorized support representative). • Set the **Synchronize guest time with host** option in the vSphere client when the HP OneView appliance is configured to use NTP. HP OneView automatically sets the appropriate **Synchronize guest time with host** setting during network configuration. When HP OneView is configured to use NTP servers, the **Synchronize guest time with host** option is disabled. If HP OneView is not configured to use NTP servers, it synchronizes to the host VM clock and the **Synchronize guest time with host** option is enabled. In this case, configure the VM host to use NTP. • Reduce the amount of memory assigned to the VM.

Table 4 Best practices for managing a Hyper-V virtual machine

Do	Do not
• Use fixed size.	• Update integration services. • Revert to a VM checkpoint (unless under specific circumstances, as instructed by your authorized support representative). • Reduce the amount of memory assigned to the VM.

A.4 Enable off-appliance browsing of UI help and REST API help

The off-appliance versions of the HP OneView help systems are useful for developers who are writing REST API scripts or other users who prefer the convenience of accessing help locally without logging in to the appliance.

NOTE: You can also browse the API Reference at http://www.hp.com/go/oneview/docs.

Downloading HTML UI help and HTML REST help

1. Go to the Enterprise Information Library:
   http://www.hp.com/go/oneview/docs

2. Select the HP OneView UI online help zip file or the HP OneView REST API online help zip and save it to your computer or a local directory on a web server.
3. Use the utility of your choice to extract the contents of the `.zip` file.
4. Navigate to the content directory.
5. Double-click the `index.html` file to open the HP OneView help system.

B Troubleshooting installation issues

This chapter describes issues that you might experience when you install HP OneView and provides possible solutions.

B.1 You cannot deploy the OVA file

Symptom	Possible cause and recommendation
The following message appears: `The OVF package is invalid and cannot be deployed.`	**The OVA file name was not included in the selected path.** • You must specify the complete address of the OVA file that resides in the OVA file directory. The complete address includes the directory, the file name, and the file extension. If you specify only the directory address, the message appears. **The FTP file transfer mode is not set to `binary`** • Retry the transfer with the transfer mode set to `binary` and then verify the checksum. **The file may have been corrupted or partially downloaded** • Retry the download and the verify the checksum.

B.2 You cannot log in

Symptom	Possible cause and recommendation
Default credentials fail when you log in to the appliance for the first time.	**The appliance has already been configured and the default password was changed.** • Contact the administrator who performed the initial setup to get the new password. • Start the installation process again.

B.3 Appliance cannot access the network

Symptom	Possible cause and recommendation
Appliance cannot access the network.	**Appliance network not properly configured** 1. Ping the appliance. 2. From the VM console, verify that the network configuration is correct. 3. From the VM console, verify that the DNS IP address is correct. 4. From the VM console, verify that the DNS server is running.

B.4 Reduced performance on the VM host

Symptom	Possible cause and recommendation
Poor appliance performance.	**The host machine has power management enabled.** 1. Ensure that power savings is disabled on the host machine. 2. Consider using a host machine with a more powerful chipset. **Poor I/O performance on hypervisor host** • Check the RAID configuration which can contribute to slower I/O. • Verify bandwidth to an SAN storage that may be hosting the VM.

B.5 VM does not restart when the vSphere VM host time is manually set

Symptom	Possible cause and recommendation
The appliance VM does not restart and the following error appears in the vSphere virtual console: `The superblock last mount time is in the future UNEXPECTED INCONSISTENCY; RUN fsck MANUALLY.`	**The appliance is not using NTP and the VM host time was incorrectly set to a time in the past.** • Reset the time settings on the VM host to the correct time, and then restart the VM appliance. For more information, see your vSphere documentation. • If the appliance or VM host is configured as an NTP client, ensure that the NTP server is working correctly. **NOTE:** For recommended best practices for managing the appliance VM, see "Best practices for managing a VM appliance" (page 22).