

HP OneView 1.0 Installation Guide

Abstract

This document guides you through a successful installation of HP OneView.

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1 Preparing for installation

This chapter describes the VM host requirements for installing HP OneView. For information about hardware, software, firmware, and web browser requirements for managing resources with HP OneView, see the *HP OneView Support Matrix* available at <http://www.hp.com/go/oneview/docs>.

1.1 Appliance VM and host requirements

HP OneView is delivered as a virtual appliance running on a VMware vSphere Hypervisor VM (virtual machine).

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- ❗ **IMPORTANT:** HP OneView cannot import existing VC (HP Virtual Connect) domain configurations, so do not select a host system located in an enclosure that you plan to manage with HP OneView. You can, however, select a host system located on an HP ProLiant DL rack mount server that you plan to manage with HP OneView.
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The VM host must be able to support a VM with the following minimum requirements:

- VMware vSphere Hypervisor 5.0 or 5.1.
- Two 2 GHz virtual CPUs.
- 10 GB of memory dedicated to the appliance.
- 160 GB of thick-provisioned disk space.
- A connection to the management LAN. HP recommends that you have separate networks for management and data.
- 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.

1.2 Planning for high availability

To use HP OneView in an HA (high availability) configuration, verify that the VM is configured according to vSphere Hypervisor HA requirements. For more information, see your vSphere Hypervisor documentation or the following website:

<http://www.vmware.com/products/datacenter-virtualization/vsphere/high-availability.html>

2 Installing the appliance on a VM host

HP OneView is delivered as an OVF (Open Virtual Format) package for installation on a vSphere Hypervisor host. The HP OneView OVF package is distributed in OVA format (Open Virtual Appliance or Application).

You must have VMware vSphere Hypervisor Client (a Microsoft Windows application) installed on the host system, and you must have access to a VMware vCenter server to install HP OneView.

2.1 Obtaining the OVA file

To obtain the OVA file, you can either download it from the HP Software Depot or order the HP OneView media kit from your HP authorized representative. The media kit includes a DVD with the OVA file.

2.1.1 Downloading the OVA file

The OVA file is approximately 7.4 GB. Download time will vary 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 vSphere 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.

4. Optionally, download the signature data file for the OVA file, and the validation instructions readme file.

NOTE: The OVA file is digitally signed. You have the option to validate the authenticity and integrity of the download by following the instructions in the readme file.

2.1.2 Accessing the OVA file on the HP OneView DVD

1. Insert the disk into a DVD drive on a system running any OS.
2. Locate the `HPOneView_<version number>.ova` file in the root directory of the DVD.

2.2 Deploying the OVA file

1. Start the vSphere client and log in to 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
 - Location of the OVA file on the HP OneView DVD
 - 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.

△ CAUTION: HP recommends that you select **Thick Provision Eager Zeroed**.

If you select thin provisioning, the appliance VM is suspended when the system 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.

- 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.

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

△ CAUTION: Do not revert to a snapshot when using HP OneView.

Reverting to an earlier snapshot causes the appliance to be out of synchronization with the managed environment. Deployed servers exist with virtual addresses, but HP OneView would not be aware that those addresses are allocated. This could result in address collisions as you deploy new servers.

For additional best practices for managing the HP OneView VM, see [“Best practices for managing a VM appliance” \(page 21\)](#).

It takes approximately 6 to 10 minutes 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. To continue the installation, you can connect to the appliance by using a browser or by continuing to use the virtual console, depending on whether your host system is configured with or without DHCP.

2.3 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:

With DHCP 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.

Without DHCP 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.

NOTE: Use the virtual console to connect to the appliance in non-DHCP environments and to debug networking issues in DHCP or non-DHCP environments.

For more information about securing access to the appliance when using the vSphere virtual console, see [“Access to the appliance console” \(page 7\)](#).

2.3.1 Access to the appliance console

Restrict access to the appliance console (by using the hypervisor management software) to prevent unauthorized users from attempting to access the password reset and service access features. See [“Restricting console access” \(page 7\)](#).

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

1. Open the virtual appliance console from vSphere.
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.

2.3.1.1 Restricting console access

For the virtual appliance, you can restrict console access through secure management practices of the hypervisor itself.

This information is available from the VMware website:

<http://www.vmware.com/support/pubs>

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

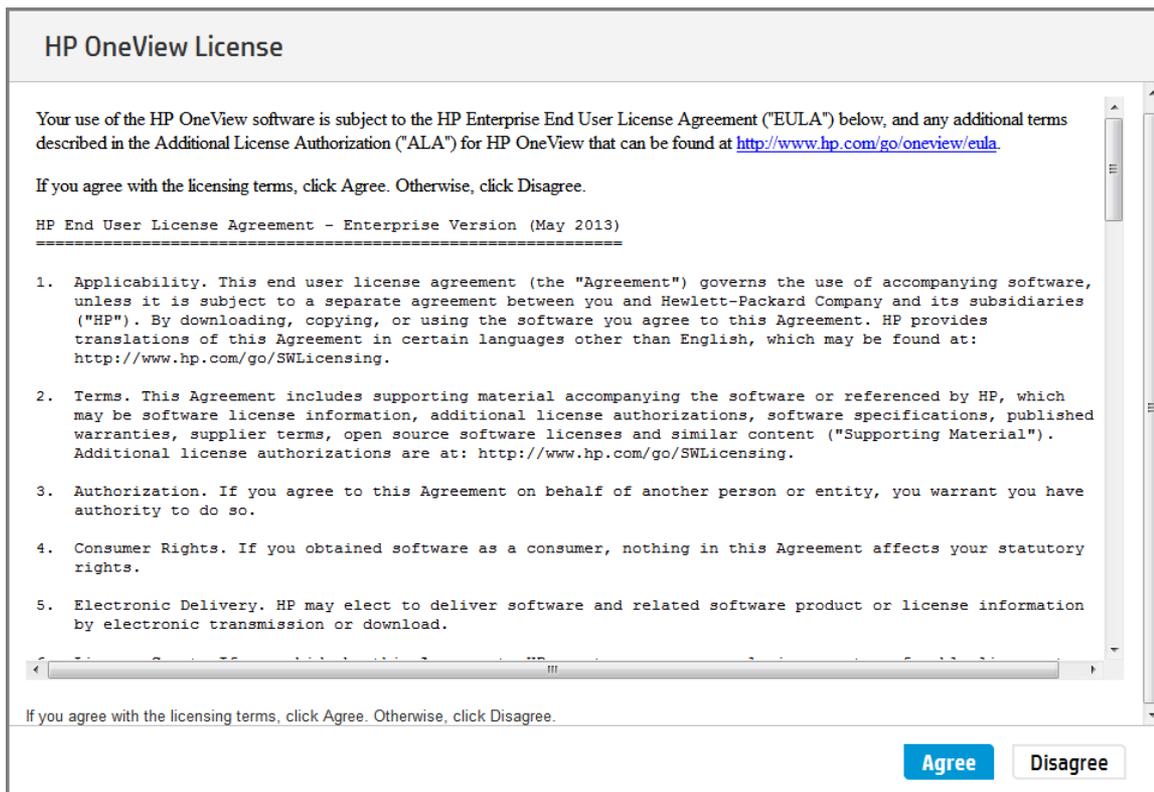
2.4 Completing the installation

Follow these steps to complete the installation.

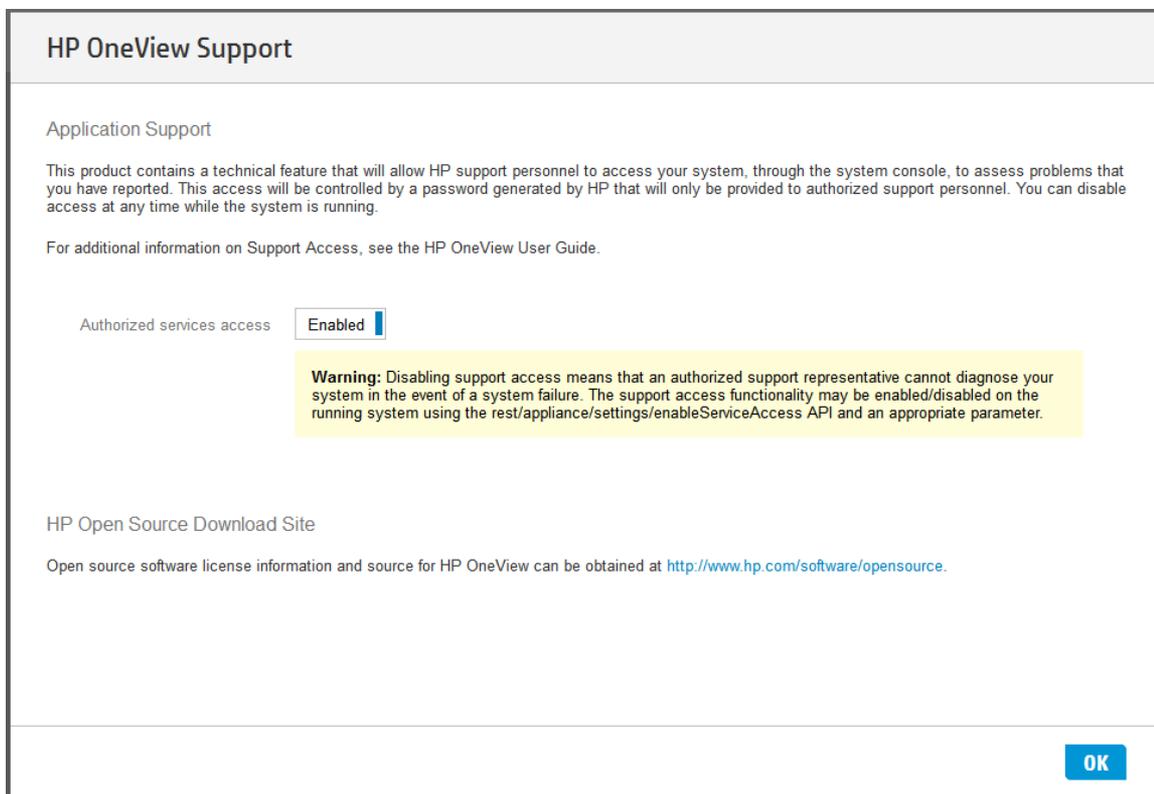
1. Connect to the appliance using one of the methods described in [“Connecting to the appliance in DHCP and non-DHCP environments” \(page 6\)](#).

NOTE: You can also complete the remaining installation steps using REST API scripts. For more information, see the Quick Start for initial configuration using REST API scripting in the UI help. For information about accessing the UI help before the appliance is installed, see [“Enabling off-appliance browsing of UI and REST API HTML help files” \(page 22\)](#).

2. On the **HP OneView EULA** screen, click **Agree** to continue or click **Disagree** to cancel the installation.



3. On the **HP OneView Support** screen, decide if you want **Enable** or **Disable** authorized services access to your appliance. For more information, see "Enabling or disabling authorized services access" (page 9).



4. Click **OK** to continue.

2.4.1 Enabling or disabling 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, you can enable or disable services access through the UI by selecting **Actions**→**Edit services access** on the **Settings** window.

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 might be unable to access the appliance to correct a problem.

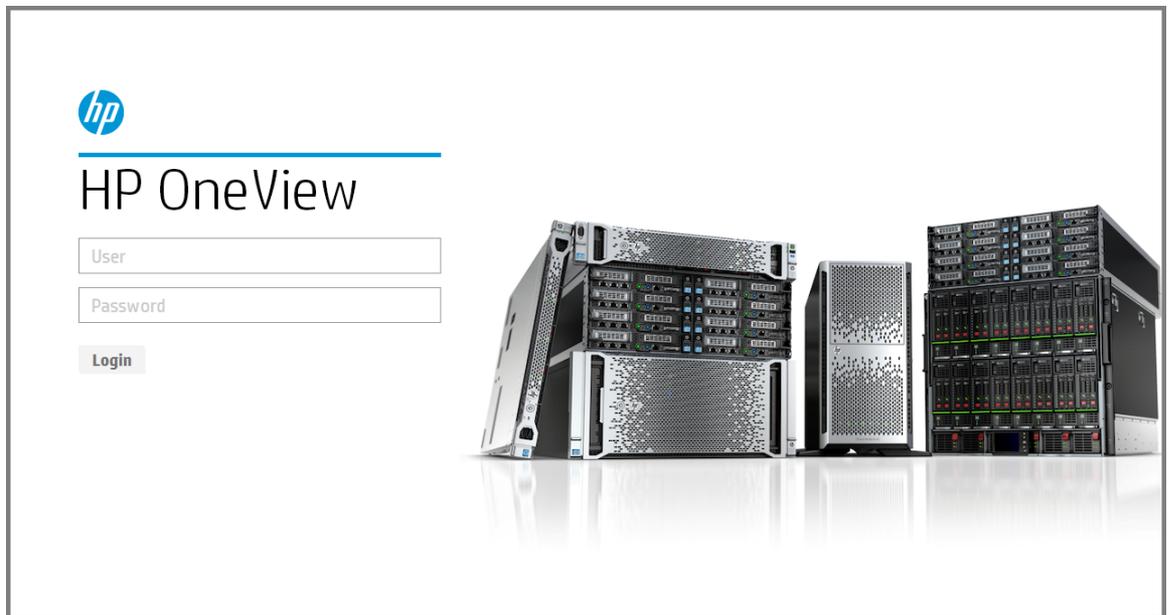
2.5 Logging in to the appliance for the first time

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

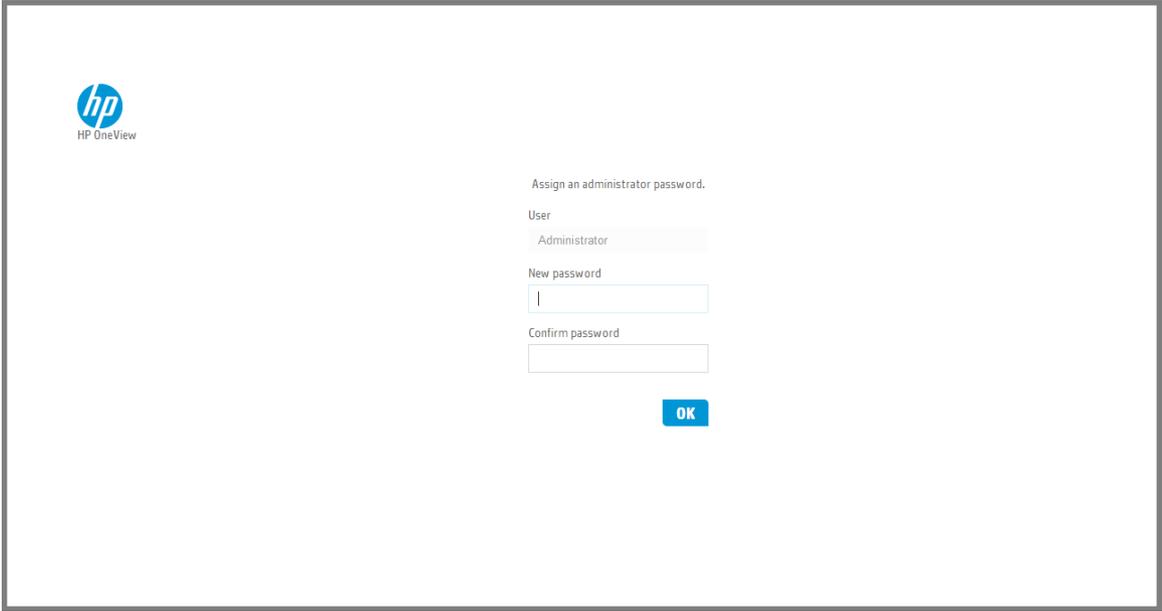
User name: **Administrator**

Password: **admin**

If you cannot log in using the default credentials, see [“You cannot log in”](#) (page 15).



2. Change the default password to a password of your choice that contains at least 8 characters.



The screenshot shows the HP OneView interface for assigning an administrator password. In the top left corner is the HP OneView logo. The main content area contains the following elements:

- The instruction: "Assign an administrator password."
- A "User" label above a text input field containing the text "Administrator".
- A "New password" label above an empty text input field.
- A "Confirm password" label above another empty text input field.
- A blue "OK" button located below the input fields.

2.6 Configuring the appliance network

You can configure the appliance network using the UI or using REST APIs.

2.6.1 Using the UI to configure the appliance network.

After you install HP OneView and log in for the first time, the **Appliance Networking** screen appears.

Appliance Networking General ▾ ?

General

Appliance host name

IPv4

Address assignment Manual DHCP

IP address

Subnet mask or CIDR

Gateway address

DNS

Preferred DNS server

Alternate DNS server

IPv6

Address assignment Unassign Manual DHCPv6

When configuring IPv6, ensure the DNS servers specified manually or supplied by the DHCP server support both IPv4 and IPv6 name resolution.

IP address

Subnet mask or CIDR

Gateway address

Time and Language

Synchronize with VM host Synchronize with time server

Current date and time (UTC-0600)

Default language / locale

Most of the information on this screen is provided for you. However, you will need to 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 appliance host name by its fully qualified host name.

- **The IPv4 address.**

NOTE: 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.** Select **Unassign** if you are not using IPv6 addresses.

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

2.6.2 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, see the *HP OneView REST API Reference*, which is available by clicking the

 icon to access the appliance online help.

3 Next steps

This chapter describes the steps you will need to perform after installing HP OneView to begin configuring your data center for management, as well as where to find more information.

3.1 Bring your data center under appliance management

After installation, you will need to configure resources in HP OneView and bring your environment under management. Initial configuration consists of several tasks, including the following:

- User management.
 - Adding users to the appliance.
- Firmware management.

The default firmware baseline is pre-installed in the appliance and provides the minimum supported firmware for all supported servers and interconnects.
- Network configuration.
 - Creating networks.
 - Creating network sets.
 - Creating a logical interconnect group.
- Importing enclosures.
 - Creating an enclosure group.
 - Adding enclosures.
- Adding servers.

Creating server profiles.
- Managing power (optional).
 - Defining physical topology of the environment.
 - Defining power delivery topology.

For instructions to complete these tasks and others, see the initial configuration Quick Start in the UI help or in the *HP OneView User Guide*. For illustrated examples of these tasks, see the sample data center in the *HP OneView User Guide*.

The *HP OneView User Guide* describes aspects of data center configuration that you might want to decide before you configure your resources. By considering these items when planning your configuration, you can create a data center configuration that takes full advantage of the appliance features and results in an environment that is even easier for your administrators to monitor and manage.

3.2 Where to find HP OneView documentation

The following HP OneView documentation is available to view or download from the HP OneView Information Library:

<http://www.hp.com/go/oneview/docs>

HP OneView documentation

- *HP OneView Release Notes*
- *HP OneView Support Matrix*

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

NOTE: To [submit documentation feedback](#) to HP, send email to docsfeedback@hp.com.

4 Troubleshooting installation issues

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

4.1 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. <ul style="list-style-type: none">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 error message appears.

4.2 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. <ul style="list-style-type: none">Contact the administrator who performed the initial setup to get the new password.Redeploy the appliance.

4.3 Appliance cannot access the network

Symptom	Possible cause and recommendation
Appliance cannot access the network.	Appliance network not properly configured <ol style="list-style-type: none">Verify that the network configuration is correct.Verify that the DNS IP address is correct.Verify that the DNS server is running.

4.4 Reduced performance on the VM host

Symptom	Possible cause and recommendation
Poor appliance performance.	The host machine has power management enabled. <ol style="list-style-type: none">Ensure that power savings is disabled on the host machine.Consider using a host machine with a more powerful chipset.

4.5 VM does not restart when 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.	<p>You are not using NTP and the VM host's time was incorrectly set to a time in the past.</p> <ul style="list-style-type: none">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. <p>NOTE:</p> <ul style="list-style-type: none">For HP-recommended best practices for managing the appliance VM, see "Best practices for managing a VM appliance" (page 21).

5 Support and other resources

To learn how to contact HP, obtain software updates, submit feedback on documentation, and locate links to HP OneView websites and other related HP products, see the following topics.

5.1 Gather information before contacting an authorized support representative

If you need to contact an authorized HP support representative, 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

5.2 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.

5.3 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.

This forum also hosts PowerShell and Python libraries that utilize the comprehensive HP OneView RESTful APIs to perform any operation.

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

5.4 Software technical support and software updates

HP OneView software products 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.

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.

5.4.1 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 <http://www.hp.com/go/insightlicense> for more information.

5.4.2 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.

5.4.3 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.

5.4.4 Obtaining software and drivers for HP ProLiant products

See <http://welcome.hp.com/country/us/en/support.htm> for the latest software and drivers for your HP ProLiant products.

5.4.5 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.

5.5 Related information

Documentation

- HP OneView Information Library
<http://www.hp.com/go/oneview/docs>

Product websites

- HP OneView
 - Primary website: <http://www.hp.com/go/oneview>
 - Software and firmware updates: <http://www.hp.com/go/oneviewupdates>
 - User forum: <http://www.hp.com/go/oneviewcommunity>
 - Product demos: www.hp.com/go/oneviewdemos
 - Infrastructure management: www.hp.com/go/management-oneview
 - End-User license agreement: <http://www.hp.com/oneview/eula>
- HP Open Source Download Site
<http://www.hp.com/software/opensource>
- HP BladeSystem enclosures
<http://www.hp.com/go/bladesystem>
- HP ProLiant server hardware
<http://www.hp.com/go/proliant>
- HP ProLiant education
<http://www.hp.com/learn/proliant>

- HP Storage products
<http://www.hp.com/go/storage>
- HP Virtual Connect
<http://www.hp.com/go/virtualconnect>

5.6 Submit documentation feedback

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

docsfeedback@hp.com

For UI and REST API help

In your email message, include the product name, product version, help edition, and publication date located on the legal notices page.

For user guides and other manuals

In your email message, include the document title, edition, publication date, and document part number located on the front cover. Any other information you can provide, such as a section title or page number, is also helpful.

A Using the virtual appliance console

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 1 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

B Best practices for managing a VM appliance

B.1 Best practices for managing a VM appliance

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

Do	Do not
<ul style="list-style-type: none">• Use thick provisioning.• Use shares and reservations to ensure adequate CPU performance.	<ul style="list-style-type: none">• 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.

C Enabling off-appliance browsing of UI and REST API HTML help files

This chapter helps you gain access to the appliance UI help or REST API help before you have installed the appliance.

C.1 Enabling off-appliance browsing of UI and REST API HTML help files

To enable your users and developers to browse the HP OneView help and *HP OneView REST API Reference* locally on their own computer or from a local web server, download the `hp-oneview-help.zip` file from the HP OneView Information Library.

An off-appliance version of the HP OneView help system is useful for developers who are writing REST API scripts or other users that prefer the convenience of accessing help without logging in to the appliance.

Downloading HTML help and REST API files

1. Go to the HP OneView Information Library:
<http://www.hp.com/go/oneview/docs>
2. Select the `hp-oneview-help.zip` file 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 `hp-oneview-help/content` directory.
5. Double click the `index.html` file to open the HP OneView help system.
6. If you are serving the files from a web server, communicate the full URL to the `index.html` file to your user community to enable them to browse to the UI and REST API help and reference information.