



## Installation

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- [Installing Cisco Intersight Virtual Appliance and Intersight Assist on VMware vSphere, on page 1](#)
- [Installing Cisco Intersight Virtual Appliance and Intersight Assist on Microsoft Hyper-V Server, on page 5](#)
- [Installing Cisco Intersight Virtual Appliance and Intersight Assist on KVM Hypervisor, on page 8](#)

# Installing Cisco Intersight Virtual Appliance and Intersight Assist on VMware vSphere

Cisco Intersight Virtual Appliance is distributed as a deployable virtual machine contained in an Open Virtual Appliance (OVA) file format, ZIP file format, or a TAR file format. Cisco Intersight Virtual Appliance supports VMware High Availability (VMHA) to ensure non-disruptive operation of the virtual appliance. For more information about VMHA, please refer to the documentation on [vmware.com](http://vmware.com).



**Attention** Intersight Virtual Appliance and Intersight Assist OVA must be deployed using VMware vCenter. The OVA cannot be directly deployed on ESXi servers.

By default, VMware vCenter does not include a Certificate Authority (CA) that validates the Cisco digital signature on the Intersight Virtual Appliance OVA file. The VMware vCenter GUI will indicate that the OVA's certificate is invalid and is not trusted. Although possible, it is recommended that you **do not ignore this warning** and proceed with the installation. Instead, download and install the appropriate root CA from the table below that will validate the digital signature on the Intersight Virtual Appliance OVA file. Validating the signature ensures that the OVA was both issued by Cisco and has not been modified by a 3rd party.

The root CA certificates listed in the following table are available on [Cisco's PKI page](#).

OVA version	CA Issuer	CA Serial Number	CA Expiration	OVA version
1.0.9-630	TrustID EV Code Signing CA 4	407604008487BB	March 18, 2030	1.0.9-630
1.0.9-588	DigiCert Trusted G4 Code Signing 2021 CA1	84150D249541D4D		1.0.9-588
1.0.9-499	None	None	None	1.0.9-499
1.0.9-342	DigiCert Trusted G4 Code Signing 2021 CA1	84150D249541D4D	March 18, 2030	1.0.9-342
OVA version	CA Issuer	CA Serial Number	CA Expiration	OVA version

Use the steps in the following task to install and deploy the appliance on VMware vSphere. **To install and deploy a multi-node Intersight Virtual Appliance on VMware vSphere, repeat the steps in the following task three times.**

#### Before you begin

Ensure that you have downloaded the Cisco Intersight Virtual Appliance package from the URL provided by your Cisco representative or a location accessible from your setup, such as a local hard drive, a network share, or a CD/DVD drive.

**Attention**

- Before installing and setting up Intersight Virtual Appliance, it is strongly recommended that you read the information provided in the [System Requirements](#) section.
- Setting up a single-node Intersight Virtual Appliance requires an IP address and two DNS records for that IP address. For more information about IP addresses and Hostname requirements, see [IP Address and Hostname Requirements](#).
- Setting up a multi-node cluster for Intersight Virtual Appliance requires three hostnames, three IP addresses, and one DC-CNAME for each hostname. For more information about IP addresses and Hostname requirements, see [IP Address and Hostname Requirements](#).
- Use only HTTPS protocol and fully qualified domain name to access the appliance via the Web user interface.

- Step 1** Log in to VMware vSphere Web Client with administrator credentials.
- Step 2** Right-click on the host and select **Deploy OVF Template**.
- Step 3** On the **Deploy OVF Template** wizard **Select template** page, specify the source location, and click **Next**. You can specify a URL or browse to location accessible from your local hard drive, a network share, or a DVD/CD drive.
- Step 4** On the **OVF Template Details** page, verify the OVF template details and click **Next**. No input is necessary.
- Step 5** On the **Select a name and location** page, add/edit the **Name** and **Location** for the Virtual appliance and click **Next**.
- Step 6** On the **Select a resource** page, select the specific **Host** (ESX station), **Cluster**, **Resource Pool**, or **virtual appliance** you want to deploy and click **Next**.
- Each VM must be assigned to a specific host on clusters that are configured with vSphere HA or Manual mode vSphere DRS.
- Step 7** On the **Review details** page, verify the OVA template details and click **Next**.
- Step 8** On the **Configuration** page, select a deployment configuration and click **Next**.
- Step 9** On the **Select storage** page, select a destination storage (hard drives) for the VM files in the selected host (ESX station) and click **Next**. Select the Disk Format for the virtual machine virtual disks.
- Cisco recommends that you use thick provisioning. While it is possible to use thin provisioning, over-provisioning can lead to a lack of storage capacity which can then result in degradation and loss of service, and might require a restore from backup.
- Step 10** On the **Select networks** page, for each network that is specified in the OVF template, select a source network and map it to a destination network and click **Next**.
- Step 11** On the **Customize Template** page, customize the deployment properties of the OVF template, and click **Next**.

OVF Property	Description
<b>Enable DHCP (only for single-node appliance)</b>	Enables the appliance to obtain IP addresses from the DHCP server running on the same network to avoid using static IP addresses. If you select this option, all static parameters will be ignored. For more information about DHCP, see the <b>Enabling DHCP</b> section after this table.

OVF Property	Description
<b>IP Address</b> <i>(Values you input will be ignored if you Enable DHCP)</i>	Enter the IPv4 address of the node. For example: 10.0.0.100
<b>Net Mask</b> <i>(Values you input will be ignored if you Enable DHCP)</i>	This field is pre-populated with the IPv4 Net Mask 255.255.255.0
<b>Default Gateway</b> <i>(Values you input will be ignored if you Enable DHCP)</i>	Enter the IPv4 Default Gateway. For example: 10.0.1.254
<b>DNS Domain</b> <i>(Values you input will be ignored if you Enable DHCP)</i>	Enter the DNS Search Domain.
<b>DNS Servers</b> <i>(Values you input will be ignored if you Enable DHCP)</i>	Enter a comma-separated list of IPv4 addresses for your DNS servers. A maximum of 2 DNS servers are supported.
<b>Admin Password</b>	Enter the admin password. This is the same password that you use to log in to the appliance.  <b>Set Password</b> —Before you register the appliance with Intersight, you must create an admin password. The password can contain 0-9, A-Z, a-z, and all special characters except a colon (: ) and space.
<b>NTP Servers</b>	Enter a comma-separated list of hostnames or IPv4 addresses for your NTP servers. You can add up to 3 NTP servers. This setting is still required even if you use DHCP to obtain IP addresses.
<b>Disk Size</b>	<b>Attention:</b> Do not change the value of the disk size as it is computed based on the deployment configuration.

**Attention** If the password you set at the time of registering your appliance is weak, Intersight prompts you to change your password to a stronger one. After a successful reset to a strong password, you are directly logged into the appliance. For more information about logging in, see [Logging In to Intersight Virtual Appliance](#).

### Enabling DHCP

Dynamic Host Configuration Protocol (DHCP) allows the Cisco Intersight Virtual Appliance VM to obtain an IP address through a DHCP server running on the network that it is installed on. When this option is enabled, the Cisco Intersight Virtual Appliance is equipped to handle IP address updates through DHCP, subject to lease requirements.

**Attention** DHCP is not supported on multi-node Intersight Virtual Appliance.

**For a single-node appliance, ensure that the following requirements are met for using DHCP:**

- If you use DHCP, ensure that the IP address returned to the appliance VM resolves to the **same FQDN** you use to set up the appliance. Cisco recommends that you configure your DHCP to return the same IP address for the appliance VM, and not change your IP address frequently.
- The appliance only reads the IP address, netmask, gateway, and DNS-Servers from the DHCP lease information. NTP information, if any, must be input into the OVF parameters at the time of the deployment.

- All IP addresses used in the appliance VM must be in the same subnet as that of the initial IP addresses assigned. For example, the VM cannot be assigned an IP from a different subnet, by connecting to a vSwitch which has a different DHCP server.

### Limitations

- A forced lease renewal could impact the VM configuration settings and could render the appliance unusable.

**Step 12** On the **Ready to Complete** page, select **Power On After Deployment** and click **Finish**.

For information on how to complete the set-up of your appliance, see [Setting Up Intersight Virtual Appliance](#).

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**Troubleshooting Tip:** After providing the OVF parameters, if you notice that your VM does not respond when you visit `<https://fqdn-of-your-appliance>` after about 15 minutes since power-on, you may use the Intersight Appliance Maintenance Shell to troubleshoot networking or misconfiguration issues.

**Troubleshooting Tip:** If the diag shell displays a hostname such as **192:**, then it is possible that while deploying the appliance, the input for one or more network parameters (such as IP address, netmask, gateway, DNS servers, etc.) was entered incorrectly. It is also possible that the appliance VM is connected to a portgroup/vswitch that does not allow it to connect to the network and perform a successful DNS lookup. If you encounter this issue, check the inputs to the OVA as well as other network parameters. You can rectify the incorrect inputs using the diag shell.

The diagnostic tool aims to:

- Detect and display issues with the installation prerequisites.
- Enable editing the inputs that are provided during the OVA deployment.
- Assist with continuing the installation after you fix the settings, or set network interface properties such as IP addresses, subnet mask, and default gateway during the OVA deployment.

For more information, see [Maintenance Shell for Intersight Virtual Appliance and Intersight Assist](#).

For a demonstration of the Intersight Virtual Appliance Installation and troubleshooting, watch [Cisco Intersight Appliance Installation and Debug](#).

## Installing Cisco Intersight Virtual Appliance and Intersight Assist on Microsoft Hyper-V Server

Cisco Intersight Virtual Appliance is distributed as a deployable virtual machine contained in an Open Virtual Appliance (OVA) file format, ZIP file format, or a TAR file format. Install the appliance on Microsoft Hyper-V Server using the ZIP file format. For more information about Microsoft Hyper-V Server, refer to the Microsoft documentation.



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**Note** Use the steps in the following task to install and deploy the appliance on Hyper-V Server Manager.

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### Before you begin

Ensure that you have downloaded the Cisco Intersight Virtual Appliance package from the URL provided by your Cisco representative or a location accessible from your setup, such as a local hard drive, a network share, or a CD/DVD drive.



#### Attention

- Before installing and setting up Intersight Virtual Appliance, it is strongly recommended that you read the information provided in the [System Requirements](#) section.
- Setting up a single-node Intersight Virtual Appliance requires an IP address and two DNS records for that IP address. For more information about IP addresses and Hostname requirements, see [IP Address and Hostname Requirements](#).
- **Setting up a multi-node cluster for Intersight Virtual Appliance is NOT supported on Microsoft Hyper-V.**
- Use only HTTPS protocol and fully qualified domain name to access the appliance via the Web user interface.

**Step 1** Log in to Hyper-V Server Manager with administrator credentials and select a server where you want to install the appliance.

**Step 2** From the **Actions** pane, select **Import Virtual Machine**, and click **Next**.

- a) Select the folder that contains the extracted virtual machine, for example, **onprem\_vms**, and click **Next**.
- b) Select the virtual machine to import and click **Next**.
- c) In the **Choose Import Type** screen, select the **Copy the virtual machine (create a new unique ID)** option, and click **Next**.
- d) Make your selection in the **Choose Destination** screen and click **Next**.
- e) Make your selection in the **Choose Storage Folders** screen and click **Next**.
- f) Verify your selections in the **Summary** screen, and click **Finish**.

After the import is completed, you will see the imported virtual machine in Hyper-V Manager.

**Step 3** Right-click on the imported virtual machine and select **Settings**.

- a) Navigate to **Network Adapter** and select a virtual switch from the drop-down list.
- b) Click **Apply**.

**Step 4** In the **Actions** pane, select **Start** to power-on the virtual machine.

**Step 5** In the **Actions** pane, select **Connect** to connect to the virtual machine.

The **Virtual Machine Connection** console is displayed.

**Step 6** On the **Virtual Machine Connection** console, customize the password configuration and IP properties.

Property	Description
Set password for user admin	Set a new password for admin user.
	<b>Note</b> Ensure that you remember this password as you will use the same one to log into the appliance.

Property	Description
<b>Choose IP Assignment</b>	Type in <b>S</b> for static IP assignment or <b>D</b> for DHCP Selecting DHCP for your IP assignment enables the appliance to obtain IP addresses from the DHCP server running on the same network to avoid using static IP addresses.
<b>IP Address</b>	Enter the IP address of the node. For example: 10.0.0.100
<b>Subnet Mask</b>	Enter the IP Net Mask. For example: 255.255.255.0
<b>Default Gateway</b>	Enter the IP Default Gateway. For example: 10.0.1.254
<b>DNS Servers</b>	Enter a comma-separated list of IP addresses for your DNS servers. A maximum of 2 DNS servers are supported.
<b>DNS Domain</b>	Enter the DNS Search Domain.
<b>NTP Servers</b>	Provide NTP information when configuring a static IP. Enter a comma-separated list of hostnames or IP addresses for your NTP servers. You can add up to 3 NTP servers. You cannot provide NTP information if you configured selected DHCP for your IP assignment.

**Attention** If the password you set at the time of registering your appliance is weak, Intersight prompts you to change your password to a stronger one. After a successful reset to a strong password, you are directly logged into the appliance. For more information about logging in, see [Logging In to Intersight Virtual Appliance](#).

### Enabling DHCP

Dynamic Host Configuration Protocol (DHCP) allows the Cisco Intersight Virtual Appliance VM to obtain an IP address through a DHCP server running on the network that it is installed on. When this option is enabled, the Cisco Intersight Virtual Appliance is equipped to handle IP address updates through DHCP, subject to lease requirements.

**Attention** For a single-node appliance, ensure that the following requirements are met for using DHCP:

- If you use DHCP, ensure that the IP address returned to the appliance VM resolves to the **same FQDN** you use to set up the appliance. Cisco recommends that you configure your DHCP to return the same IP address for the appliance VM, and not change your IP address frequently.
- The appliance only reads the IP address, netmask, gateway, and DNS-Servers from the DHCP lease information. NTP information for the Hyper-V Server must be input into the Virtual Machine Connection console when configuring static IP.
- All IP addresses used in the appliance VM must be in the same subnet as that of the initial IP addresses assigned. For example, the VM cannot be assigned an IP from a different subnet, by connecting to a vSwitch which has a different DHCP server.

### Limitations

- A forced lease renewal could impact the VM configuration settings and could render the appliance unusable.

- Step 7** Proceed to `<https://fqdn-of-your-appliance>` to complete the post-install set-up of your appliance.
- For information on how to complete the set-up of your appliance, see [Setting Up Intersight Virtual Appliance](#).

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**Troubleshooting Tip:** After providing the password and IP property parameters, if you notice that your VM does not respond when you visit `<https://fqdn-of-your-appliance>` after about 15 minutes, you can use the Intersight Appliance Maintenance Shell to troubleshoot networking or misconfiguration issues.

The diagnostic tool aims to:

- Detect and display issues with the installation prerequisites.
- Enable editing the inputs that are provided during the OVA deployment.
- Assist with continuing the installation after you fix the settings, or set network interface properties such as IP addresses, subnet mask, and default gateway during the OVA deployment.

For more information, see [Maintenance Shell for Intersight Virtual Appliance and Intersight Assist](#).

For a demonstration of the Intersight Virtual Appliance Installation and troubleshooting, watch [Cisco Intersight Appliance Installation and Debug](#).

## Installing Cisco Intersight Virtual Appliance and Intersight Assist on KVM Hypervisor

Cisco Intersight Virtual Appliance is distributed as a deployable virtual machine contained in an Open Virtual Appliance (OVA) file format, ZIP file format, or a TAR file format. Install the appliance on KVM hypervisor using the TAR file format. The following procedure shows how to install and deploy the appliance on KVM hypervisor using Virtual Machine Manager (VMM).



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**Note** Software Requirements:

- Linux operating system with support for KVM hypervisor or Linux operating system pre-configured with KVM hypervisor. On CentOS 7.9, the minimum supported KVM hypervisor version is 1.5.3.
- A virtual network bridge to provide network connectivity to VMs.



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**Note** Use the steps in the following task to install and deploy the appliance on KVM hypervisor using Virtual Machine Manager (VMM).

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### Before you begin

Ensure that you have downloaded the Cisco Intersight Virtual Appliance package from the URL provided by your Cisco representative or a location accessible from your setup, such as a local hard drive, a network share, or a CD/DVD drive.



**Attention**

- Before installing and setting up Intersight Virtual Appliance, it is strongly recommended that you read the information provided in the [System Requirements](#) section.
- Setting up a single-node Intersight Virtual Appliance requires an IP address and two DNS records for that IP address. For more information about IP addresses and Hostname requirements, see [IP Address and Hostname Requirements](#).
- **Setting up a multi-node cluster for Intersight Virtual Appliance is NOT supported on KVM hypervisor.**
- Use only HTTPS protocol and fully qualified domain name to access the appliance via the Web user interface.

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- Step 1** Launch the Virtual Machine Manager (VMM) client.
- Step 2** Select **File > New Virtual Machine** on the menu bar to install a new virtual machine on a KVM hypervisor. The **New VM** dialog box appears and displays Step 1 of 4 of the New VM installation.
- Step 3** Under **Choose how you would like to install the operating system**, select **Import existing disk image**, and click **Forward**.  
Step 2 of 4 is displayed.
- Step 4** Under **Provide the existing storage path**, click **Browse**.
- Step 5** Under **Choose storage volume**, browse your directories to locate and select the first disk of the Intersight Virtual Appliance image file, (for example, *intersight-appliance-1.0.9-180-1.qcow2*) that you have extracted on your system.  
a) Under **Advanced options**, select **VirtIO**.
- Note** VirtIO is the only supported disk bus for storage while installing Intersight Virtual Appliance and Intersight Assist on KVM Hypervisor.
- Step 6** Under **Choose an operating system type and version**, select **Linux** for OS type and **CentOS 7.0** for Version, and click **Forward**.  
Step 3 of 4 is displayed.
- Step 7** Under **Choose Memory and CPU settings**, do the following, and click **Forward**.
- Select or enter 32768 for Memory (RAM)
  - Set CPU at 16
- Step 4 of 4 is displayed.
- For more information about appliance deployment sizes, see [Supported Configuration Limits for Intersight Virtual Appliance](#).
- Step 8** In the dialog box, complete the following configuration:
- Under **Ready to begin the installation**, in the **Name** field, enter a name for the Intersight Virtual Appliance software. For example, *intersight-appliance-1.0.9-180*

- Ensure that you have selected the **Customize configuration before install** option.
- Under **Network selection**, ensure that you select the appropriate virtual network bridge.

**Step 9** Click **Finish**.

You have now completed the process of adding the first disk of the Intersight Virtual Appliance image. You will need to add disks 2 through 8, one by one, before you can begin the installation process.

**Step 10** On the VMM console, complete the following configuration:

- Click **Add Hardware** that you can find at the bottom of the left navigation panel.
- Under **Storage**, ensure that **Select or create custom storage** is selected.
- Browse your directories to locate and select the second disk of the Intersight Virtual Appliance image file, (for example, *intersight-appliance-1.0.9-180-2.qcow2*) that you have extracted on your system, and click **Choose volume**.
- Click **Finish**.

Repeat this step until you have added disk 3 through disk 8. Ensure that all eight disks appear on the left navigation panel.

**Step 11** Click **Begin installation**.

**Step 12** On the VMM console, customize the password configuration and IP properties.

Property	Description
<b>Set password for user admin</b>	Set a new password for admin user.  <b>Note</b> Ensure that you remember this password as you will use the same one to log into the appliance.
<b>Choose IP Assignment</b>	Type in <b>S</b> for static IP assignment or <b>D</b> for DHCP  Selecting DHCP for your IP assignment enables the appliance to obtain IP addresses from the DHCP server running on the same network to avoid using static IP addresses.
<b>IP Address</b>	Enter an IPv4 address of the node. For example: 10.0.0.100  <b>Note</b> You must have an IPv4 address configured in order for the appliance to be functional.  It is recommended that you configure IPv6 addresses subsequent to completing the initial installation and deployment of the appliance using an IPv4 address.
<b>Subnet Mask</b>	Enter the IP Net Mask. For example: 255.255.255.0
<b>Default Gateway</b>	Enter the IP Default Gateway. For example: 10.0.1.254
<b>DNS Servers</b>	Enter a comma-separated list of IP addresses for your DNS servers. A maximum of 2 DNS servers are supported.
<b>DNS Domain</b>	Enter the DNS Search Domain.

Property	Description
NTP Servers	<p>Provide NTP information when configuring a static IP.</p> <p>Enter a comma-separated list of hostnames or IP addresses for your NTP servers. You can add up to 3 NTP servers.</p> <p>You cannot provide NTP information if you configured selected DHCP for your IP assignment.</p>

**Attention** If the password you set at the time of registering your appliance is weak, Intersight prompts you to change your password to a stronger one. After a successful reset to a strong password, you are directly logged into the appliance. For more information about logging in, see [Logging In to Intersight Virtual Appliance](#).

### Enabling DHCP

Dynamic Host Configuration Protocol (DHCP) allows the Cisco Intersight Virtual Appliance VM to obtain an IP address through a DHCP server running on the network that it is installed on. When this option is enabled, the Cisco Intersight Virtual Appliance is equipped to handle IP address updates through DHCP, subject to lease requirements.

**Attention** For a single-node appliance, ensure that the following requirements are met for using DHCP:

- If you use DHCP, ensure that the IP address returned to the appliance VM resolves to the **same FQDN** you use to set up the appliance. Cisco recommends that you configure your DHCP to return the same IP address for the appliance VM, and not change your IP address frequently.
- The appliance only reads the IP address, netmask, gateway, and DNS-Servers from the DHCP lease information. NTP information for the KVM hypervisor must be input into the VMM console when configuring static IP.
- All IP addresses used in the appliance VM must be in the same subnet as that of the initial IP addresses assigned. For example, the VM cannot be assigned an IP from a different subnet, by connecting to a vSwitch which has a different DHCP server.

### Limitations

- A forced lease renewal could impact the VM configuration settings and could render the appliance unusable.

### Step 13

Proceed to `<https://fqdn-of-your-appliance>` to complete the post-install set-up of your appliance.

For information on how to complete the set-up of your appliance, see [Setting Up Intersight Virtual Appliance](#).

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**Troubleshooting Tip:** After providing the password and IP property parameters, if you notice that your VM does not respond when you visit `<https://fqdn-of-your-appliance>` after about 15 minutes, you can use the Intersight Appliance Maintenance Shell to troubleshoot networking or misconfiguration issues.

The diagnostic tool aims to:

- Detect and display issues with the installation prerequisites.
- Enable editing the inputs that are provided during the appliance image deployment.
- Assist with continuing the installation after you fix the settings, or set network interface properties such as IP addresses, subnet mask, and default gateway during the appliance image deployment.

For more information, see [Maintenance Shell for Intersight Virtual Appliance and Intersight Assist](#).

For a demonstration of the Intersight Virtual Appliance Installation and troubleshooting, watch [Cisco Intersight Appliance Installation and Debug](#).