



# Getting Started with the Cisco ACI HTML5 vCenter Plug-in

---

- [Getting Started with the Cisco ACI HTML5 vCenter Plug-in, on page 1](#)
- [Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in, on page 2](#)
- [Download the Cisco ACI HTML5 vCenter Plug-in Software \(for releases prior to ACI HTML Plug-in Release 1.0.6\), on page 2](#)
- [Download the Cisco ACI HTML5 vCenter Plug-in Software \(for ACI HTML Plug-in Release 1.0.6\), on page 3](#)
- [Install the Cisco ACI HTML5 vCenter Plug-in, on page 4](#)
- [Connecting the Cisco ACI HTML5 vCenter Plug-in to your Cisco ACI Fabric , on page 6](#)
- [Uninstalling the Cisco ACI HTML5 vCenter Plug-in, on page 9](#)

## Getting Started with the Cisco ACI HTML5 vCenter Plug-in

Getting started with the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in requires that you complete a series of steps:

- Fulfill all the prerequisites.  
See [Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in, on page 2](#).
- Download the Cisco ACI HTML5 vCenter plug-in software and save it on a web server (see download instructions based on the release, as indicated below).  
See [Download the Cisco ACI HTML5 vCenter Plug-in Software \(for releases prior to ACI HTML Plug-in Release 1.0.6\), on page 2](#).  
See [Download the Cisco ACI HTML5 vCenter Plug-in Software \(for ACI HTML Plug-in Release 1.0.6\), on page 3](#).
- Run the installation script so VMware vCenter can install and deploy the plug-in.  
See [Install the Cisco ACI HTML5 vCenter Plug-in, on page 4](#).
- Connect the plug-in to your Cisco ACI fabric in VMware vCenter.  
See [Connecting the Cisco ACI HTML5 vCenter Plug-in to your Cisco ACI Fabric , on page 6](#).

## Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in

Fulfill the following prerequisites before you install the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in.

- Ensure that you have a web server to host the Cisco ACI HTML5 vCenter plug-in file and that the VMware vCenter can reach it.
- Ensure that a Windows server with the VMware PowerCLI module is installed to run the installation script.
- Ensure that at least one virtual machine manager (VMM) domain exists between the Cisco APIC and the VMware vCenter where you will use the plug-in.

For more information, see the [Cisco Application Centric Infrastructure Fundamentals Guide](#).

- Ensure that you have the following software installed:
  - VMware vSphere Client: Version 6.7 Update 2 or Version 7.0.
  - VMware vCenter: Cisco APIC supports any version of Linux Appliance and Windows Server that VMware supports. See VMware documentation for details.
  - Cisco APIC: Release 3.2(2x) and later.
  - VMware PowerCLI: Version 11.2.0 or later.

In addition, so you can use the Cisco ACI HTML5 vCenter plug-in after it is installed, ensure that you have VMware vCenter credentials.

## Download the Cisco ACI HTML5 vCenter Plug-in Software (for releases prior to ACI HTML Plug-in Release 1.0.6)

This section describes how to download the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in. This procedure is applicable for releases prior to ACI HTML Plug-in release 1.0.6).

The following task is applicable for ACI HTML plug-in releases prior to release 1.0.6.

### Before you begin

You must have completed the tasks in the section [Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in, on page 2](#).

- 
- Step 1** Go to the Application Policy Infrastructure Controller (APIC) [Software Download page](#).
  - Step 2** In the **Select a Software Type** area, click **ACI vCenter plugin**.
  - Step 3** On the **ACI vCenter plugin** page, choose the desired release in the left-hand menu, and then choose and download the plug-in.

You must save the Cisco ACI HTML5 vCenter plug-in file on an HTTPS web server that the VMware vCenter can reach.

---

### What to do next

Install the Cisco ACI HTML5 vCenter plug-in in VMware vCenter. See [Install the Cisco ACI HTML5 vCenter Plug-in, on page 4](#).

## Download the Cisco ACI HTML5 vCenter Plug-in Software (for ACI HTML Plug-in Release 1.0.6)

This section describes how to download the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in.

The following task is applicable for ACI HTML plug-in release 1.0.6.

### Before you begin

Complete the tasks in the section [Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in, on page 2](#). Also, ensure that you have Python installed on your local machine. The minimum version required is Python 3. You can check if Python is installed on your machine using the following command:

```
$ python3 --version
Python 3.9.6
```

Beginning with Cisco ACI HTML5 vCenter Plug-in release 1.0.6, the ACI HTML5 plug-in zip file used for installing the plugin on vCenter (vcplugin-1.0.6.zip) is enclosed inside an outer zip file, vcplugin-rel-1.0.6.zip. Ensure to use the inner vcplugin-1.0.6.zip file with the install script to successfully install vcplugin, 1.0.6 on vCenter.

- 
- Step 1** Go to the Application Policy Infrastructure Controller (APIC) [Software Download page](#).
  - Step 2** In the **Select a Software Type** area, click **ACI vCenter plugin**.
  - Step 3** On the **ACI vCenter plugin** page, choose the desired release in the left-hand menu, and then choose and download the plug-in (vcplugin-rel-1.0.6.zip).
  - Step 4** Unzip the outer vcplugin-rel-1.0.6.zip file to extract the contents:

```
$ unzip vcplugin-rel-1.0.6.zip
Archive: vcplugin-rel-1.0.6.zip
extracting: vcplugin-1.0.6.zip
extracting: vcplugin-1.0.6.zip.signature
inflating: ACI_4070389ff0d61fc7fbb8cdfdec0f38f30482c22e.PEM inflating: cisco_x509_verify_release.py3
```

- Step 5** Verify the signature.  
Verify the signature for the release-key signed vcplugin image.

```
$ ./cisco_x509_verify_release.py3 -e ACI_4070389ff0d61fc7fbb8cdfdec0f38f30482c22e.PEM -i
vcplugin-1.0.6.zip -s vcplugin-1.0.6.zip.signature -v dgst -sha512
Retrieving CA certificate from https://www.cisco.com/security/pki/certs/crcam2.cer ...
Successfully retrieved and verified crcam2.cer.
```

```
Retrieving SubCA certificate from https://www.cisco.com/security/pki/certs/innerspace.cer ...
Successfully retrieved and verified innerspace.cer.
Successfully verified root, subca and end-entity certificate chain.
Successfully fetched a public key from ACI_4070389ff0d61fc7fbb8cdfdec0f38f30482c22e.PEM.
Successfully verified the signature of vcplugin-1.0.6.zip using
ACI_4070389ff0d61fc7fbb8cdfdec0f38f30482c22e.PEM
```

You must save the Cisco ACI HTML5 vCenter plug-in file on an HTTPS web server that the VMware vCenter can reach.

### What to do next

Install the Cisco ACI HTML5 vCenter plug-in in VMware vCenter. See [Install the Cisco ACI HTML5 vCenter Plug-in, on page 4](#).

## Install the Cisco ACI HTML5 vCenter Plug-in

This section describes how to install the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in so the VMware vCenter can deploy it.



**Note** The installation process is different for ACI HTML Plug-in Release 1.0.6 and releases prior to release 1.0.6. Check for release-specific information, as indicated.

### (for releases prior to ACI HTML Plug-in Release 1.0.6)

The plug-in (to install in VMware vCenter) is delivered in the format `vcplugin-1.0.x.zip`. You can also separately download the install/upgrade script, **ACIPlugin-Install.ps1**, and the uninstall script, **ACIPlugin-Uninstall.ps1**, from the same location as the plug-in file.

- README: Contains installation instructions and references to the documentation.
- vcenter-plugin-x.x.x.zip: Is the plug-in to install in VMware vCenter.
- ACIPlugin-Install.ps1: Is the script to manage the installation and upgrade of the plug-in.
- ACIPlugin-Uninstall.ps1: Is the script to manage uninstallation of the plug-in

**(for ACI HTML Plug-in Release 1.0.6)** The plug-in is delivered as a .zip archive in the format `vcplugin-rel-x.x.x.zip`. The archive includes the following:

- `vcplugin-x.x.x.zip`: Is the plug-in to install in VMware vCenter
- `ACI_4070389ff0d61fc7fbb8cdfdec0f38f30482c22e.PEM` : Public key for release signature validation
- `cisco_x509_verify_release.py3`: Python script for signature validation
- `vcplugin-1.0.6.zip.signature` : Signature file for plugin
- Download the installation scripts separately from Cisco.com:
  - `ACIPlugin-Install.ps1`: Is the script to manage the installation and upgrade of the plug-in.
  - `ACIPlugin-Uninstall.ps1`: Is the script to manage uninstallation of the plug-in

### Before you begin

- You must complete the tasks in the section [Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in](#), on page 2.
- You must download the Cisco ACI HTML5 vCenter plug-in; see [Download the Cisco ACI HTML5 vCenter Plug-in Software \(for releases prior to ACI HTML Plug-in Release 1.0.6\)](#), on page 2.
- You must download the Cisco ACI HTML5 vCenter plug-in; see [Download the Cisco ACI HTML5 vCenter Plug-in Software \(for ACI HTML Plug-in Release 1.0.6\)](#), on page 3.

**Step 1** Open a VMware PowerCLI console.

**Step 2** Run the installation script by completing the following steps:

- a) Run the `ACIPlugin-Install.ps1` script.
- b) When prompted, in the `vCenter IP / FQDN` field, enter the VMware vCenter where the plug-in needs to be installed.
- c) When prompted, in the `Plugin .zip file URL` field, enter the URL where the VMware vCenter will be able to download the plug-in.

Ensure you have not renamed the `.zip` file.

- d) In the console pop-up window, enter your credentials for the VMware vCenter.

You can use any VMware vCenter user credentials so long as you have the correct permissions to install the plug-in. Typically, you can use administrator credentials.

VMware vCenter installs and registers the Cisco ACI HTML5 vCenter plug-in.

**Note** During installation, you may see the following error on the console:

```
Error: Invalid server certificate. Use Set-PowerCLIConfiguration to set the value for the
InvalidCertificationAction option to Prompt if you'd like to connect once or to add a
permanent exception for this server.
```

To avoid seeing this error, enter the following command before installation:

```
Set-PowerCLIConfiguration -InvalidCertificateAction Ignore -Confirm:$false
```

**Step 3** Log into the VMware vSphere Client after the installation is completed.

The first login can take a while because the VMware vCenter downloads the Cisco ACI HTML5 vCenter plug-in from the web server and then deploys it.

Once the VMware vSphere Client loads, you can see the Home page. You can access the **Cisco ACI Fabric** in the left navigation area or from the **Menu** drop-down list at the top of the page. The **Cisco ACI Fabric** link is where you begin to manage your allows you to manage your Cisco ACI fabric.

**Note** After you install the Cisco ACI HTML5 vCenter plug-in, when you launch the VMware vSphere Client for the first time, you might see an error message asking you to reload the client. Click **Reload** to refresh the page; the error message will not appear again.

### What to do next

Connect the Cisco ACI HTML5 vCenter plug-in to a Cisco ACI fabric. See [Connecting the Cisco ACI HTML5 vCenter Plug-in to your Cisco ACI Fabric](#), on page 6.

# Connecting the Cisco ACI HTML5 vCenter Plug-in to your Cisco ACI Fabric

This section describes how to connect the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in to your Cisco ACI fabric. Once you have done so, you can use the plug-in to perform basic configurations in VMware vCenter.




---

**Note** The registration is VMware vCenter-wide and it does not take into account the user that performs it. It is a configuration for the whole VMware vCenter, not just for the logged-in user who performs it.

---

You can connect the plug-in to your Cisco ACI fabric, using one of the following ways:

- [Connect the Cisco ACI HTML5 vCenter Plug-in with a Self-Signed Certificate, on page 6](#)
- [Connect the Cisco ACI HTML5 vCenter Plug-in with Your Username and Password, on page 7](#)
- [Connect the Cisco ACI HTML5 vCenter Plug-in Using a Previous Login, on page 8.](#)




---

**Note** If you connect using a previous login, you can connect only a fabric that you have connected to previously. Connecting with an IP address or a self-signed certificate enable you to connect to a fabric that you have not connected to previously as well as one you have connected to.

---

## Connect the Cisco ACI HTML5 vCenter Plug-in with a Self-Signed Certificate

This section describes how to connect the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in to your Cisco ACI fabric using a self-signed certificate.

### Before you begin

You must have fulfilled the requirements in the section [Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in, on page 2.](#)

- 
- Step 1** Log into the VMware vSphere Client.
- Step 2** Click **Cisco ACI Fabric**, either in the left navigation pane or from the **Menu** pull-down menu.
- Step 3** In the upper right of the fabric work pane, click + **FABRIC**.  
The **Login to another Fabric** dialog box appears. It enables you to choose an authentication method and register your fabric with VMware vCenter.
- Step 4** In the **Login to another Fabric** dialog box, complete the following steps:
- a) In the **APIC IP / FQDN** area, in the **APIC IP / FQDN** field, enter your Cisco Application Policy Infrastructure Controller (APIC) IP address.
  - b) In the **Fabric Name** field, enter a name for the new fabric.
  - c) In the **CREDENTIALS** area, from the drop-down menu, choose **Generate self-signed certificate**.

- d) In the **Username** field, enter the username that you want to use for the certificate.
- e) In the **Certificate name** field, enter a name for the certificate.
- f) Click **GENERATE**.  
The dialog box displays a message that the certificate was generated successfully, followed by the text of the certificate itself.
- g) Copy the certificate, making sure to include `-----BEGIN CERTIFICATE-----` and `-----end CERTIFICATE-----`.

**Step 5**

Log in to Cisco APIC.

Do not log out of or close VMware vCenter.

**Step 6**

Go to **Admin > AAA > Users**.

**Step 7**

In the **Users** work pane, in the **Login ID** column, click **admin**.  
The **Local admin - user** dialog box opens.

**Step 8**

Click the task icon at the upper right of the dialog box and then choose **Create X509 Certificate** from the drop-down menu.

**Step 9**

In the **Create X509 Certificate** dialog box, complete the following steps:

- a) In the **Name** field, enter the name of the certificate.
- b) In the **Data** field, paste the certificate that you copied earlier.
- c) Click **Submit**.

**Step 10**

In VMware vCenter, in the **Login to another Fabric** dialog box, click **CHECK CONNECTION**.  
You should see a message saying that the connection was successful.

**Step 11**

In the message box, in the **Passphrase** field, enter a passphrase to encrypt the private key, which is stored in VMware vCenter.

**Step 12**

Click **CONNECT TO APIC**.  
The work pane displays information about the fabric.

**Step 13**

Verify that the fabric is registered in vCenter:

- a) In the fabric work pane, open the **ACI Tasks & Settings** pane by clicking the clipboard icon at the upper right.
- b) Look at the queue of tasks and settings for a **Register Fabric** entry showing the name of the new fabric as an object and the time that the fabric was registered.

---

**What to do next**

See the other sections in this guide for information about Cisco ACI HTML5 vCenter plug-in and tasks that you can perform with the plug-in.

## Connect the Cisco ACI HTML5 vCenter Plug-in with Your Username and Password

This section describes how to connect the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in to your Cisco ACI fabric using your Cisco Application Policy Infrastructure Controller (APIC) username and password.

**Before you begin**

You must have fulfilled the requirements in the section [Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in](#), on page 2.

- 
- Step 1** Log into the VMware vSphere Client.
- Step 2** Click **Cisco ACI Fabric**, either in the left navigation pane or from the **Menu** pull-down menu.
- Step 3** In the upper right of the fabric work pane, click + **FABRIC**.  
The **Login to another Fabric** dialog box appears. It enables you to choose an authentication method and register your fabric with VMware vCenter.
- Step 4** In the **Login to another Fabric** dialog box, complete the following steps:
- In the **APIC IP / FQDN** area, in the **APIC IP / FQDN** field, enter your Cisco APIC IP address.
  - In the **Fabric Name** field, enter a name for the new fabric.
  - In the **CREDENTIALS** area, in the **User Name** field, enter your Cisco APIC username.
  - In the **Password** field, enter your Cisco APIC password.
  - Click **CONNECT TO APIC**.  
The work pane displays information about the fabric.
- Step 5** Verify that the fabric is registered in vCenter:
- In the fabric work pane, open the **ACI Tasks & Settings** pane by clicking the clipboard icon at the upper right.
  - Look at the queue of tasks and settings for a **Register Fabric** entry showing the name of the new fabric as an object and the time that the fabric was registered.
- You can also see the fabric from the **Fabric** drop-down list.
- 

### What to do next

See the other sections in this guide for information about Cisco ACI HTML5 vCenter plug-in and tasks that you can perform with the plug-in.

## Connect the Cisco ACI HTML5 vCenter Plug-in Using a Previous Login

This section describes how to connect the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in to your Cisco ACI fabric using previously used login credentials.



---

**Note** You cannot connect using this procedure when you use the Cisco ACI HTML5 vCenter plug-in for the first time. Even if you used a previous version of the plug-in on the same VMware vCenter, the cached settings are not available in the new version of the plug-in.

---

### Before you begin

You must have fulfilled the requirements in the section [Prerequisites for Installing the Cisco ACI HTML5 vCenter Plug-in, on page 2](#).

---

- Step 1** Log into the VMware vSphere Client.
- Step 2** Click **Cisco ACI Fabric**, either in the left navigation pane or from the **Menu** pull-down menu.
- Step 3** In the upper right of the fabric work pane, click + **FABRIC**.



The **Login to another Fabric** dialog box appears. It enables you to choose an authentication method and register your fabric with VMware vCenter.

**Step 4** In the **History** area, click a login that was used previously to connect to a fabric.

**Step 5** In the **Connect to** dialog box, complete the following steps:

- a) In the **Fabric Name** field, enter the name of the fabric you previously connected to.
- b) In the **Password** field, enter the password that you previously used to connect to fabric.

The user name and the Cisco Application Policy Infrastructure Controller (APIC) IP address used in the previous login are cached and added to the dialog box fields automatically.

- c) Click **CONNECT**.  
The work pane displays information about the fabric.

**Step 6** Verify that the fabric is registered in vCenter:

- a) In the fabric work pane, open the **ACI Tasks & Settings** pane by clicking the clipboard icon at the upper right.
- b) Look at the queue of tasks and settings for a **Register Fabric** entry showing the name of the new fabric as an object and the time that the fabric was registered.

---

### What to do next

See the other sections in this guide for information about Cisco ACI HTML5 vCenter plug-in and tasks that you can perform with the plug-in.

## Uninstalling the Cisco ACI HTML5 vCenter Plug-in

You can uninstall the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in by accessing a URL or by running a script.

### Uninstall the Cisco ACI HTML5 vCenter Plug-in Using a Script

Complete this procedure to delete the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in.

---

**Step 1** Open a VMware PowerCLI console.

**Step 2** Execute the `ACIPlugin-Uninstall.ps1` script.

**Example:**

```
.\ACIPlugin-Uninstall.ps1
```

**Step 3** When prompted, provide the VMware vCenter IP address or fully qualified domain name (FQDN).

**Step 4** In the pop-up window, provide your VMware vCenter credentials with administrator rights. The Cisco ACI HTML5 vCenter plug-in uninstalls.

**Step 5** Log in into the VMware vSphere Client and make sure that the plug-in is no longer there.

If you were already logged in to the VMware vSphere Client, log out and log in again.

**Step 6** Restart your vsphere-ui service:

For Linux server:

```
service-control --stop vsphere-ui
service-control --start vsphere-ui
```

For Windows server:

```
cd C:\Program Files\VMware\vCenter Server\bin
service-control --stop vsphere-ui
service-control --start vsphere-ui
```

---

## Uninstall Cisco ACI HTML5 vCenter Plug-in Using a URL

Complete this procedure to delete the Cisco Application Centric Infrastructure (ACI) HTML5 vCenter plug-in.

---

**Step 1** Enter the following URL in your browser:

```
https://vCenter_IP_address/mob/?moid=ExtensionManager&method=unregisterExtension
```

When prompted, log in with your VMware vCenter credentials.

**Step 2** In the **Parameters** section, in the **Value** field, enter **com.cisco.aci.vcplugin**, and then click **Invoke Method**.

**Step 3** Log into the VMware vSphere Client and ensure that the **Cisco ACI Fabric** is not present in the GUI.

**Note** If you were already logged into the VMware vSphere Client, you must log out and log back in to ensure that the **Cisco ACI Fabric** is not present.

**Step 4** Restart your vsphere-ui service:

For Linux server:

```
service-control --stop vsphere-ui
service-control --start vsphere-ui
```

For Windows server:

```
cd C:\Program Files\VMware\vCenter Server\bin
service-control --stop vsphere-ui
service-control --start vsphere-ui
```

---