Cisco SD-WAN Control Components Certificate Management

SD-WAN Control Components certificate management feature history

Table 1: Feature History

Feature Name	Release Information	Description
SD-WAN Control Components Certificate Management workflow	Cisco IOS XE Catalyst SD-WAN Release 17.18.1a Cisco Catalyst SD-WAN Control Components Release 20.18.1	The Control Components Certificate Management workflow updates the authentication certificates for SD-WAN Control Components in the fabric. This is useful for updating certificates before they expire.

Control Components Certificate Management workflow

The Control Components Certificate Management Workflow in Cisco SD-WAN Manager is a step-by-step interactive procedure (called a workflow) that updates the authentication certificates for SD-WAN Control Components.

Cisco Catalyst SD-WAN uses authentication certificates to authenticate components when establishing control connections between SD-WAN Control Components, or between SD-WAN Control Components and edge devices. SD-WAN Manager can manage the certificates installed on components in the network:

- SD-WAN Control Components
- WAN edge devices

Certificates expire and require renewal. Use this SD-WAN Manager workflow to renew the certificates for SD-WAN Control Components.

Expired certificates

From SD-WAN Control Components 20.18.1, control connections between SD-WAN Control Components and edge devices remain operational even when the certificates on SD-WAN Control Components have expired. Control connections may also successfully re-establish after being manually cleared, including connections to SD-WAN Controllers with expired certificates. This maintains the functionality of the fabric.

Supported environments for the Control Components Certificate Management workflow

The workflow applies to Cisco Catalyst SD-WAN environments in which you manage the SD-WAN Control Components.

Supported components for the Control Components Certificate Management workflow

- Cisco SD-WAN Manager
- Cisco SD-WAN Controller
- Cisco SD-WAN Validator

Renew Certificates using the Control Components Certificate Management workflow

The Control Components Certificate Management workflow provides two methods:

- **Auto**: For each selected SD-WAN Control Component, SD-WAN Manager generates a certificate signing request (CSR), sends the CSR to the certificate authority (CA) for signing, then installs the signed certificate on the component.

  The **Auto** option is available if you have selected one of the Cisco PKI, EST, or SCEP options in **Administration** > **Settings** > **Certificate settings**.

- **Manual**: For each selected SD-WAN Control Component, SD-WAN Manager generates a certificate signing request (CSR) for you to download. Then you manually handle the certificate signing and re-upload the signed certificate. The workflow then installs the signed certificate on the component.

Before you begin

For the automatic certificate signing option that occurs in the workflow, two prerequisites apply. Without these, only a manual signing option is available in the workflow. Here are the prerequisites:

- Smart Account and Virtual Account

  In Cisco Catalyst SD-WAN Manager Release 20.18.1 and earlier, enter Smart Account and Virtual Account details in Cisco SD-WAN Manager.

  1. From the Cisco SD-WAN Manager menu, choose **Administration** > **Settings** > **Smart Account Credentials**.
  2. Enter your Smart Account or Virtual Account credentials in the **Username** and **Password** fields.

- Register Plug-and-Play

  From Cisco Catalyst SD-WAN Manager Release 20.18.2, service providers in a multitenant environment and tenant in a single-tenant environment must register the Plug-and-Play service.

- Certificate signing by Cisco

  1. From the Cisco SD-WAN Manager menu, choose **Administration** > **Settings** > **Certificate settings**.
  2. Click **Control Components**.
  3. Change **Certificate Signing by** to **Cisco**.

Procedure

Step 1 Do one of these to launch the Control Components Certificate Management workflow:

- Launch from the workflow library.
  a. From the Cisco SD-WAN Manager menu, choose **Workflows** > **Workflow Library**.
  b. Launch the Control Components Certificate Management workflow.

- Launch from the **Control Components** page.
  a. From the Cisco SD-WAN Manager menu, choose **Configuration** > **Devices** > **Control Components**.
  b. Click **Certificate management** to launch the Control Components Certificate Management workflow.

Step 2 Choose **Auto** or **Manual**, select the desired SD-WAN Control Components, and proceed according to the instructions in the workflow.

For the **Manual** option:

- File formats

  If you use the **Manual** option, which requires you to complete the signing for each certificate manually, outside of SD-WAN Manager, add the signed certificates to a single archive file to upload at the required step. The workflow supports these file formats for upload:

  - zip

- pem
- crt
- cer

If you are renewing certificates for multiple SD-WAN Control Components simultaneously, we recommend using the zip format so that you can combine all certificates into a single zip file to upload.

- Signed certificates

  If you use the **Manual** option, which requires you to complete the signing for each certificate manually, the archive file that you upload with the signed certificates must include a signed certificate for each selected SD-WAN Control Component. If the uploaded file does not contain signed certificates for each, the workflow does not proceed.