Collect an Admin-Tech in an SD-WAN Environment and Upload It to a TAC Case

Contents

Introduction

This document describes how to initiate an admin-tech in an Software-Defined Wide Area Network (SD-WAN) environment. This is intended to help to capture information for the Technical Assistance Center (TAC) in order to assist it to troubleshoot an issue. It helps to capture the admin-tech in the problem state. It covers the usage of the vManage GUI and CLI, Edge device CLI, and the upload of the admin-tech directly into the Cisco TAC case with the use of the token mechanism.

Prerequisites

Requirements

Cisco recommends that you have knowledge of Cisco SD-WAN.

Components Used

The information in this document is based on Cisco vManage.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

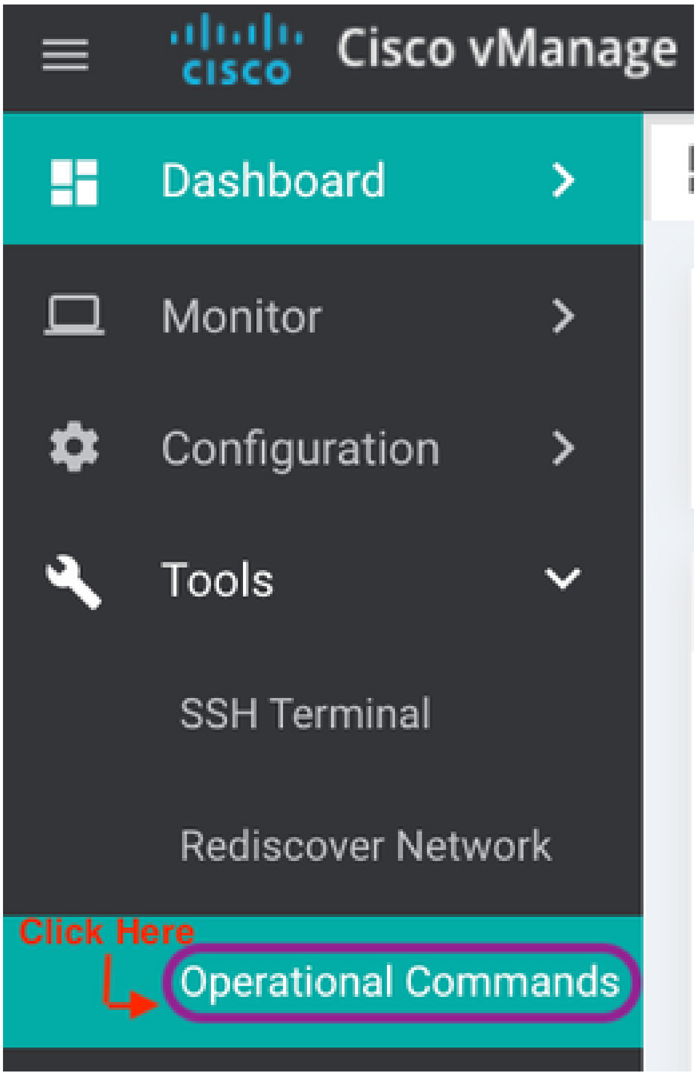
Generate Admin-Tech

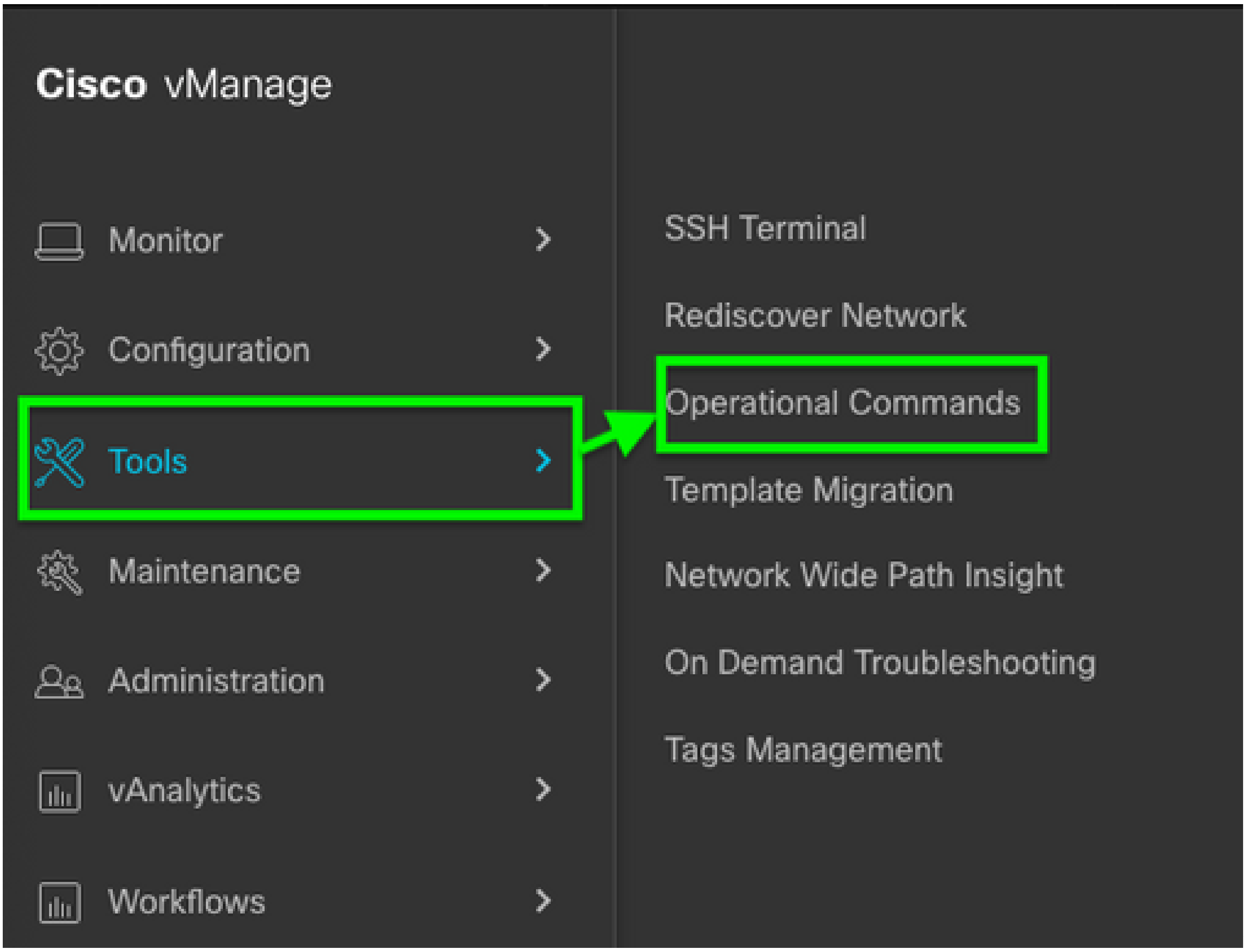
Scenario 1. From vManage for Device Online

Step 1. Log in to vManage.

Step 2. Navigate to **Tools > Operational Commands.**

> **Note:** Admin-Tech is generated by a user that has **netadmin** rights or with a custom **usergroup** user that has write access to **Tools.**

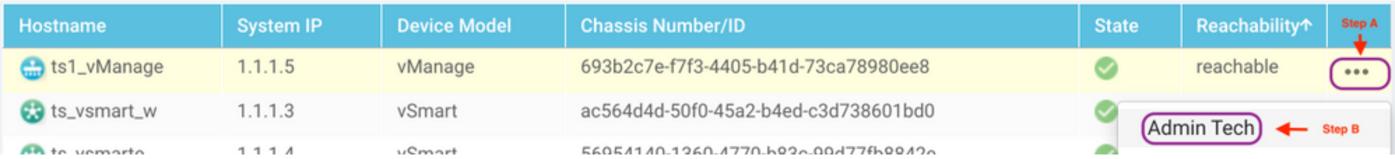




vManage 20.7.x and later

Step 3. Click the **...** (three dots) for the device for which admin-tech needs to be generated (Step A).

Step 4. Click **Admin Tech** (Step B) as shown in the image.



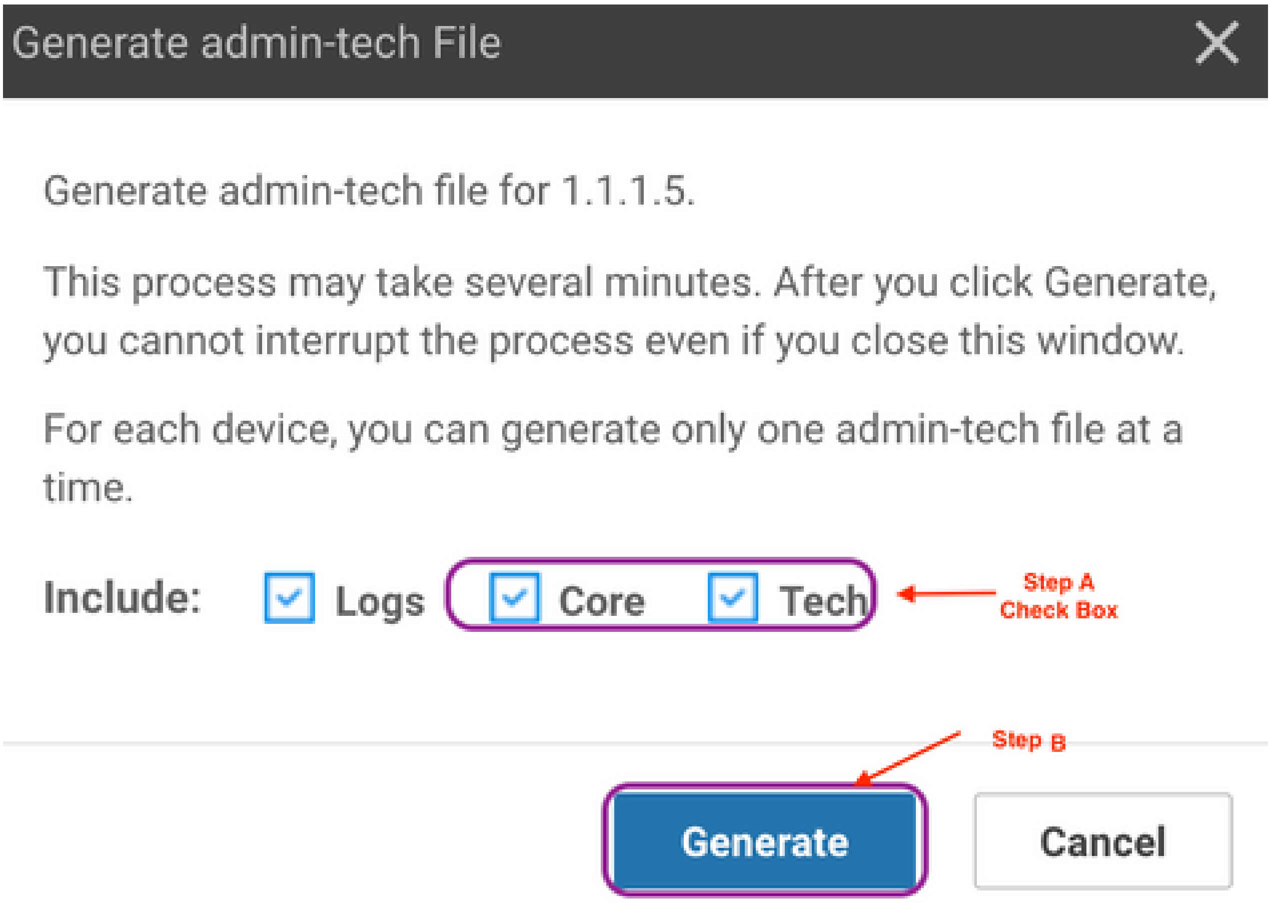
Hostname	System IP	Device Model	Chassis Number/ID	State	Reachability↑	
ts1_vManage	1.1.1.5	vManage	693b2c7e-f7f3-4405-b41d-73ca78980ee8	✓	reachable	•••
ts_vsmart_w	1.1.1.3	vSmart	ac564d4d-50f0-45a2-b4ed-c3d738601bd0	✓		
ts_vsmarts	1.1.1.4	vSmart	56954140-1360-4770-b83c-99d77fb8842e	✓		

Step 5. Check the relevant check boxes, as shown in the image.

> **Note:** If the device has crashed, choose the **Core** option as shown. The core files, once collected via admin-tech, can be removed from the device in question. If it is not a crash, **Logs** and **Tech** are the minimum that need to be selected in order to generate an admin-tech.

Step 6. Click **Generate**.

> **Note:** Close the pop-up window since it takes a while to generate an **admin-tech.** Thd duration depends upon the log size of each device.



Generate admin-tech File

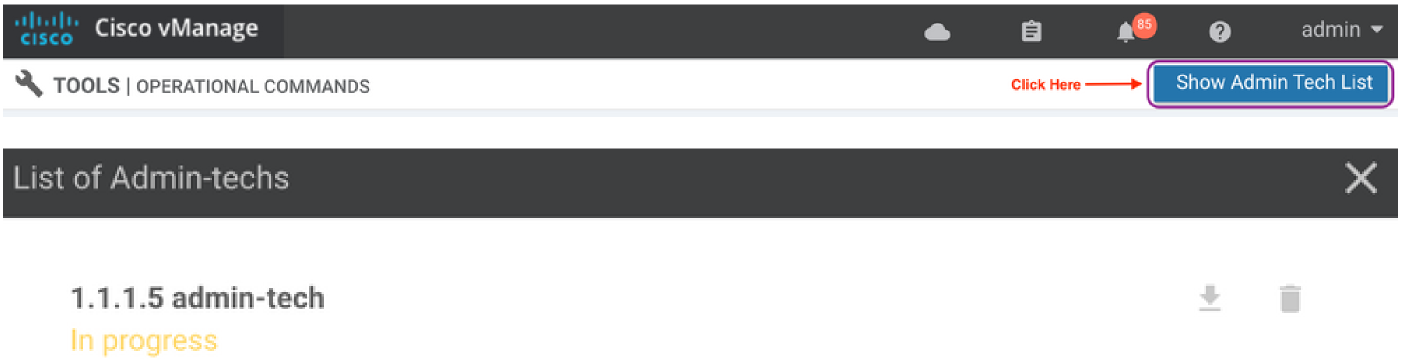
Generate admin-tech file for 1.1.1.5.

This process may take several minutes. After you click Generate, you cannot interrupt the process even if you close this window.

For each device, you can generate only one admin-tech file at a time.

Include: ☑ Logs ☑ Core ☑ Tech

Step 7. Click **Show Admin Tech List** as shown in the image.

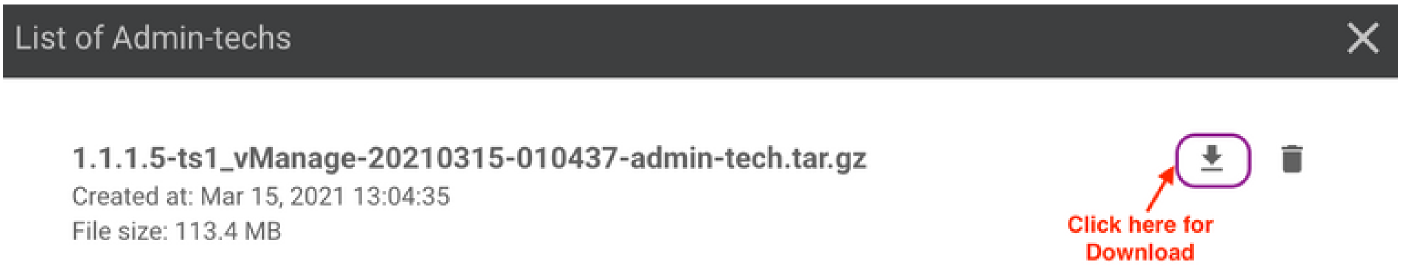


List of Admin-techs

1.1.1.5 admin-tech

In progress

Step 8. Click the **Download** icon.



List of Admin-techs

1.1.1.5-ts1_vManage-20210315-010437-admin-tech.tar.gz

Created at: Mar 15, 2021 13:04:35

File size: 113.4 MB

Download it from the local system and upload it to a Service Request (SR).

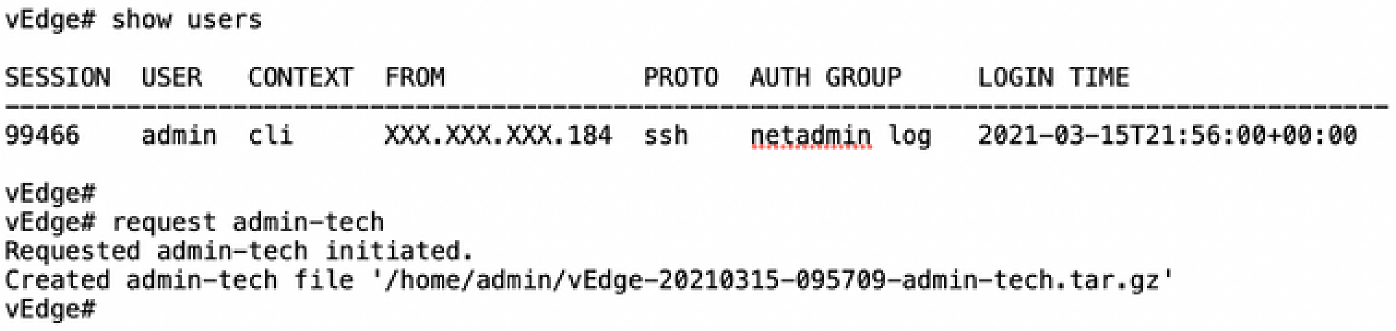
Scenario 2. From the CLI for Device Unreachable from vManage

Step 1. Log in to vEdge via Secure Shell (SSH).

```
ssh -l <username> <IP-Address>
```

> **Note**: Admin-tech is generated by a user that has netadmin rights. Enter the **show users** command in the CLI in order to show the group the user belongs to.

Step 2. Enter the **request admin-tech** command as shown in this image.



```
vEdge# show users

SESSION  USER   CONTEXT  FROM             PROTO  AUTH GROUP    LOGIN TIME
------------------------------------------------------------------------------------------
99466    admin  cli      XXX.XXX.XXX.184  ssh    netadmin log  2021-03-15T21:56:00+00:00

vEdge#
vEdge# request admin-tech
Requested admin-tech initiated.
Created admin-tech file '/home/admin/vEdge-20210315-095709-admin-tech.tar.gz'
vEdge#
```

Step 3. Copy the **admin-tech** from the **/home/admin/<dated-time-admin-tech.tar.gz>** directory.

For example, if the local user is **johndoe**, admin-tech is placed in the **/home/johndoe/** directory. If the **netadmin** group user is authenticated against the RADIUS or TACACS central authentication server, admin-tech is found in the **/home/basic/** directory by default.

> **Note**: Windows users use the WINSCP application in order to copy to the local system.

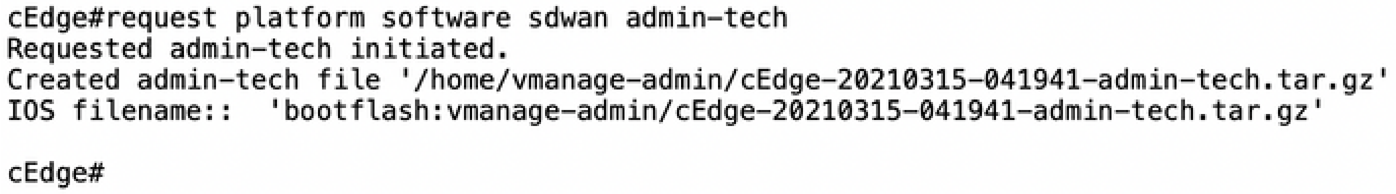
> **Note**: Linux users use the **scp** command in order to copy the admin-tech to a reachable system. The command syntax is: **scp /home/admin/** @

Scenario 3. From the CLI for cEdge

Step 1. Log in to cEdge via SSH.

```
ssh -l <username> <IP-Address>
```

Step 2. Enter the **request platform software sdwan admin-tech** command.

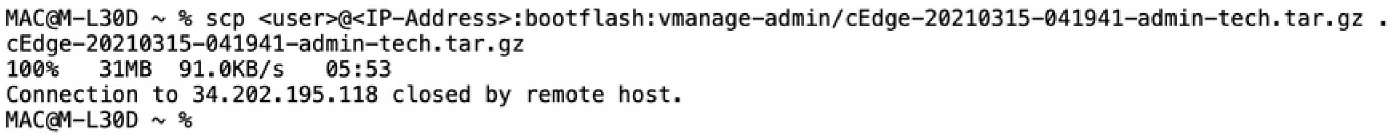


```
cEdge#request platform software sdwan admin-tech
Requested admin-tech initiated.
Created admin-tech file '/home/vmanage-admin/cEdge-20210315-041941-admin-tech.tar.gz'
IOS filename::  'bootflash:vmanage-admin/cEdge-20210315-041941-admin-tech.tar.gz'

cEdge#
```

Step 3. Copy the admin-tech to TFTP, FTP, SCP to the external server.

An example of SCP from the local system is shown here.

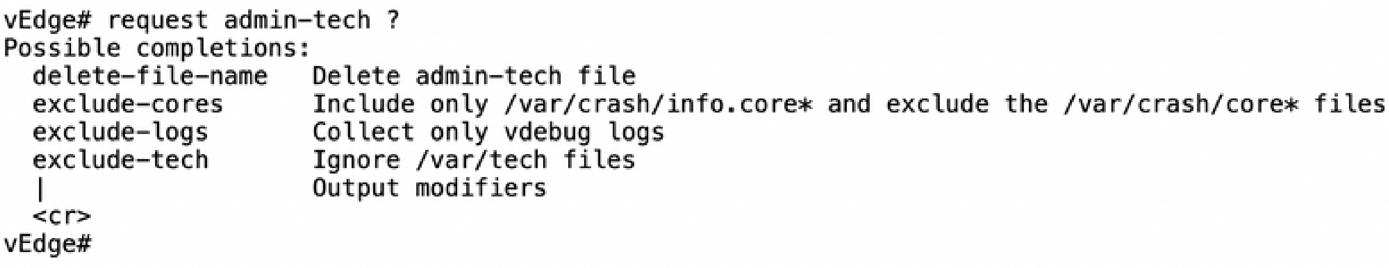


```
MAC@M-L30D ~ % scp <user>@<IP-Address>:bootflash:vmanage-admin/cEdge-20210315-041941-admin-tech.tar.gz .
cEdge-20210315-041941-admin-tech.tar.gz
100%   31MB  91.0KB/s   05:53
Connection to 34.202.195.118 closed by remote host.
MAC@M-L30D ~ %
```

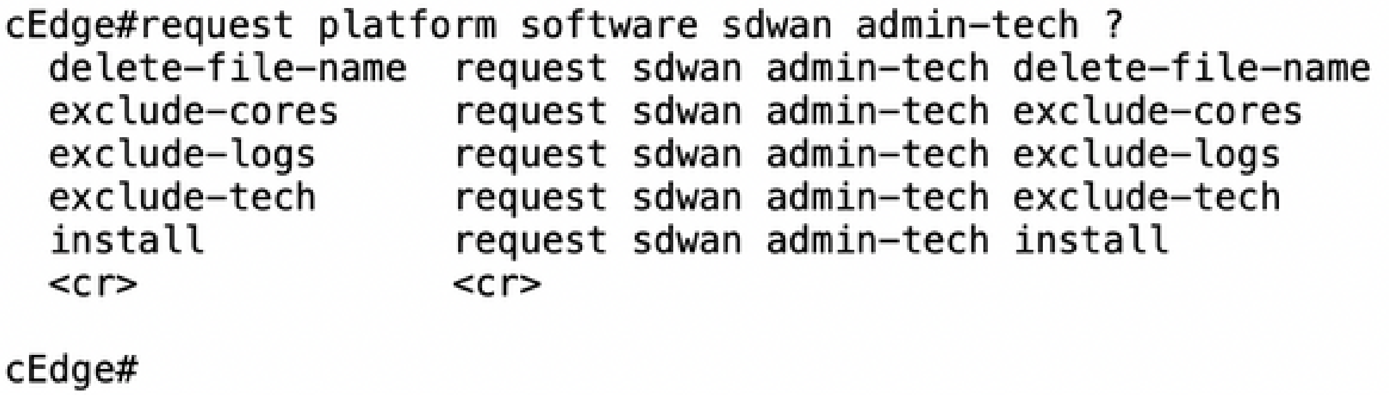
Additional Notes

> **Note**: In Release 20.1.x and later, the option to exclude specific files from the admin-tech from the CLI is available.

vEdge:



```
vEdge# request admin-tech ?
Possible completions:
  delete-file-name   Delete admin-tech file
  exclude-cores      Include only /var/crash/info.core* and exclude the /var/crash/core* files
  exclude-logs       Collect only vdebug logs
  exclude-tech       Ignore /var/tech files
  |                  Output modifiers
  <cr>
vEdge#
```



```
cEdge#request platform software sdwan admin-tech ?
  delete-file-name   request sdwan admin-tech delete-file-name
  exclude-cores      request sdwan admin-tech exclude-cores
  exclude-logs       request sdwan admin-tech exclude-logs
  exclude-tech       request sdwan admin-tech exclude-tech
  install            request sdwan admin-tech install
  <cr>               <cr>

cEdge#
```

Transfer Admin-Tech Directly into a Cisco SR

In order to troubleshoot SD-WAN related issues, upload the admin-tech directly from vManage to a Cisco SR. You can find it hard to download the rather bulky file to your own workstation when you are remote from the controller. After the slow download, you then need to upload the file to the SR, which is again a slow process. This procedure describes how to achieve it via the GUI and CLI on vManage.

Prerequisites

For the upload to work, the vManage requires connectivity to the public Internet. Cisco cloud-hosted vManage controllers have such capability. The user needs to have netadmin privileges to be able to request an admin-tech. You can only transfer one admin-tech into the SR at a time. For the upload to the SR, you need the SR number and an upload token. More information on different ways to upload is explained in Customer File Uploads to Cisco Technical Assistance Center. The Customer eXperience Drive (CXD) procedure is used in the example.

Retrieve the Upload Token for an SR

Use SCM to Get the Token

When an SR is opened, CXD automatically generates an upload token and inserts a note in the SR which contains the token and some details on how to use the service.

In order to retrieve the upload token, complete these steps:

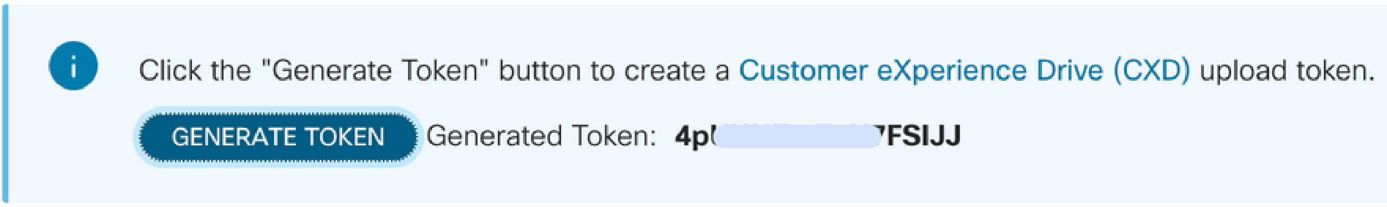
Step 1. Log in to SCM.

Step 2. Open the desired case to get the upload token for.

Step 3. Click the **Attachments** tab.

Step 4. Click **Generate Token.** Once the token is generated, it is displayed to the right of the **Generate Token** button.

> **Notes**:
> - The Username is always the SR number. The term "password" and "token" refer to the upload token, which is used as a password when prompted by CXD.
> - The note is attached automatically within a few minutes to the SR. If the user cannot find the note, they can contact the SR Owner and the token can be generated manually.



Click the "Generate Token" button to create a Customer eXperience Drive (CXD) upload token.

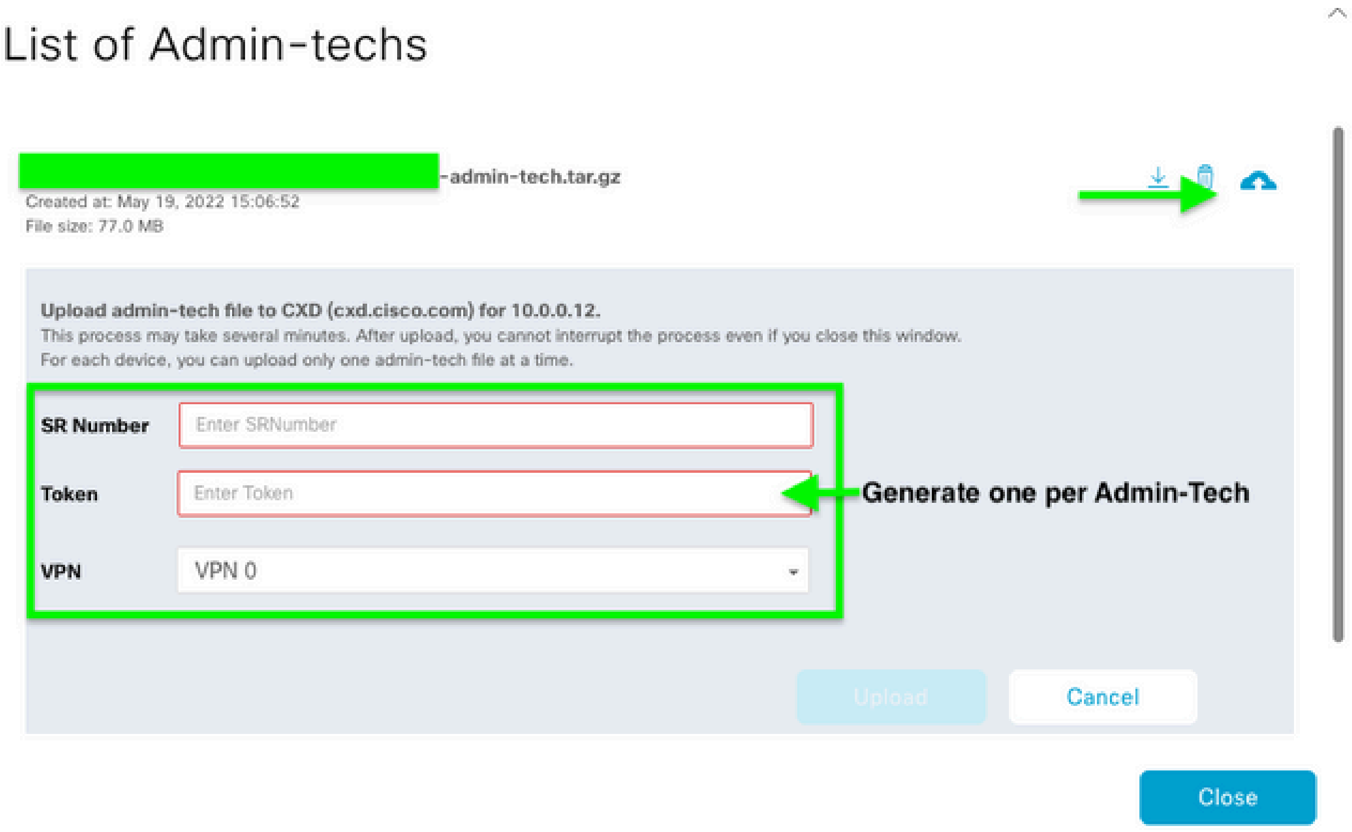
Generated Token: **4p[redacted]FSIJJ**

Upload Admin-Tech to an SR

vManage GUI

For vManage 20.7.x and later, perform steps 1-7 in **Scenario 1. From vManage for Device Online**.

Once step 7 is complete, and the admin-tech has been generated, click the **cloud** icon, fill in the information (SR Number, Token, and VPN 0 or 512) and click **Upload**.



List of Admin-techs

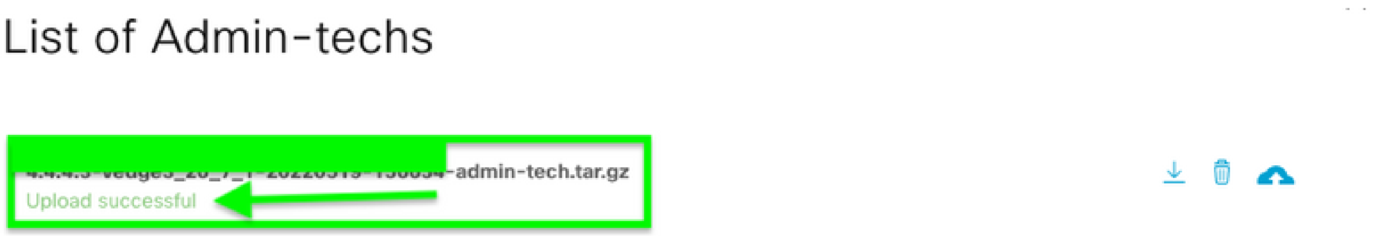
[redacted]-admin-tech.tar.gz
Created at: May 19, 2022 15:06:52
File size: 77.0 MB

Upload admin-tech file to CXD (cxd.cisco.com) for 10.0.0.12.
This process may take several minutes. After upload, you cannot interrupt the process even if you close this window.
For each device, you can upload only one admin-tech file at a time.

SR Number: Enter SRNumber
Token: Enter Token
VPN: VPN 0

Generate one per Admin-Tech

After you click **Upload** , the "**Upload successful**" message is displayted to let you know that the admin-tech was successfully uploaded to the SR.



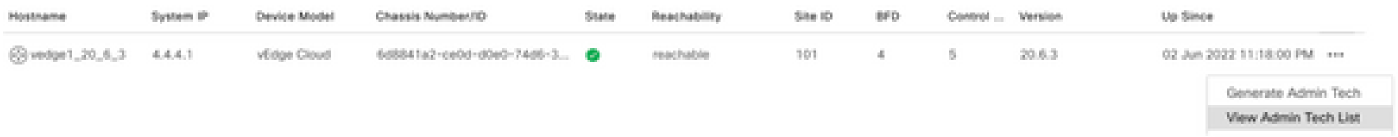
List of Admin-techs

[redacted]-admin-tech.tar.gz
Upload successful

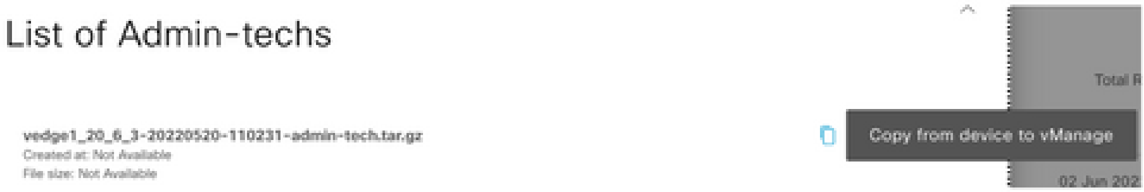
Also, now we have the ability on the vManage to fetch the **admin-tech** from the Edge devcie, if the **admin-tech** is already there on the device. It could be that the admin-tech has been generated via the CLI on the device. On vManage, now you can use the copy option to copy the the image into vManage and subsequently use it to upload directly into the Cisco SR case, as mentioned previously.

Additional information is provided here.

You can see the admin-techs on the device via:



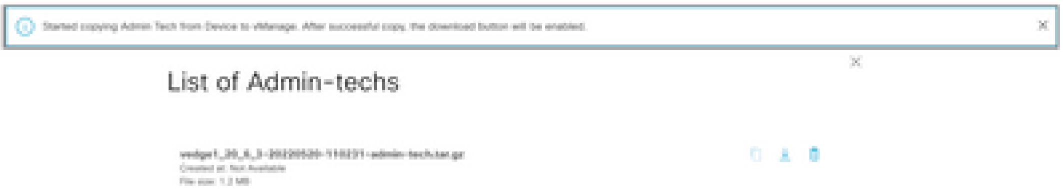
Hostname	System IP	Device Model	Chassis Number/ID	State	Reachability	Site ID	BFD	Control ...	Version	Up Since
vedge1_20_6_3	4.4.4.1	vEdge Cloud	6d8841a2-ce0d-d0e0-74d6-3...	●	reachable	101	4	5	20.6.3	02 Jun 2022 11:18:00 PM



List of Admin-techs

vedge1_20_6_3-20220520-110231-admin-tech.tar.gz
Created at: Not Available
File size: Not Available

Once the download is initiated / completed:

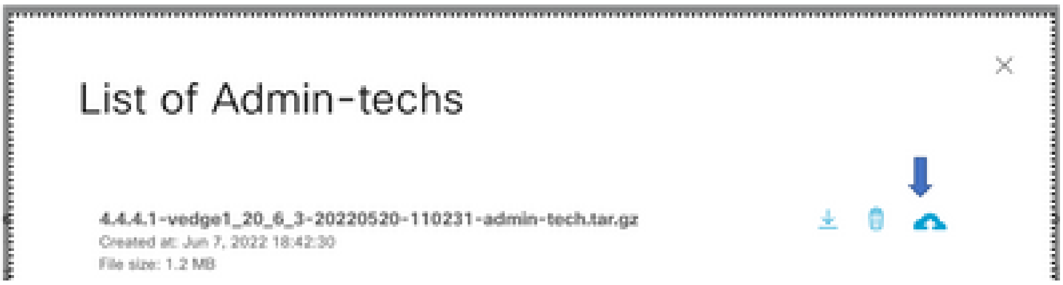


Started copying Admin Tech from Device to vManage. After successful copy, the download button will be enabled.

List of Admin-techs

vedge1_20_6_3-20220520-110231-admin-tech.tar.gz
Created at: Not Available
File size: 1.2 MB

The list of admin-techs shows the downloaded one. You can use the **Cloud** icon to upload it into the Cisco SR.



List of Admin-techs

4.4.4.1-vedge1_20_6_3-20220520-110231-admin-tech.tar.gz
Created at: Jun 7, 2022 18:42:30
File size: 1.2 MB

In Release 20.6.x and later, if the vManage is in a Cluster mode, you can generate admin-techs across all the vManage nodes with the **Generate Admin Tech for vManage** option under **Tools > Operational Commands.**

Generate Admin Tech for vManage

Once generated, you can use the previous steps to upload the admin-techs directly to the TAC Case.

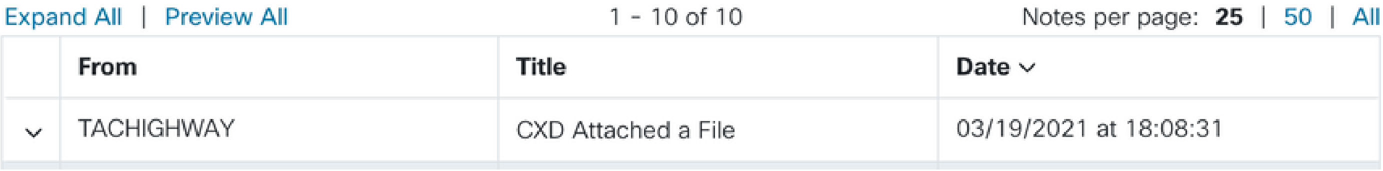
vManage CLI

Specific to vManage only, once **request admin-tech** is used via the CLI to generate the admin-tech and it is completed, you can enter the **request upload** command. Use this syntax in this example. Once prompted for the password, enter the token you retrieved earlier.

```
vManage# request upload vpn 512 scp://69094XXXX@cxd.cisco.com:/test.file test.file
69094XXXX@cxd.cisco.com's password:
test.file                100%    21     0.3KB/s    00:00
vManage#
```

Verify the Case Attachment

Verify the admin-tech has been uploaded to the case with the use of SCM.



Expand All | Preview All   1 - 10 of 10   Notes per page: **25** | 50 | All

	From	Title	Date ⌄
⌄	TACHIGHWAY	CXD Attached a File	03/19/2021 at 18:08:31