

Upgrade SD-WAN vEdge Routers

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Introduction

This document describes the process to upgrade the Software-Defined Wide Area Network (SD-WAN) vEdge routers.

Prerequisites

Cisco recommends that you have knowledge of these topics:

- Cisco Software-Defined Wide Area Network (SD-WAN)
- Cisco Software Central - download the Controllers software from software.cisco.com
- [Cisco SD-WAN Compatibility Matrix](#)

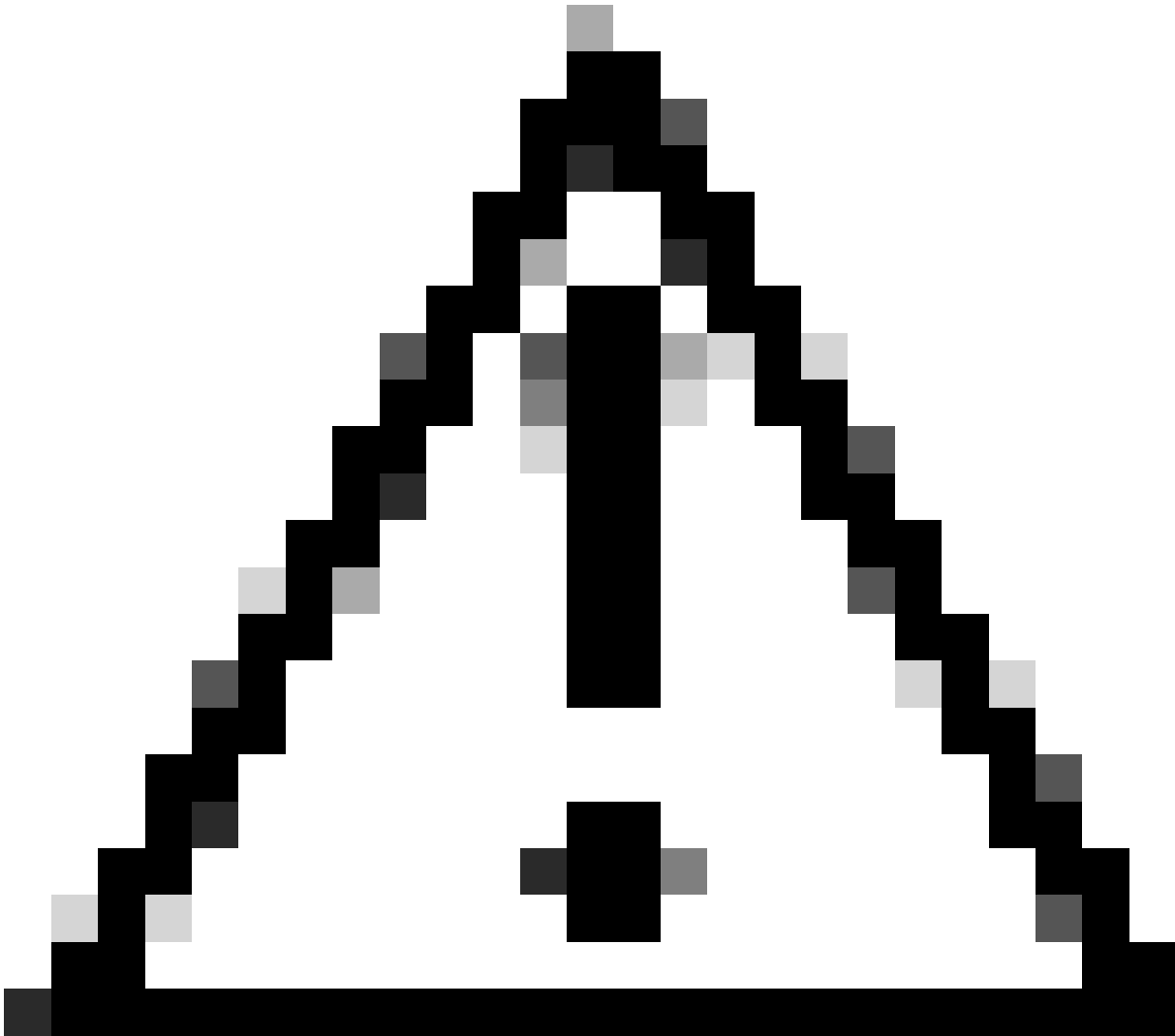
Components Used

Cisco vManage

Cisco vEdge Routers

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.

Pre-check to Perform Prior to vEdge Upgrade



Caution: If these prechecks are skipped, the vEdge upgrade could fail due to insufficient disk space.

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1. Verify the clock of the device is correct time.
 2. Verify the current version is the only one listed under **show software** command.

```
vedge# show software
```

```
VERSION ACTIVE DEFAULT PREVIOUS CONFIRMED TIMESTAMP
-----
20.9.4 true true false auto 2023-10-05T16:48:45-00:00
20.9.1 false false true user 2023-05-02T19:16:09-00:00
20.6.4 false false false user 2023-05-10T10:57:31-00:00
```

3. Verify the current version is set as default under **show software version** command.

```
vedge# request software set-default 20.9.4
status mkdefault 20.9.4: successful
vedge#
```

4. If more versions are listed, remove any versions not active with the command **request software remove <version>**. This increases the space available to proceed with the upgrade.

```
vedge# request software remove 20.9.4
status remove 20.9.4: successful
vedge-1# show software
VERSION   ACTIVE DEFAULT PREVIOUS CONFIRMED TIMESTAMP
-----
20.9.4   true  true   false   auto    2023-10-05T16:48:45-00:00
vedge-1#
```

5. Use **vShell** and command **df -h** in order to confirm there is enough free disk space to perform the upgrade.

```
vedge# vshel
vedge:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
none            1.4G  8.0K  1.4G   1% /dev
/dev/sda1       1013M  518M  445M  54% /boot
/dev/loop0      78M   78M   0 100% /rootfs.ro
/dev/sda2       6.0G  178M  5.5G   4% /rootfs.rw
aufs            6.0G  178M  5.5G   4% /
tmpfs           1.4G  300K  1.4G   1% /run
shm             1.4G   48K  1.4G   1% /dev/shm
tmp             600M   84K  600M   1% /tmp
tmplog         120M   37M   84M  31% /var/volatile/log/tmplog
svtmp          1.0M  312K  712K  31% /etc/sv
```

6. If /tmp is full, [open a TAC SR](#) to get assistance to clear space in the /tmp/tmp directory prior to the upgrade.

Upgrade vEdge Routers via the vManage Graphic User Interface (GUI)

1. Upload the new vEdge software to the vManage via **Maintenance > Software Repository**
2. Go to the vManage **Maintenance > Software Upgrade** page and select the device(s) you want to upgrade.
3. Click **Upgrade**, select the version from the drop down menu, and click **Upgrade**.
4. Navigate back to the same page. Choose the vEdge and then click **Activate**.



Note: You can combined steps 3 and 4 if you select the check box beside **Active and Reboot**.

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5. Navigate back to thevManage **Maintenance > Software Upgrade** page, select the device(s)
 6. Click **Set Default Version**, select the version from the drop down menu, and click **Set Default**.

Upgrade vEdge Routers via the CLI

1. Transfer the software to the router via scp, ftp or if applicable via USB.
2. Install the software via the **request software install <filepath>** command.

```
vedge2_20_6_3# request software install /home/admin/viptela-20.6.5-x86_64.tar.gz
```

3. Confirm software was installed with the **show software** command.

<#root>

vedge# show software

VERSION	ACTIVE	DEFAULT	PREVIOUS	CONFIRMED	TIMESTAMP
20.6.2	false	true	true	user	2022-01-28T21:25:12-00:00
20.6.3	true	false	false	user	2022-06-08T00:09:20-00:00
20.6.5	false	false	false	-	-

4. Activate the software via the **request software activate <version>** command

vedge# request software activate 20.6.5

5. Within 15 min of the upgrade, you need confirm the software upgrade via the **request software upgrade-confirm** command.

vedge# request software upgrade-confirm



Warning: Failure to confirm the upgrade prior to the expiration of the upgrade-confirm timer results in the device reverting to its previous software version. The upgrade confirm timer has a default duration of 15 minutes.

6. Set the newly installed version to be the default version using the **request software set-default <version>** command.

```
vedge# request software set-default 20.6.5
This will change the default software version.
Are you sure you want to proceed? [yes,NO] yes
vedge2_20_6_3# show software
```

VERSION	ACTIVE	DEFAULT	PREVIOUS	CONFIRMED	TIMESTAMP
20.6.2	false	false	false	user	2022-01-28T21:25:12-00:00
20.6.3	false	false	true	user	2022-06-08T00:09:20-00:00
20.6.5	true	true	false	user	2023-10-06T00:09:40-00:00

Post-Upgrade Validation

- Verify the control connections and BFD sessions
- Verify OMP routes and Service VPN routes - test end-to-end ping on every Service VPN segment between vEdge and Hub/other nodes

Troubleshoot

Incorrect Clock

If you received this error below, check that the clock of the device and confirm that it is set to the correct time.

The local time of vEdge router was incorrect and hence were getting following error message:

```
tar: md5sum: time stamp 2018-12-20 06:12:07 is 7096084.404035963 s in the future
tar: rootfs.img: time stamp 2018-12-20 06:11:44 is 7096048.610879825 s in the future
Bad signing cert
Signature verification failed.
```

Additional Troubleshooting

You can check the vdebug located in the /var/log/tmplog directory for errors regarding the upgrade.

Related Information

[Upgrade SD-WAN Controllers with the Use of vManage GUI or CLI](#)

[Video - Upgrade Cisco SD-WAN Edge Devices via CLI](#)

[Video - Upgrade Cisco SD-WAN Edge Devices from vManage GUI](#)

[Upgrade Cisco SD-WAN Edge Router with the Use of CLI or vManage](#)

[Technical Support & Documentation - Cisco Systems](#)