Integrate SD-WAN ISR1100 Routers from Viptela OS to Cisco IOS XE

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Introduction

This document describes the process to migrate SD-WAN ISR1100 router from Viptela OS to Cisco IOS® XE.

Prerequisites

Requirements

Cisco recommends that you have knowledge of Cisco Software-Defined Wide Area Network (SD-WAN).

Components Used

The information in this document is based on these software and hardware versions:

- vManage Version 20.6.3
- vBond Version 20.6.3
- vSmart Version 20.6.3
- ISR1100-4GLTE Version 20.4.1.2

The software image to use for migration is available from the Software Download page.

Cisco IOS XE: **isr1100be.universalk9.<release>.SPA.bin**

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.

Background

Specific requirements for this document include:

- Cisco vManage Release 20.4.1 or later
- Cisco Integrated Services Routers (ISR)1100 and ISR1100X Release 20.4.1 or later

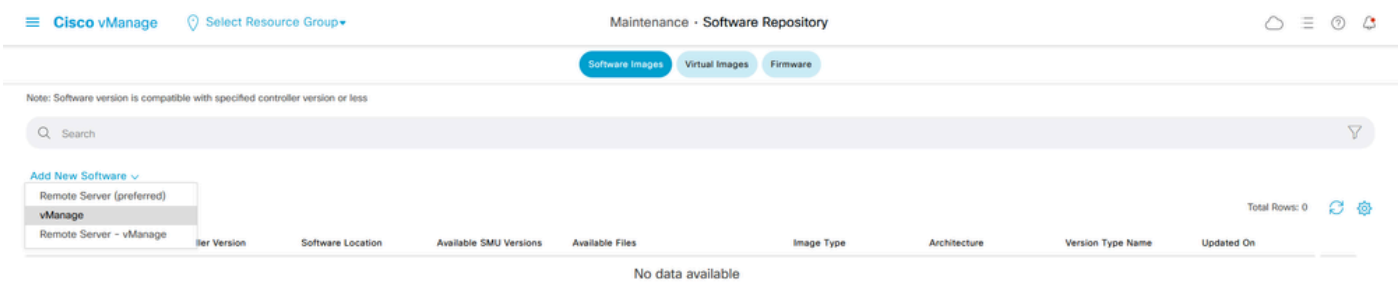
Migration between Viptela OS and Cisco IOS XE are supported in the listed platforms:

- Cisco ISR1100X-6G
- Cisco ISR1100X-4G
- Cisco ISR1100-6G
- Cisco ISR1100-4G
- Cisco ISR1100-4GLTE (Cisco ISR1100-4GLTENA and Cisco ISR1100-4GLTEGB)

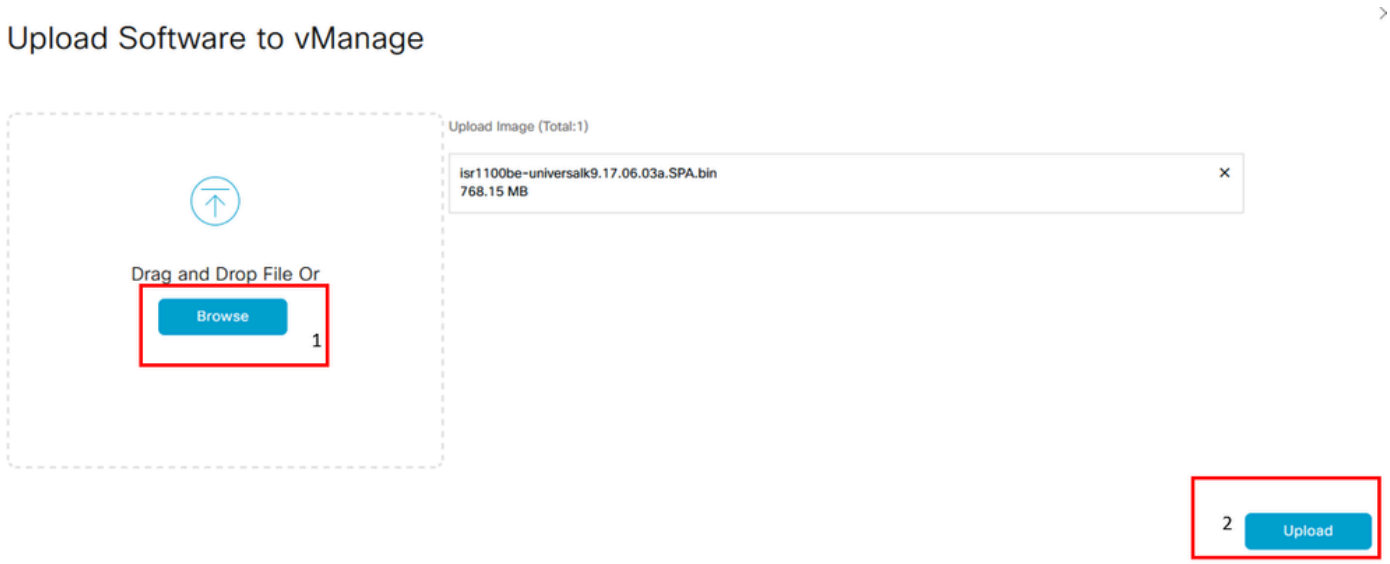
Upgrade

Upgrade to Cisco ISR1100 Software from vManage

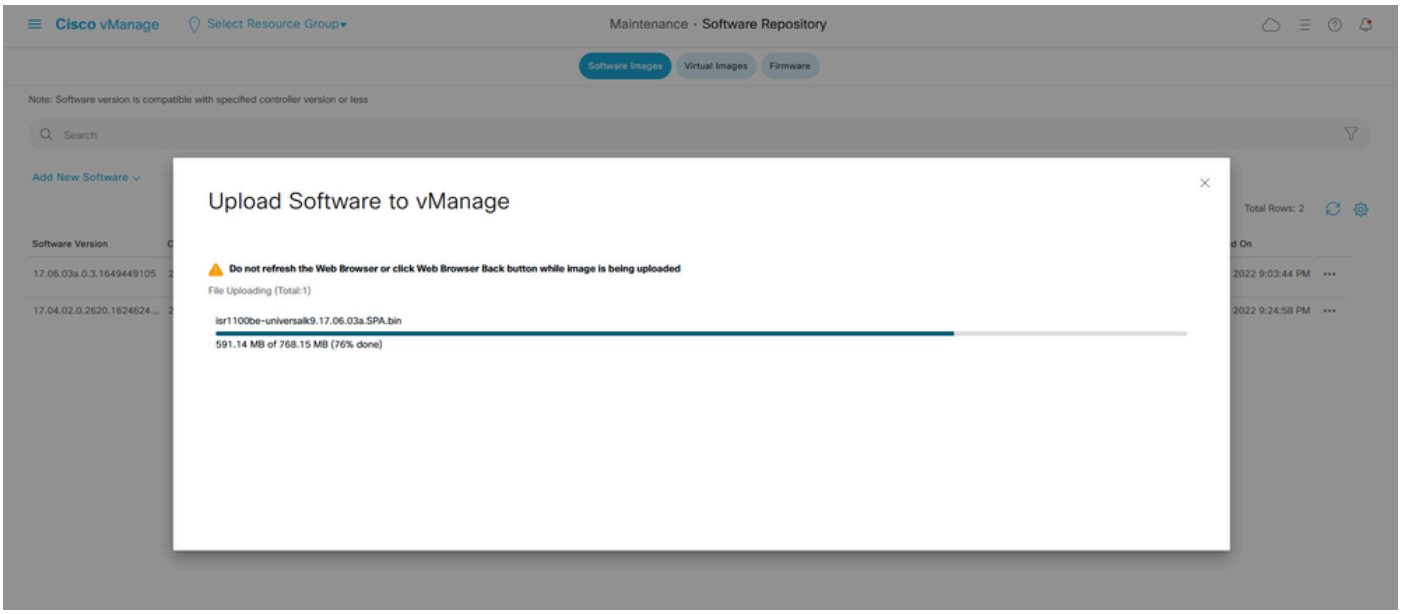
1. In the Cisco vManage GUI, choose **Maintenance** > **Software Repository** > **Add New Software** > **vManage** as shown in the image:



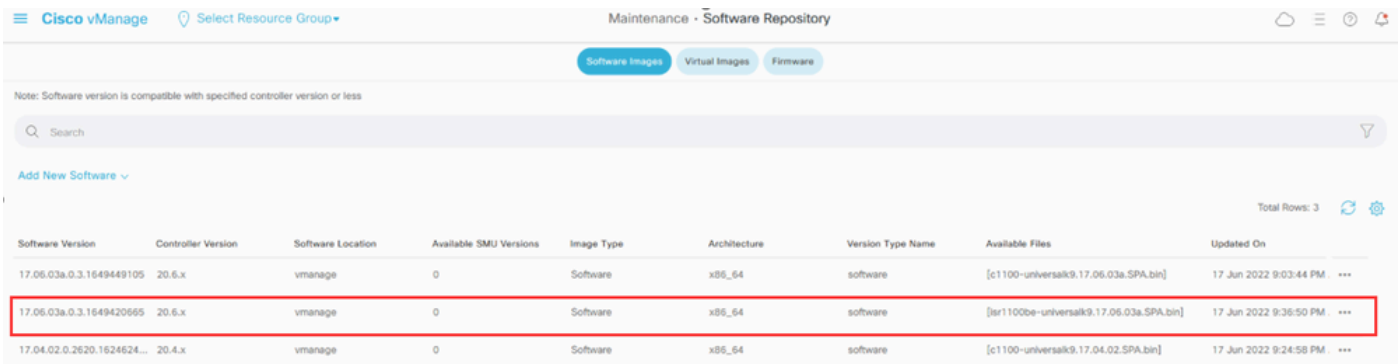
2. In the pop-up window, click **Browse**, then click **Upload.**



3. Once the upload starts do not refresh the web browser, as shown in the next image:

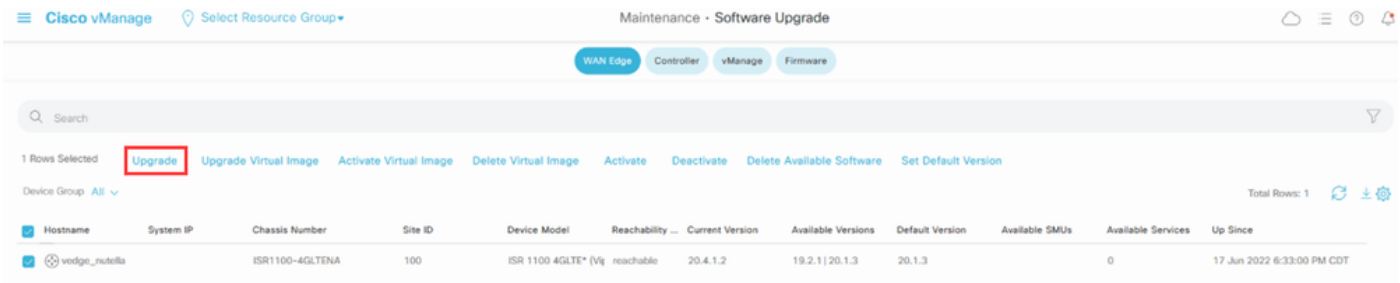


4. In the Software Repository section, verify the image has uploaded:



5. Navigate to the **Maintenance** > **Software Upgrade** > **WAN Edge** section. Check the **Hostname**

checkbox to choose the device(s) and click **Upgrade**.

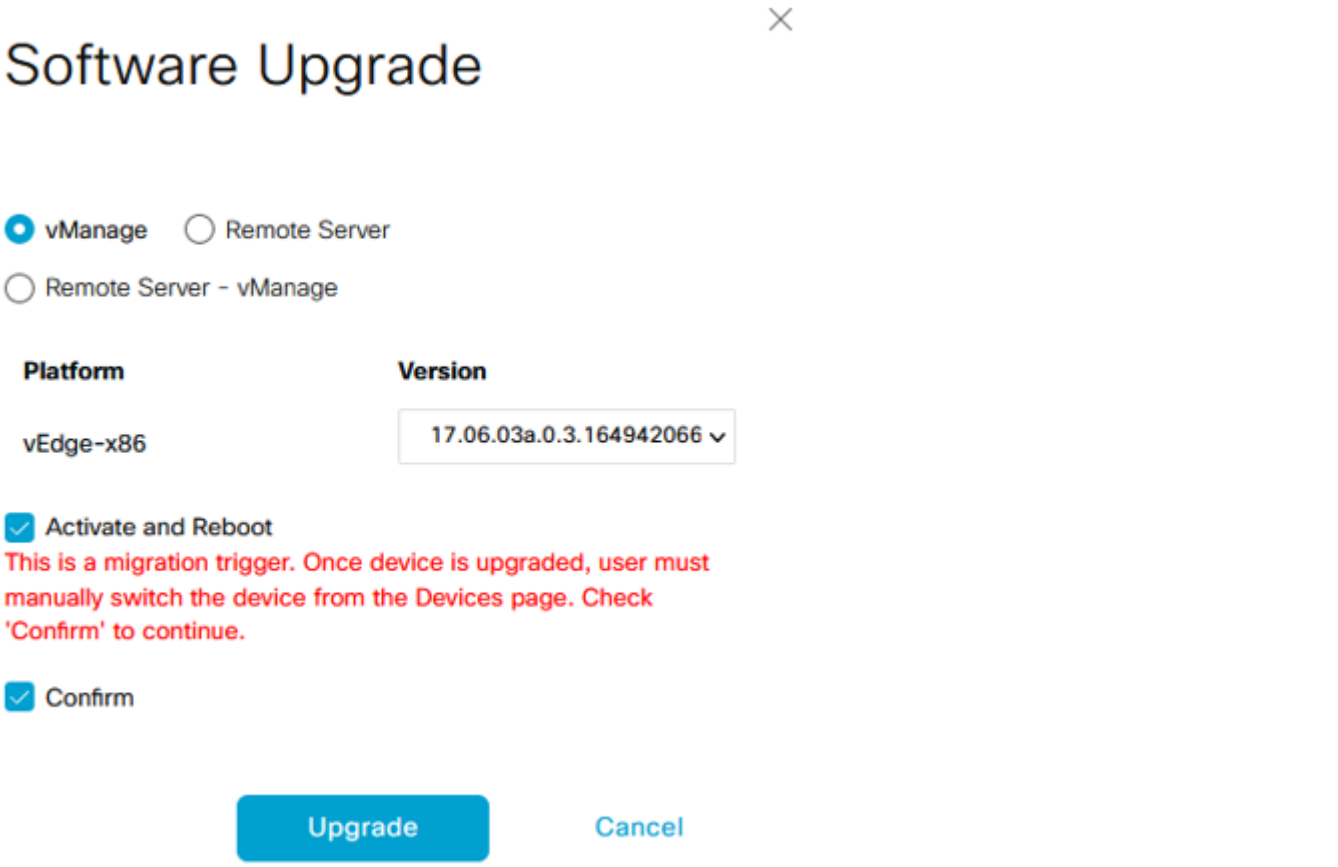


6. Click the **vManage** radio button.

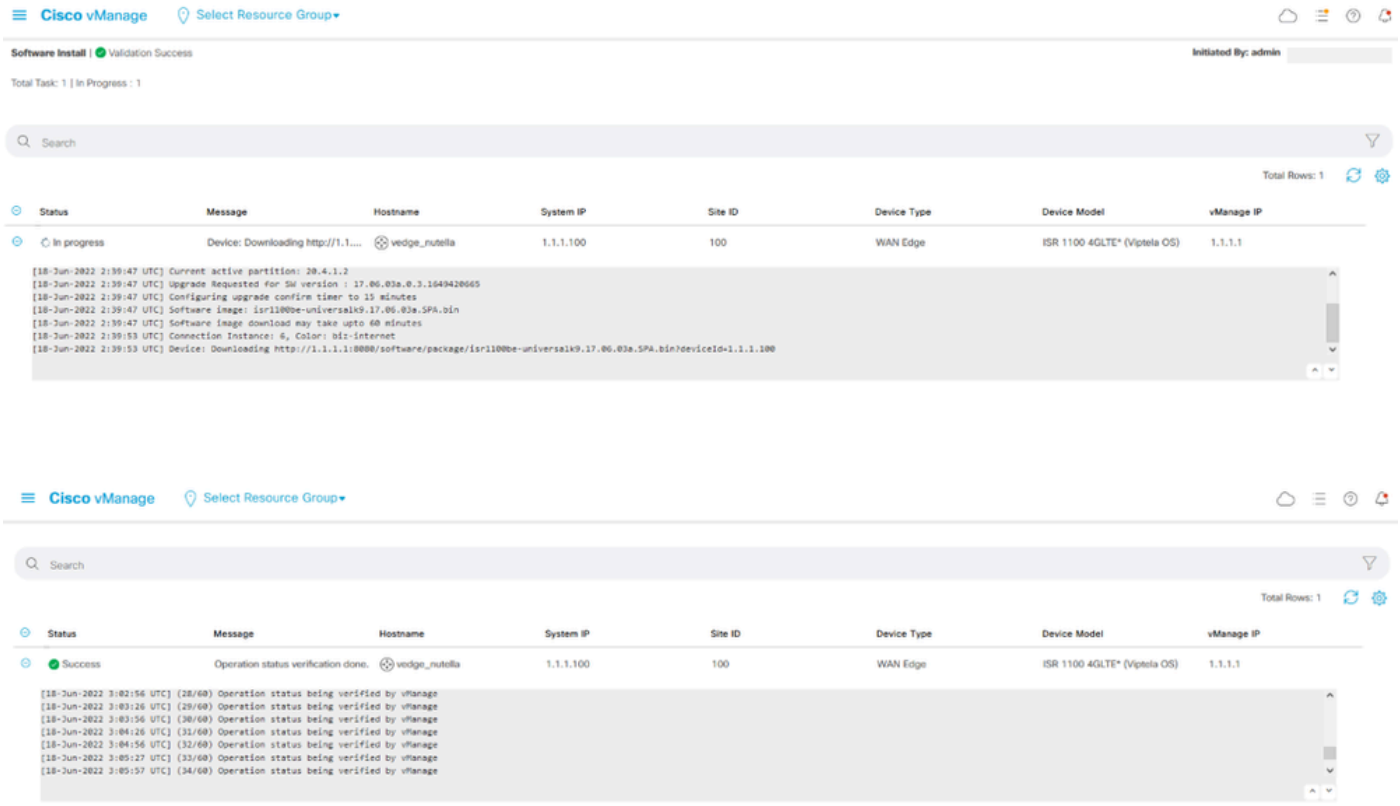
7. In the **Version** drop-down list, choose the Cisco IOS XE image.

8. Check the **Activate and Reboot** checkbox and the **Confirm** checkbox.

9. Click **Upgrade**.

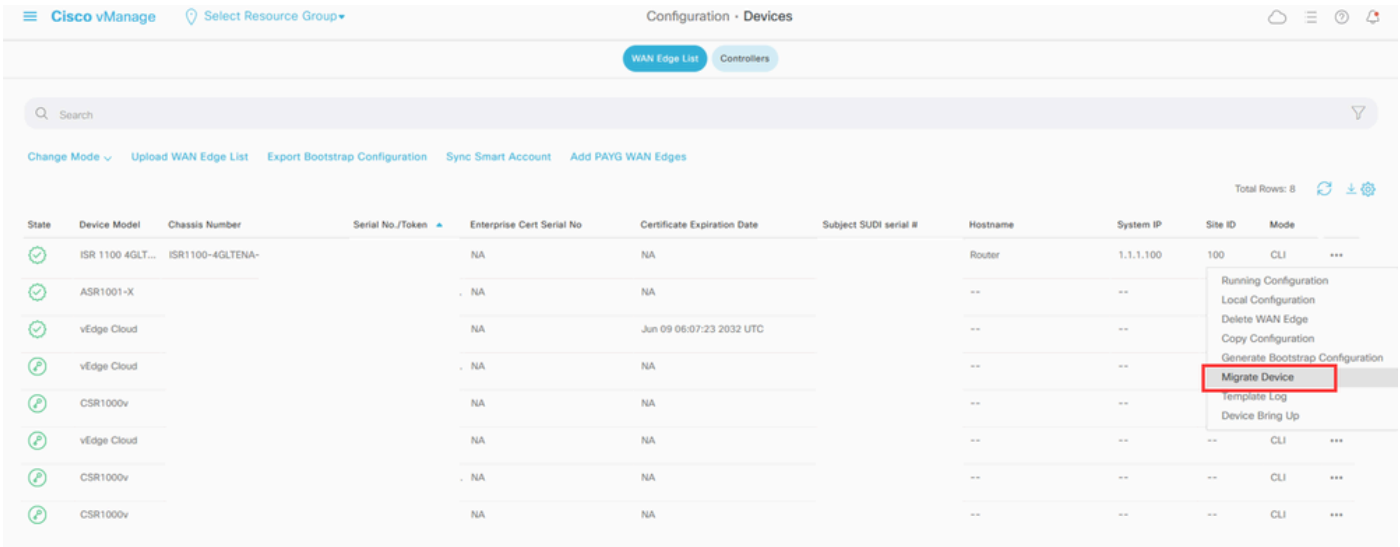


10. The device begins the upgrade process and takes several minutes. You can validate the successful completion in the **Task** view.

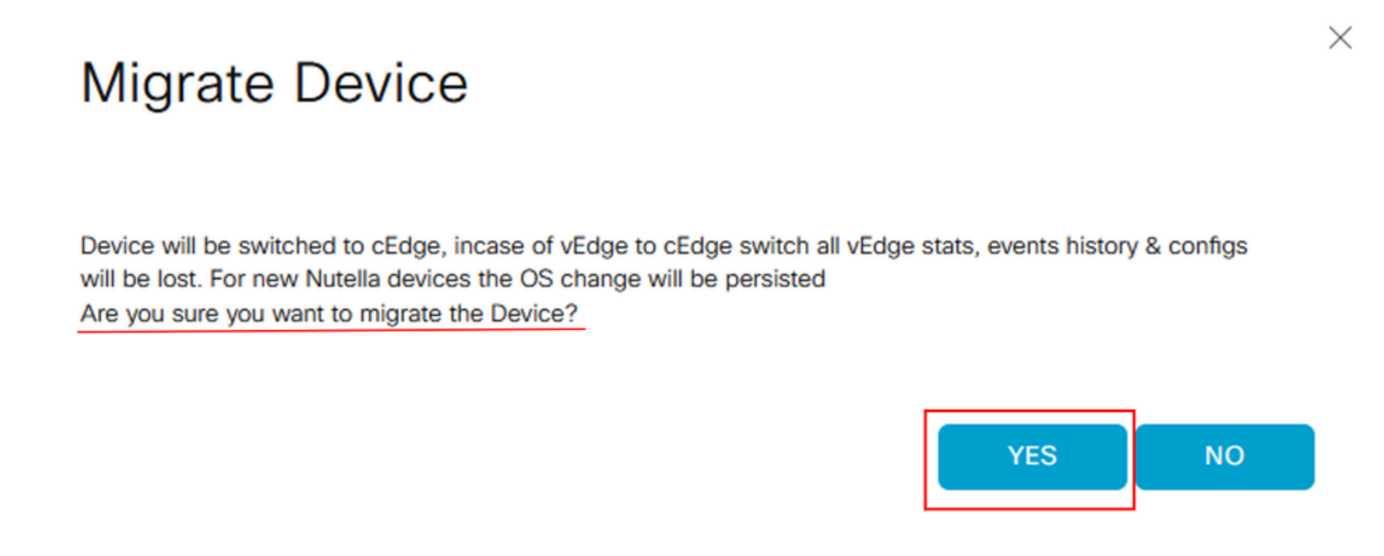


11. Navigate to **Configuration > Devices** and click the **WAN Edge List** tab.

12. In the right side of the display, click (...) **More Actions** and choose **Migrate Device**.



13. In the Migrate Device dialog box, click **Yes** to confirm the migration.



Note: After the upgrade, the device only has basic configuration to establish control connections with the SD-WAN overlay. You can use vManage to add the additional configuration.

Upgrade to Cisco ISR1100 Software Cisco IOS XE from the CLI

This section applies to Cisco ISR1100 and ISR1100X Release 20.4.1 or later.

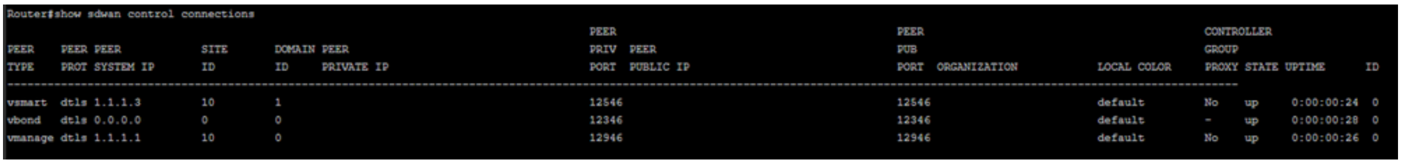
1.Transfer image **isr1100be.universalk9.<release>.SPA.bin** on vEdge router.

<#root>

```
Router#
```

```
request software install http/ftp/directory path (http://,ftp://,scp://,/)> reboot
```

2. After reboot, verify the control connections are established.



```
Router#show sdwan control connections
                                                            PEER                        PEER                                          CONTROLLER
PEER    PEER PEER           SITE      DOMAIN PEER           PRIV  PEER                  PUB                                           GROUP
TYPE    PROT SYSTEM IP      ID        ID     PRIVATE IP     PORT  PUBLIC IP             PORT  ORGANIZATION      LOCAL COLOR           PROXY STATE UPTIME     ID
-------------------------------------------------------------------------------------------------------------------------------------------------------
vsmart  dtls 1.1.1.3        10        1                     12546                       12546                   default              No    up    0:00:00:24  0
vbond   dtls 0.0.0.0        0         0                     12346                       12346                   default              -     up    0:00:00:28  0
vmanage dtls 1.1.1.1        10        0                     12946                       12946                   default              No    up    0:00:00:26  0
```

3. Ensure the upgrade was confirmed.

<#root>

```
Router#
```

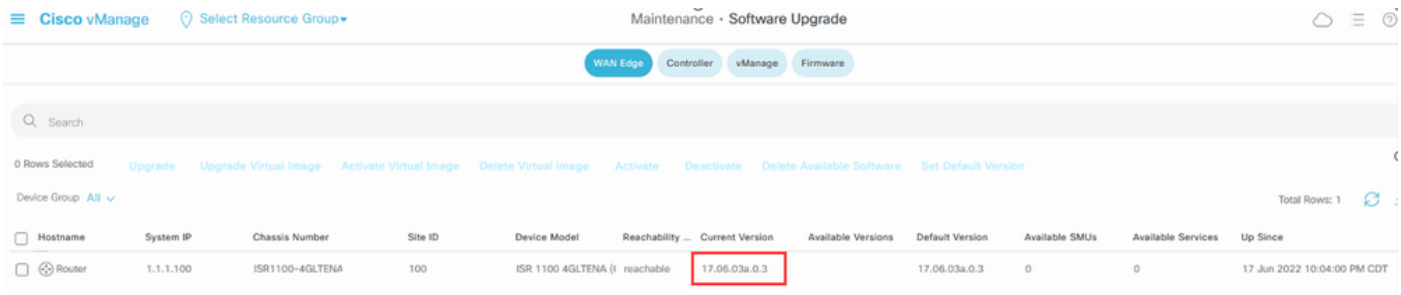
```
request platform software sdwan software upgrade-confirm
```

Verify

Use this section to confirm your configuration works properly.

vManage GUI

Navigate to **Administration** > **Maintenance** > **Software Upgrade**. Verify the version in the **Current Version** column, the device shows Cisco IOS XE OS.



vManage CLI

Run the command show romvar to verify the migration is successful on MIGRATION_STATUS:

<#root>

```
Router#
```

```
show romvar
```

```
ROMMON variables:
 PS1 = rommon ! >
 CRYPTO_BI_THPUT = 10000
 RET_2_RTS =
 BOOT = bootflash:packages.conf,1;
 DEVICE_MANAGED_MODE = controller
 RANDOM_NUM = 342435660
 BSI = 0
 RET_2_RCALTS =
 MIGRATION_STATUS = SUCCESS<<<<<<<<<<<
 BIS_MODE = 2
```

Troubleshoot

This section provides information to troubleshoot your configuration.

Verify the logs in Cisco IOS XE:

```
bootflash:migrationlogs
```

Verify the logs in vEdge:

```
etc/Viptela/vedgemigration.cfg
```