

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

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Introduction

This document describes the procedure 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

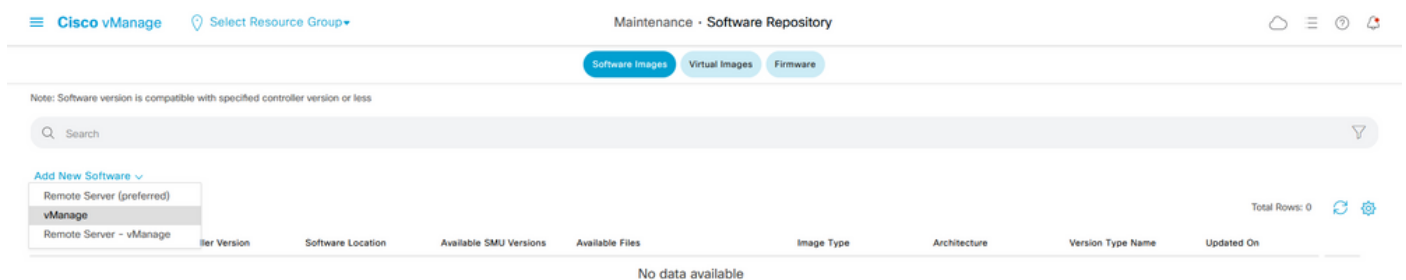
Migration between Viptela OS and Cisco IOS XE is supported in listed platforms:

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

Upgrade

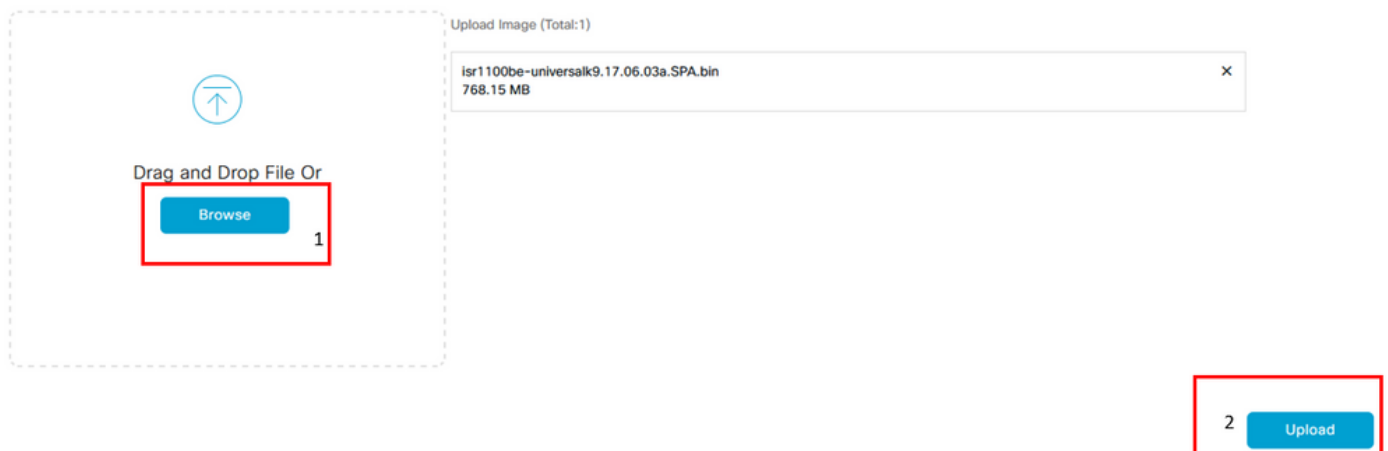
Upgrade to Cisco ISR1100 Software from vManage

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

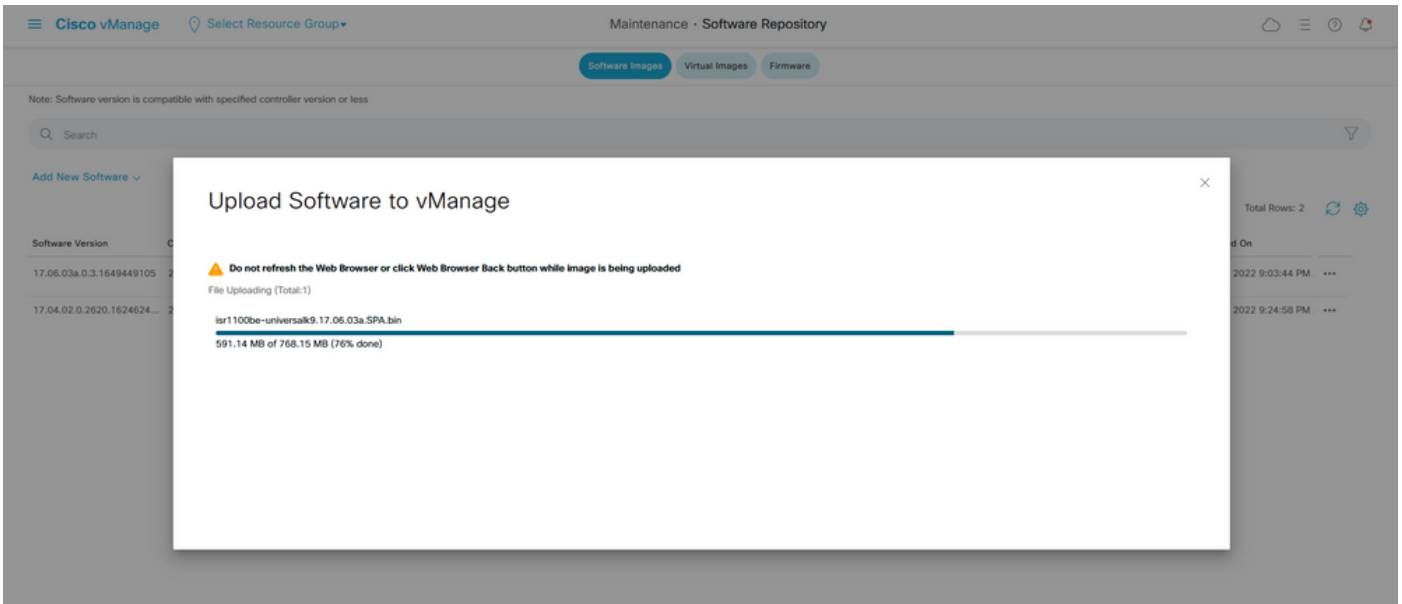


2. In the pop-up window, click **Browse** and then click **Upload**.

Upload Software to vManage



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



4. In the Software Repository section, verify the image has uploaded as shown in the image.

Software Version	Controller Version	Software Location	Available SMU Versions	Image Type	Architecture	Version Type Name	Available Files	Updated On
17.06.03a.0.3.1649449105	20.6.x	vmanage	0	Software	x86_64	software	[c1100-universalk9.17.06.03a.SPA.bin]	17 Jun 2022 9:03:44 PM
17.06.03a.0.3.1649420665	20.6.x	vmanage	0	Software	x86_64	software	[ISR1100be-universalk9.17.06.03a.SPA.bin]	17 Jun 2022 9:36:50 PM
17.04.02.0.2620.1624624...	20.4.x	vmanage	0	Software	x86_64	software	[c1100-universalk9.17.04.02.SPA.bin]	17 Jun 2022 9:24:58 PM

5. Navigate to the **Maintenance > Software Upgrade > WAN Edge** section. Check the **Hostname** check box to choose the device(s) and click **Upgrade**.

Hostname	System IP	Chassis Number	Site ID	Device Model	Reachability	Current Version	Available Versions	Default Version	Available SMUs	Available Services	Up Since
<input checked="" type="checkbox"/> wedge_nutella		ISR1100-AGLTENA	100	ISR 1100 4GLTE* (Vq	reachable	20.4.1.2	19.2.1 20.1.3	20.1.3	0		17 Jun 2022 6:33:00 PM CDT

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** check box and the **Confirm** check box.

9. Click **Upgrade**.



Software Upgrade

vManage Remote Server

Remote Server - vManage

Platform

Version

vEdge-x86

17.06.03a.0.3.164942066 ▾

Activate and Reboot

This is a migration trigger. Once device is upgraded, user must manually switch the device from the Devices page. Check 'Confirm' to continue.

Confirm

Upgrade

Cancel

10. The device starts the upgrade process and takes several minutes. You can verify the successful completion in the Task view.

Cisco vManage | Select Resource Group

Software Install | Validation Success Initiated By: admin

Total Task: 1 | In Progress: 1

Search

Total Rows: 1

Status	Message	Hostname	System IP	Site ID	Device Type	Device Model	vManage IP
In progress	Device: Downloading http://1.1.1...	vedge_nutella	1.1.1.100	100	WAN Edge	ISR 1100 4GLTE* (Viptela OS)	1.1.1.1

```

[18-Jun-2022 2:39:47 UTC] Current active partition: 28.4.1.2
[18-Jun-2022 2:39:47 UTC] Upgrade Requested for SW version : 17.06.03a.0.3.164942665
[18-Jun-2022 2:39:47 UTC] Configuring upgrade confirm timer to 15 minutes
[18-Jun-2022 2:39:47 UTC] Software image: isr1100be-universalk9.17.06.03a.SPA.bin
[18-Jun-2022 2:39:47 UTC] Software image download may take upto 60 minutes
[18-Jun-2022 2:39:53 UTC] Connection Instance: 6, Color: slr-internet
[18-Jun-2022 2:39:53 UTC] Device: Downloading http://1.1.1.10000/software/package/isr1100be-universalk9.17.06.03a.SPA.bin?deviceId=1.1.1.100
  
```

Cisco vManage | Select Resource Group

Search

Total Rows: 1

Status	Message	Hostname	System IP	Site ID	Device Type	Device Model	vManage IP
Success	Operation status verification done.	vedge_nutella	1.1.1.100	100	WAN Edge	ISR 1100 4GLTE* (Viptela OS)	1.1.1.1

```

[18-Jun-2022 3:02:56 UTC] (28/60) Operation status being verified by vManage
[18-Jun-2022 3:03:26 UTC] (29/60) Operation status being verified by vManage
[18-Jun-2022 3:03:56 UTC] (30/60) Operation status being verified by vManage
[18-Jun-2022 3:04:26 UTC] (31/60) Operation status being verified by vManage
[18-Jun-2022 3:04:56 UTC] (32/60) Operation status being verified by vManage
[18-Jun-2022 3:05:27 UTC] (33/60) Operation status being verified by vManage
[18-Jun-2022 3:05:57 UTC] (34/60) Operation status being verified by vManage
  
```

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**.

Cisco vManage | Select Resource Group

Configuration · Devices WAN Edge List | Controllers

Search

Change Mode | Upload WAN Edge List | Export Bootstrap Configuration | Sync Smart Account | Add PAYG WAN Edges

Total Rows: 8

State	Device Model	Chassis Number	Serial No./Token	Enterprise Cert Serial No	Certificate Expiration Date	Subject SUDI serial #	Hostname	System IP	Site ID	Mode
✓	ISR 1100 4GLT...	ISR1100-4GLTENA-		NA	NA		Router	1.1.1.100	100	CLI
✓	ASR1001-X			NA	NA		--	--	--	...
✓	vEdge Cloud			NA	Jun 09 06:07:23 2032 UTC		--	--	--	...
⚙	vEdge Cloud			NA	NA		--	--	--	...
⚙	CSR1000v			NA	NA		--	--	--	CLI
⚙	vEdge Cloud			NA	NA		--	--	--	CLI
⚙	CSR1000v			NA	NA		--	--	--	CLI
⚙	CSR1000v			NA	NA		--	--	--	CLI

- Running Configuration
- Local Configuration
- Delete WAN Edge
- Copy Configuration
- Generate Bootstrap Configuration
- Migrate Device**
- Template Log
- Device Bring Up

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



Migrate Device

Device will be switched to cEdge, incase of vEdge to cEdge switch all vEdge stats, events history & configs will be lost. For new Nutella devices the OS change will be persisted
Are you sure you want to migrate the Device?

Note: After the upgrade, the device only has the basic configuration to establish control connections with 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://,https://)> reboot
```

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

```
Router#show sdwan control connections
```

PEER TYPE	PEER PROT	PEER SYSTEM IP	SITE ID	DOMAIN ID	PEER PRIVATE IP	PEER PRIV PORT	PEER PUBLIC IP	PEER FQDN	PEER ORGANIZATION	LOCAL COLOR	CONTROLLER GROUP	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

etc/Viptela/vedgemigration.cfg