Upgrading to Cisco 1x2 / Compact Shelf RPD Software 9.x

Upgrade Cisco RPD and Cisco cBR-8 Router

The following scenarios are supported for upgrading the RPD and Cisco cBR-8 router.

Table 1: Cisco 1x2 / Compact Shelf RPD Software 9.4

Cisco cBR-8 Original Version	RPD Original Version	RPD State Before Upgrade	Cisco cBR-8 Upgrade Version	RPD Upgrade Version	RPD State After Upgrade
Lower than 17.3.1x	Lower than 9.4	online	17.3.1x	9.4	online
Lower than 17.3.1x	Lower than 9.4	init(gcp)	17.3.1x	9.4	online

Table 2: Cisco 1x2 / Compact Shelf RPD Software 9.3

Cisco cBR-8 Original Version	RPD Original Version	RPD State Before Upgrade	Cisco cBR-8 Upgrade Version	RPD Upgrade Version	RPD State After Upgrade
Lower than 17.3.1x	Lower than 9.3	online	17.3.1x	9.3	online
Lower than 17.3.1x	Lower than 9.3	init(gcp)	17.3.1x	9.3	online

Table 3: Cisco 1x2 / Compact Shelf RPD Software 9.2

Cisco cBR-8 Original Version	Cisco RPD Original Version	Cisco RPD State Before Upgrade	Cisco cBR-8 Upgrade Version	Cisco RPD Upgrade Version	Cisco RPD State After Upgrade
Lower than 17.3.1w	Lower than 9.2	online	17.3.1w	9.2	online
Lower than 17.3.1w	Lower than 9.2	init(gcp)	17.3.1w	9.2	online

Table 4: Cisco 1x2 / Compact Shelf RPD Software 9.1

Cisco cBR-8 Original Version	Cisco RPD Original Version	Cisco RPD State Before Upgrade	Cisco cBR-8 Upgrade Version	Cisco RPD Upgrade Version	Cisco RPD State After Upgrade
Lower than 17.3.1w	Lower than 9.1	online	17.3.1w	9.1	online
Lower than 17.3.1w	Lower than 9.1	init(gcp)	17.3.1w	9.1	online

Prerequisites

Before upgrading the system, make sure that the following requirements are met:

- Console access for both SUP line cards is required.

- Download the files from the Cisco.com Software Center.

Table 5: Upgrade File Download Location

RPD Version	Download Files
Cisco RPD 9.4	- Cisco IOS XE Amsterdam 17.3.1x **cbrsup-universalk9.17.03.01x.SPA.bin**: https://software.cisco.com/download/home/286283913/type/282046477/release/Amsterdam-17.3.1x - RPD 9.4 **RPD-V9-4.itb.SSA**: https://software.cisco.com/download/home/286316518/type/286316917/release/9.4
Cisco RPD 9.3	- Cisco IOS XE Amsterdam 17.3.1x **cbrsup-universalk9.17.03.01x.SPA.bin**: https://software.cisco.com/download/home/286283913/type/282046477/release/Amsterdam-17.3.1x - RPD 9.3 **RPD-V9-3.itb.SSA**: https://software.cisco.com/download/home/286316518/type/286316917/release/9.3

RPD Version	Download Files
Cisco RPD 9.2	• Cisco IOS XE Amsterdam 17.3.1w **cbrsup-universalk9.17.03.01w.SPA.bin**: https://software.cisco.com/download/home/286283913/type/282046477/release/Amsterdam-17.3.1w • RPD 9.2 **RPD-V9-2.itb.SSA**: https://software.cisco.com/download/home/286316518/type/286316917/release/9.2
Cisco RPD 9.1	• Cisco IOS XE Amsterdam 17.3.1w **cbrsup-universalk9.17.03.01w.SPA.bin**: https://software.cisco.com/download/home/286283913/type/282046477/release/Amsterdam-17.3.1w • RPD 9.1 **RPD-V9-1.itb.SSA**: https://software.cisco.com/download/home/286316518/type/286316917/release/9.1

Note   For more information on how to upgrade the Cisco cBR-8 router, see Upgrading the Cisco cBR Series Converged Broadband Routers for Cisco IOS XE Amsterdam 17.3.x.

When upgrading Cisco cBR-8 router, if there is any difference between the procedure for upgrading the Cisco cBR-8 Routers for Cisco IOS XE Amsterdam 17.3.x and the following steps, the Cisco cBR-8 Upgrade Guide prevails.

Upgrade Procedure for Cisco RPD and Cisco cBR-8 Router

Step 1   Copy the required Cisco IOS XE package to bootflash and stby-bootflash:

```
copy <location>/<Cisco IOS XE software download filename> bootflash:
copy <location>/<Cisco IOS XE software version>.SPA.bin stby-bootflash:
```

Step 2   Verify the Cisco IOS XE package against the md5 hash as provided in the Cisco.com Software center.

```
verify /md5 bootflash:<Cisco IOS XE software download filename>
verify /md5 stby-bootflash:<Cisco IOS XE software download filename>
```

Step 3   Back up the current running config to bootflash.

```
copy running-config bootflash:pre-upgrade.cfg
```

Step 4   Check the system status before the upgrade.

Save the information to compare against the system status after the upgrade. For commands on checking the status, see the **show** commands at the end of this section.

Step 5   Copy the Cisco RPD image to a TFTP server that is accessible by the RPDs.

Step 6   Verify the current RPD software version by running the following command:

```
show cable rpd sw-version
```

Step 7   Upgrade all RPD images to the required version by using SSD from the Cisco cBR-8 router.

```
cable rpd all ssd <tftp_server_ip> tftp <rpd_version_file_path>
```

Note   The **all** command is not recommended in large-scale RPD deployments. If you have a larger number of RPDs, it is recommended to upgrade the RPD per line card or per Organizationally Unique Identifier (OUI).

Step 8   Verify RPD SSD status.

The status shows as `downloading`.

```
cable rpd all ssd status
```

Step 9   Verify that all RPDs have downloaded the new image.

```
cable rpd all ssd status
show cable rpd
```

Step 10   Configure the chassis to boot the system with Cisco IOS XE version image. Save the running configuration.

```
configure terminal
no boot system
boot system bootflash:<Cisco IOS XE software download filename>
config-register 0x2102
end
copy running-config startup-config
```

Step 11   Reload and start the Cisco cBR-8 router.

```
Reload
```

Step 12   Adjust the RPD type/max-carrier/base-power as necessary.

If you upgrade the Compact Shelf from Cisco IOS XE Everest 16.5.x or Cisco IOS XE Everest 16.6.x to Cisco IOS XE Fuji 16.7.x or later, you must change the RPD type to **shelf**. By default the RPD type is **Node**. Adjust the related base-power according to your requirement.

Step 13   Verify that the RPDs have been upgraded to new version and are online.

```
show cable rpd
show cable rpd sw-version
```

The following **show** commands can be used during the verification test:

- **show version**
- **show platform**
- **show platform diag**
- **show environment**
- **show environment power**
- **show platform hardware slot P <0-5> mcu status**
- **show facility-alarm status**
- **show redundancy**
- **show redundancy line card all**
- **show ip ospf neighbor**

- **show cable modem voice**

- **show cable calls**

- **show cable licenses all**

- **show inventory**

- **show log**

- **show cable rpd**

- **show cable modem summary total**

- **show cable rpd lcha**

- **show running**

- **show tech**

Upgrade Cisco RPD Software

Before you begin

Before upgrading the system, make sure the following requirements are met:

- All RPDs are in init(gcp), init(clock), or online state.

- Download new image file from the following Cisco.com Software Center URL:

  https://software.cisco.com/download/home/286316518/type

  For example: RPD V9.5: **RPD-V9-5.itb.SSA**

SUMMARY STEPS

1. Copy the Cisco RPD softwre image package to a TFTP server where it can be accessed by the RPDs.
2. Verify the current RPD software version.
3. Upgrade all RPDs image to the latest version through SSD.
4. Verify the RPD SSD status. It will show the status as **downloading**.
5. Verify that all RPDs have downloaded the new image.
6. Verify that the RPDs have been upgraded to new version and are online.

DETAILED STEPS

	Command or Action	Purpose
Step 1	Copy the Cisco RPD softwre image package to a TFTP server where it can be accessed by the RPDs.	
Step 2	Verify the current RPD software version.	`show cable rpd sw-version`

	Command or Action	**Purpose**
Step 3	Upgrade all RPDs image to the latest version through SSD.	```cable rpd all ssd <tftp_server_ip> tftp <rpd_version_file_path>``` **Note** The **all** command is not recommended in large scale RPD deployment. If you have many RPDs, it is recommended to upgrade the RPD per line card or per OUI.
Step 4	Verify the RPD SSD status. It will show the status as **downloading**.	```cable rpd all ssd status```

Step 5	Verify that all RPDs have downloaded the new image.	```cable rpd all ssd status```
		```show cable rpd```
		
		You can also use **cable rpd slot <slot_num> ssd status** to check upgrade status for each line card.

Step 6	Verify that the RPDs have been upgraded to new version and are online.	```show cable rpd```
		```show cable rpd sw-version```
		
		These **show** commands might be used during the verification test:
		
		• **show version**
		
		• **show platform**
		
		• **show platform diag**
		
		• **show environment**
		
		• **show environment power**
		
		• **show platform hardware slot P <0-5> mcu status**
		
		• **show facility-alarm status**
		
		• **show redundancy**
		
		• **show redundancy line card all**
		
		• **show ip ospf neighbor**
		
		• **show cable modem voice**
		
		• **show cable calls**
		
		• **show cable licenses all**
		
		• **show inventory**
		
		• **show log**

Command or Action	Purpose
	• **show cable rpd**
	• **show cable modem summary total**
	• **show cable rpd lcha**
	• **show running**
	• **show tech**

Upgrade Cisco cBR-8 Router

This section explains the procedure to upgrade only the Cisco cBR-8 router.

The following scenarios are supported in upgrading the Cisco cBR-8 router.

Cisco cBR-8 Original Version	Cisco RPD Version	Cisco RPD State Before Upgrade	Cisco cBR-8 Upgrade Version	Cisco RPD State After Upgrade
Lower than 17.3.1x	9.x	init(gcp)	17.3.1x	online

Before upgrading the system, make sure the following requirements are met:

- The firmware versions are not lower than the ones listed in Firmware versions table. Otherwise upgrade the firmware versions, see Upgrading the Cisco cBR-8 Router Firmware.

- Download new image file from the following Cisco.com Software Center URL:

  https://software.cisco.com/download/home/286283913/type

  - IOS XE Software Version 17.3.1x: **cbrsup-universalk9.17.03.01x.SPA.bin**

- Console access for both SUPs are required.

Note   For information on how to upgrade the cBR-8 router, see Upgrading the Cisco cBR Series Converged Broadband Routers for Cisco IOS XE Amsterdam 17.3.x.

These **show** commands might be used during the verification test:

- **show version**
- **show platform**
- **show platform diag**
- **show environment**
- **show environment power**
- **show platform hardware slot P <0-5> mcu status**
- **show facility-alarm status**

- **show redundancy**

- **show redundancy line card all**

- **show ip ospf neighbor**

- **show cable modem voice**

- **show cable calls**

- **show cable licenses all**

- **show inventory**

- **show log**

- **show cable rpd**

- **show cable modem summary total**

- **show cable rpd lcha**

- **show running**

- **show tech**