Upgrading the Cisco cBR-8 Router System

This section contains the upgrade procedures for the Cisco cBR-8 Router System, including both the IOS-XE software and firmwares used in the router. If you need to upgrade only the firmware, see Upgrading the Cisco cBR-8 Router Firmware.

Upgrading Cisco cBR-8 Router to Cisco IOS-XE release 3.18.1SP

This use case provides the example procedure to upgrade a Cisco cBR-8 router to IOS-XE release 3.18.1SP from earlier versions.

Upgrading Cisco IOS-XE software to release 3.18.1SP

Note If the system image is upgraded using ISSU, after the ISSU upgrade is finished, use **hw-module subslot 4/1 reload** and **hw-module subslot 5/1 reload** commands to upgrade the SUP MAC firmware.

Before You Begin

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

- Download the new image package from the following URL:

  https://software.cisco.com/download/navigator.html

- Copy the new image package to the cBR-8 using TFTP.

  copy tftp://<location>/cbrsup-universalk9.03.18.01.SP.156-2.SP1-ext.SPA.bin bootflash:
  copy tftp://<location>/cbrsup-universalk9.03.18.01.SP.156-2.SP1-ext.SPA.bin stby-bootflash:

- Verify the new image package against the known md5 hash.

  verify /md5 bootflash:cbrsup-universalk9.03.18.01.SP.156-2.SP1-ext.SPA.bin
  verify /md5 stby-bootflash:cbrsup-universalk9.03.18.01.SP.156-2.SP1-ext.SPA.bin

Upgrading in Consolidated Package Mode

Step 1 Change the boot variable to point to the desired new image.

configure terminal
no boot system
boot system bootflash:cbrsup-universalk9.03.18.01.SP.156-2.SP1-ext.SPA.bin
end
write memory

Step 2 Verify that the bootvar has changed to point to the new image using **show bootvar** command.

Step 3 Reload cBR-8 router.

reload

Upgrading in Subpackage Mode

Step 1 Extract the individual subpackages and the provisioning file from a consolidated package to a specific image based directory in the bootflash.

request platform software package expand file bootflash:cbrsup-universalk9.03.18.01.SP.156-2.SP1-ext.SPA.bin to bootflash:/<location>/ wipe
request platform software package expand file stby-bootflash:cbrsup-universalk9.03.18.01.SP.156-2.SP1-ext.SPA.bin to stby-bootflash:/<location>/ wipe

Step 2 Verify the list of sub-packages and helper files are created in the directory specified in last step using **dir** command.

Step 3 Change the boot variable to point to the desired new IOS-XE image.

configure terminal
no boot system
boot system bootflash:cbrsup-universalk9.03.18.01.SP.156-2.SP1-ext.SPA.bin
end
write memory

Step 4 Verify that the bootvar has changed to point to the new image using **show bootvar** command.

Step 5 Reload cBR-8 router.

reload

Upgrading Firmwares

The correct firmware versions after the upgrade are listed in the tables below. Use the commands in the tables to verify the firmware versions.

Table 1: Firmware Versions

Firmware	Correct Version	Command
Supervisor CPLD	16012711	**show platform**
Supervisor ROMMON	15.5(3r)S	**show platform**
Linecard CPLD	00000021	**show platform**
Linecard ROMMON	2011.03.13	**show platform**
Linecard PSOC 1	v4.6	**show platform diag**
Linecard PSOC 2	v4.6	**show platform diag**
Docsis 3.0 downstream module Micro	1000e	**show platform diag**
Docsis 3.1 downstream module Micro	30016	**show platform diag**
Docsis 3.1 downstream module FPGA	44147	**show platform diag**

Before You Begin

Make sure the Cisco cBR-8 router software is upgraded to Cisco IOS-XE release 3.18.1SP.

Upgrading Docsis 3.1 and Docsis 3.0 Downstream Module Firmwares

Note If the Cisco IOS-XE release is 3.18.1S or 3.18.0SP before upgrading to Cisco IOS-XE release 3.18.1SP, the downstream module upgrade procedure can be performed before Cisco IOS-XE software upgrade, in this way, there is no need to reset the linecard during the upgrade, since linecard will be reloaded during Cisco IOS-XE software upgrade.

For detailed upgrading steps, see Upgrading Docsis 3.0 downstream module and Docsis 3.1 downstream module (Cisco IOS-XE Release 3.18.1S and later releases).

What to Do Next

If there is other firmware that needs upgrade, see Upgrading the Cisco cBR-8 Router Firmware for details.

Upgrading Cisco cBR-8 Router to Cisco IOS-XE release 3.18.0SP

This use case provides the example procedure to upgrade a Cisco cBR-8 router to IOS-XE release 3.18.0SP from earlier versions. ISSU is not applicable in this case.

Upgrading Cisco IOS-XE software to release 3.18.0SP

Before You Begin

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

- Download the new image package from the following URL:

  https://software.cisco.com/download/navigator.html

- Copy the new image package to the cBR-8 using TFTP.

  copy tftp://<location>/cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin bootflash:
  copy tftp://<location>/cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin stby-bootflash:

- Verify the new image package against the known md5 hash c244aa64b4af3d7bfa7826ef46eda47f.

  verify /md5 bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin
  verify /md5 stby-bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin

Upgrading in Consolidated Package Mode

Step 1 Change the boot variable to point to the desired new image.

configure terminal
no boot system

boot system bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin
end
write memory

Step 2 Verify that the bootvar has changed to point to the new image using **show bootvar** command. Below is a sample output:

```
router# show bootvar

Load for five secs: 24%/3%; one minute: 30%; five minutes: 44%
Time source is NTP, 12:18:00.120 PDT Wed Jul 27 2016

BOOT variable = bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin,1;
CONFIG_FILE variable =
BOOTLDR variable does not exist
Configuration register is 0x2102

Standby BOOT variable = bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin,1;
Standby CONFIG_FILE variable =
Standby BOOTLDR variable does not exist
Standby Configuration register is 0x2102
```

Step 3 Reload cBR-8 router.

reload

Upgrading in Subpackage Mode

Step 1 Extract the individual subpackages and the provisioning file from a consolidated package to a specific image based directory in the bootflash.

request platform software package expand file bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin to bootflash:/XE318SP/ wipe
request platform software package expand file stby-bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin to stby-bootflash:/XE318SP/ wipe

Step 2 Verify the list of sub-packages and helper files are created in the directory specified in last step using **dir** command. Below is a sample output:

```
router# dir bootflash:/XE318SP/

Directory of bootflash:/XE318SP/

661250  -rw-         28926928  Jul 27 2016 12:44:40 -07:00
cbrsup-cciomdsup.03.18.00.SP.156-2.SP-ext.SPA.pkg
661251  -rw-        144602072  Jul 27 2016 12:44:40 -07:00
cbrsup-clc-firmware.03.18.00.SP.156-2.SP-ext.SPA.pkg
499969  -rw-         15782888  Jul 27 2016 12:44:40 -07:00
```

```
cbrsup-clccontrol.03.18.00.SP.156-2.SP-ext.SPA.pkg
499970  -rw-         13474788  Jul 27 2016 12:44:40 -07:00
cbrsup-clcdocsis.03.18.00.SP.156-2.SP-ext.SPA.pkg
499971  -rw-         32705508  Jul 27 2016 12:44:40 -07:00
cbrsup-clcios.03.18.00.SP.156-2.SP-ext.SPA.pkg
499972  -rw-         32703460  Jul 27 2016 12:44:40 -07:00
cbrsup-clciosdb.03.18.00.SP.156-2.SP-ext.SPA.pkg
499973  -rw-        121892616  Jul 27 2016 12:44:40 -07:00
cbrsup-clcmipsbase.03.18.00.SP.156-2.SP-ext.SPA.pkg
499974  -rw-         14345188  Jul 27 2016 12:44:40 -07:00
cbrsup-clcvideo.03.18.00.SP.156-2.SP-ext.SPA.pkg
499975  -rw-        116792792  Jul 27 2016 12:44:40 -07:00
cbrsup-espx86base.03.18.00.SP.156-2.SP-ext.SPA.pkg
499976  -rw-            12856  Jul 27 2016 12:44:40 -07:00
cbrsup-packages-universalk9.03.18.00.SP.156-2.SP-ext.conf
499977  -rw-         36006868  Jul 27 2016 12:44:40 -07:00
cbrsup-rp-firmware.03.18.00.SP.156-2.SP-ext.SPA.pkg
499978  -rw-         34864096  Jul 27 2016 12:44:40 -07:00
cbrsup-rp-programmable-firmware.03.18.00.SP.156-2.SP-ext.SPA.pkg
499979  -rw-         23325652  Jul 27 2016 12:44:41 -07:00
cbrsup-rpaccess.03.18.00.SP.156-2.SP-ext.SPA.pkg
596737  -rw-         50582996  Jul 27 2016 12:44:41 -07:00
cbrsup-rpbase.03.18.00.SP.156-2.SP-ext.SPA.pkg
596738  -rw-         59765716  Jul 27 2016 12:44:41 -07:00
cbrsup-rpcontrol.03.18.00.SP.156-2.SP-ext.SPA.pkg
596739  -rw-        183200740  Jul 27 2016 12:44:41 -07:00
cbrsup-rpios-universalk9.03.18.00.SP.156-2.SP-ext.SPA.pkg
596740  -rw-          7844820  Jul 27 2016 12:44:41 -07:00
cbrsup-rpvideo.03.18.00.SP.156-2.SP-ext.SPA.pkg
596741  -rw-            13641  Jul 27 2016 12:44:41 -07:00  packages.conf

router# dir stby-bootflash:/XE318SP/

Directory of stby-bootflash:/XE318SP/

661250  -rw-         28926928  Jul 27 2016 12:44:40 -07:00
cbrsup-cciomdsup.03.18.00.SP.156-2.SP-ext.SPA.pkg
661251  -rw-        144602072  Jul 27 2016 12:44:40 -07:00
cbrsup-clc-firmware.03.18.00.SP.156-2.SP-ext.SPA.pkg
499969  -rw-         15782888  Jul 27 2016 12:44:40 -07:00
cbrsup-clccontrol.03.18.00.SP.156-2.SP-ext.SPA.pkg
499970  -rw-         13474788  Jul 27 2016 12:44:40 -07:00
cbrsup-clcdocsis.03.18.00.SP.156-2.SP-ext.SPA.pkg
499971  -rw-         32705508  Jul 27 2016 12:44:40 -07:00
cbrsup-clcios.03.18.00.SP.156-2.SP-ext.SPA.pkg
499972  -rw-         32703460  Jul 27 2016 12:44:40 -07:00
cbrsup-clciosdb.03.18.00.SP.156-2.SP-ext.SPA.pkg
499973  -rw-        121892616  Jul 27 2016 12:44:40 -07:00
cbrsup-clcmipsbase.03.18.00.SP.156-2.SP-ext.SPA.pkg
499974  -rw-         14345188  Jul 27 2016 12:44:40 -07:00
cbrsup-clcvideo.03.18.00.SP.156-2.SP-ext.SPA.pkg
499975  -rw-        116792792  Jul 27 2016 12:44:40 -07:00
cbrsup-espx86base.03.18.00.SP.156-2.SP-ext.SPA.pkg
499976  -rw-            12856  Jul 27 2016 12:44:40 -07:00
```

```
cbrsup-packages-universalk9.03.18.00.SP.156-2.SP-ext.conf
499977  -rw-         36006868  Jul 27 2016 12:44:40 -07:00
cbrsup-rp-firmware.03.18.00.SP.156-2.SP-ext.SPA.pkg
499978  -rw-         34864096  Jul 27 2016 12:44:40 -07:00
cbrsup-rp-programmable-firmware.03.18.00.SP.156-2.SP-ext.SPA.pkg
499979  -rw-         23325652  Jul 27 2016 12:44:41 -07:00
cbrsup-rpaccess.03.18.00.SP.156-2.SP-ext.SPA.pkg
596737  -rw-         50582996  Jul 27 2016 12:44:41 -07:00
cbrsup-rpbase.03.18.00.SP.156-2.SP-ext.SPA.pkg
596738  -rw-         59765716  Jul 27 2016 12:44:41 -07:00
cbrsup-rpcontrol.03.18.00.SP.156-2.SP-ext.SPA.pkg
596739  -rw-        183200740  Jul 27 2016 12:44:41 -07:00
cbrsup-rpios-universalk9.03.18.00.SP.156-2.SP-ext.SPA.pkg
596740  -rw-          7844820  Jul 27 2016 12:44:41 -07:00
cbrsup-rpvideo.03.18.00.SP.156-2.SP-ext.SPA.pkg
596741  -rw-            13641  Jul 27 2016 12:44:41 -07:00  packages.conf
```

Step 3 Change the boot variable to point to the desired new IOS-XE image.

configure terminal
no boot system
boot system bootflash:/XE318SP/cbrsup-packages-universalk9.03.18.00.SP.156-2.SP-ext.conf
end
write memory

Note When the directory name is created with the uppercase, ensure that you follow the same naming convention when entering the directory name at the command prompt.

For example, if the directory name entered for the **bootflash** command is uppercase (**bootflash:/XE318SP2**), then you need to create the directory using the same naming convention (**mkdir bootflash:/XE318SP2**).

Step 4 Verify that the bootvar has changed to point to the new image using **show bootvar** command.
Below is a sample output:

```
router# show bootvar

Load for five secs: 24%/3%; one minute: 30%; five minutes: 44%
Time source is NTP, 12:18:00.120 PDT Wed Jul 27 2016

BOOT variable = bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin,1;
CONFIG_FILE variable =
BOOTLDR variable does not exist
Configuration register is 0x2102

Standby BOOT variable = bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bin,1;
Standby CONFIG_FILE variable =
Standby BOOTLDR variable does not exist
Standby Configuration register is 0x2102
```

Step 5 Reload cBR-8 router.

reload

What to Do Next

Once the system is up, make sure that it is running the new version **Version 03.18.00.SP.156-2.SP-ext** using **show version** command.

Below is a sample output:

```
router# show version

Load for five secs: 82%/3%; one minute: 46%; five minutes: 45%
Time source is NTP, 12:24:50.303 PDT Wed Jul 27 2016
Cisco IOS XE Software, Version 03.18.00.SP.156-2.SP-ext
Cisco IOS Software, cBR  Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version 15.6(2)SP,
RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2016 by Cisco Systems, Inc.
Compiled Wed 27-Jul-16 04:49 by mcpre


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documentation or "License Notice" file accompanying the IOS-XE software,
or the applicable URL provided on the flyer accompanying the IOS-XE
software.


ROM: IOS-XE ROMMON

router uptime is 29 minutes
Uptime for this control processor is 33 minutes
System returned to ROM by reload at 11:48:48 PDT Wed Jul 27 2016
System restarted at 11:54:58 PDT Wed Jul 27 2016
System image file is "bootflash:cbrsup-universalk9.03.18.00.SP.156-2.SP-ext.SPA.bi"
Last reload reason: Reload Command



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A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

cisco cBR1013 (CBR) processor (revision CBR) with 13397499K/6147K bytes of memory.
Processor board ID FXS1947Q0DA
16 Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
50331648K bytes of physical memory.
7739391K bytes of eUSB flash at bootflash:.
97620247K bytes of SATA hard disk at harddisk:.
31422288K bytes of USB flash at usb0:.

Configuration register is 0x2102
```

Upgrading Firmwares

The correct firmware versions after the upgrade are listed in the tables below. Use the commands in the tables to verify the firmware versions.

Table 2: Firmware Versions

Firmware	Correct Version	Command
Supervisor CPLD	16012711	**show platform**
Docsis 3.1 downstream module Micro	3.13	**show platform**
Docsis 3.1 downstream module FPGA	4.4141	**show platform**

Before You Begin

Make sure the Cisco cBR-8 router software is upgraded to Cisco IOS-XE release 3.18.0SP.

Upgrading Supervisor CPLD Firmware to Version 16012711

For detailed upgrading steps, see Upgrading Supervisor CPLD Firmware in the Cisco cBR.

Upgrading Docsis 3.1 Downstream Module Firmwares

For detailed upgrading steps, see Upgrading Docsis 3.0 downstream module and Docsis 3.1 downstream module (Cisco IOS-XE Release 3.18.1S and later releases).

What to Do Next

If there is other firmware that needs upgrade, see Upgrading the Cisco cBR-8 Router Firmware for details.

Upgrading Cisco cBR-8 Router from Cisco IOS-XE release 3.17.0S to Cisco IOS-XE release 3.17.1S

Cisco cBR-8 Routers support the In-Service Software Upgrades (ISSU) for redundant platforms. The ISSU process allows software to be updated or otherwise modified while packet forwarding continues with the benefit of LCHA. ISSU supports subpackage software upgrade mode. For more information, please refer to Cisco IOS-XE In-Service Software Upgrade Process.

This use case provides the example procedure to upgrade a Cisco cBR-8 router from IOS-XE release 3.17.0S to IOS-XE release 3.17.1S with subpackage mode.

Before You Begin

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

- Verify the chassis is in subpackage mode.

  If the chassis is not in subpackage mode, change it to subpackage mode following the steps below:

  1. Expand the IOS-XE binary image file to a specific image based directory in the bootflash using the following commands:

     request platform software package expand file bootflash: cbrsup-universalk9.03.17.00.S.156-1.S-std.SPA.bin to bootflash:/XE317/ wipe
     request platform software package expand file stby-bootflash: cbrsup-universalk9.03.17.00.S.156-1.S-std.SPA.bin to stby-bootflash:/XE317/ wipe
  2. Verify that the following list of sub-packages and helper files are created in the directory using **dir bootflash:/XE317/** and **dir stby-bootflash:/XE317/** commands.

File	Size (Bytes)
cbrsup-cciomdsup.03.17.00.S.156-1.S-std.SPA.pkg	28523472
cbrsup-clc-firmware.03.17.00.S.156-1.S-std.SPA.pkg	125895640
cbrsup-clccontrol.03.17.00.S.156-1.S-std.SPA.pkg	13757412
cbrsup-clcdocsis.03.17.00.S.156-1.S-std.SPA.pkg	12731364
cbrsup-clcios.03.17.00.S.156-1.S-std.SPA.pkg	31560672
cbrsup-clciosdb.03.17.00.S.156-1.S-std.SPA.pkg	31558628
cbrsup-clcmipsbase.03.17.00.S.156-1.S-std.SPA.pkg	121236229
cbrsup-clcvideo.03.17.00.S.156-1.S-std.SPA.pkg	13859812
cbrsup-espx86base.03.17.00.S.156-1.S-std.SPA.pkg	114570324
cbrsup-packages-universalk9.03.17.00.S.156-1.S-std.conf	15440
cbrsup-rp-firmware.03.17.00.S.156-1.S-std.SPA.pkg	35701712
cbrsup-rp-programmable-firmware.03.17.00.S.156-1.S-std.SPA.pkg	2786272
cbrsup-rpaccess.03.17.00.S.156-1.S-std.SPA.pkg	23290836
cbrsup-rpbase.03.17.00.S.156-1.S-std.SPA.pkg	48516176
cbrsup-rpcontrol.03.17.00.S.156-1.S-std.SPA.pkg	59235284
cbrsup-rpios-universalk9.03.17.00.S.156-1.S-std.SPA.pkg	180753380
cbrsup-rpvideo.03.17.00.S.156-1.S-std.SPA.pkg	7455696
packages.conf	16220

3. Change boot statement to point to the subpackage mode using following commands:

   configure terminal
   no boot system
   boot system bootflash:/XE317/cbrsup-packages-universalk9.03.17.00.S.156-1.S-ext.conf
   end
   write memory
4. Verify peer SUP is in hot standby state using **show redundancy** command.
5. Switchover from SUP0 to SUP1 using **redundancy force-switchover** command.
6. Wait and verify SUP0 is in hot standby state using **show redundancy** command.
7. Switchover from SUP1 to SUP0 using **redundancy force-switchover** command.
8. Wait and verify SUP1 is in hot standby state using **show redundancy** command.
9. Verify the system is running in subpackage mode using **show version** command. System image file should point to a .conf package file. Below is a sample output:

   ```
   cBR8-01 uptime is 6 weeks, 4 days, 5 hours, 36 minutes
    Uptime for this control processor is 6 weeks, 4 days, 4 hours, 57 minutes
    System returned to ROM by SSO Switchover at 10:33:32 est Thu Nov 19 2015
    System restarted at 11:19:15 est Thu Nov 19 2015
    System image file is "bootflash:/Upgrade/packages.conf"
   ```
10. Verify the directory in which the .conf file is booted. You will see packages.conf along with a list of package files ending with SPA.pkg.

- Verify both SUPs are running the same image from the same path using **show version | include image** command. Below is a sample output:

  ```
  Router# show version | include image
  System image file is "bootflash:XE317/packages.conf"
  ```

- Verify autoboot is enabled using **show bootvar** command. Below is a sample output:

  ```
  Router# show bootvar
  BOOT variable = bootflash:XE317/packages.conf,12;
  CONFIG_FILE variable =
  BOOTLDR variable does not exist
  Configuration register is 0x2102

  Standby BOOT variable = bootflash:XE317/packages.conf,12;
  Standby CONFIG_FILE variable =
  Standby BOOTLDR variable does not exist
  Standby Configuration register is 0x2102
  ```

- Verify both SUPs are in SSO mode, standby SUP is in hot standby mode using **show redundancy state** command. Below is a sample output:

  ```
  Router# show redundancy state
         my state = 13 -ACTIVE
       peer state = 8  -STANDBY HOT
             Mode = Duplex
             Unit = Primary
          Unit ID = 48

  Redundancy Mode (Operational) = sso
  Redundancy Mode (Configured)  = sso
  Redundancy State              = sso
       Maintenance Mode = Disabled
      Manual Swact = enabled
   Communications = Up
  ```

```
   client count = 119
client_notification_TMR = 30000 milliseconds
          RF debug mask = 0x0
```

- Make sure there is enough bootflash disk space on both SUPs (available space more than 1.8GB).
- Verify the IOS-XE release 3.17.1S image file against the known file md5 hash using **verify /md5** *cbrsup-universalk9.03.17.01.S.156-1.S1-std.SPA.bin* command.
- Put IOS-XE release 3.17.1S image *cbrsup-universalk9.03.17.01.S.156-1.S1-std.SPA.bin* in the same folder as current boot package on active SUP using **dir bootflash:***/XE317/cbrsup-universalk9.03.17.01.S.156-1.S1-std.SPA.bin* command.
- Verify .issu folder and config files exists on both active and standby SUP hard disk using **dir harddisk:.issu/** command. Below is a sample output:

```
Router# dir harddisk:.issu/
Directory of harddisk:/.issu/

11108354  -rw-           16220   Mar 7 2016 14:03:12 +08:00  0.conf
11108355  -rw-           16220   Mar 7 2016 14:03:14 +08:00  1.conf
11108356  -rw-           16220   Mar 7 2016 14:03:15 +08:00  2.conf
11108357  -rw-           16220   Mar 7 2016 14:03:21 +08:00  3.conf
11108358  -rw-           16220   Mar 7 2016 14:03:23 +08:00  6.conf
11108359  -rw-           16220   Mar 7 2016 14:03:23 +08:00  7.conf
11108360  -rw-           16220   Mar 7 2016 14:03:26 +08:00  8.conf
11108361  -rw-           16220   Mar 7 2016 14:06:25 +08:00  9.conf
11108362  -rw-           16220   Mar 7 2016 14:18:14 +08:00  rp.conf
11108363  -rw-           16220   Mar 7 2016 14:18:18 +08:00  remote_rp.conf

Router# dir stby-harddisk:.issu/
Directory of stby-harddisk:/.issu/

3670018  -rw-           16220   Mar 7 2016 14:18:53 +08:00  rp.conf
3670019  -rw-           16220   Mar 7 2016 14:19:03 +08:00  remote_rp.conf
3670020  -rw-           16220   Mar 7 2016 14:19:29 +08:00  0.conf
3670021  -rw-           16220   Mar 7 2016 14:19:38 +08:00  1.conf
3670022  -rw-           16220   Mar 7 2016 14:19:43 +08:00  2.conf
3670023  -rw-           16220   Mar 7 2016 14:19:47 +08:00  3.conf
3670024  -rw-           16220   Mar 7 2016 14:19:51 +08:00  6.conf
3670025  -rw-           16220   Mar 7 2016 14:19:56 +08:00  7.conf
3670026  -rw-           16220   Mar 7 2016 14:20:00 +08:00  8.conf
3670027  -rw-           16220   Mar 7 2016 14:20:05 +08:00  9.conf
```

If there is no such folder or file is missing, create a new one and generate files needed. Below are sample commands:

```
Router# mkdir harddisk:.issu
Router# mkdir stby-harddisk:.issu
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/rp.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/remote_rp.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/0.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/1.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/2.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/3.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/6.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/7.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/8.conf
Router# copy bootflash:/XE317/packages.conf harddisk:.issu/9.conf

Router# copy harddisk:.issu/rp.conf stby-harddisk:.issu/rp.conf
Router# copy harddisk:.issu/remote_rp.conf stby-harddisk:.issu/remote_rp.conf
Router# copy harddisk:.issu/0.conf stby-harddisk:.issu/0.conf
Router# copy harddisk:.issu/1.conf stby-harddisk:.issu/1.conf
Router# copy harddisk:.issu/2.conf stby-harddisk:.issu/2.conf
Router# copy harddisk:.issu/3.conf stby-harddisk:.issu/3.conf
Router# copy harddisk:.issu/6.conf stby-harddisk:.issu/6.conf
Router# copy harddisk:.issu/7.conf stby-harddisk:.issu/7.conf
```

```
Router# copy harddisk:.issu/8.conf stby-harddisk:.issu/8.conf
Router# copy harddisk:.issu/9.conf stby-harddisk:.issu/9.conf
```

Note The file with digital as the name corresponds with line card slot, the above example is for fully loaded chassis. If target system is not fully loaded, just copy the files named with inserted slot number.

Step 1 Perform RP only ISSU.

request platform software package install node file bootflash:XE317/cbrsup-universalk9.03.17.01.S.156-1.S1-std.SPA.bin noreload linecard

Note Do not interrupt the terminal until ISSU performs automatic SUP switchover.

Step 2 Attach to ISSU progress status tracking mode after SUP switchover. User can use Ctrl+C to exit to perform other command if needed.

request platform software package install node attach
Below is a sample output:

```
NOTE: Currently node has booted from a provisioning file
NOTE: Going to resume a dual rp sub-pakcage node ISSU install

--- Starting wait for Standby RP to reach terminal redundancy state ---
```

Step 3 Reset secondary line card (change slot 0 to secondary slot on target chassis).

hw-module slot 0 reload

Step 4 Upgrade all line cards.

request platform software package install node linecard-only all

Note Do not interrupt the terminal until ISSU is successfully complete.

What to Do Next

Perform verification test to determine if the upgrade is successful, include:

- Verify the router is running the new IOS-XE release using **show version** command.
- Check facility alarms using **show facility-alarm status** command.

Note Some deployments use 5 power supplies which are sufficient, but will show an major alarm which can be ignored.

- Check the status of the power supplies using **show environment power** command.
- Check PS status using **show platform hardware slot P<0-5> mcu status** command.
- Complete trace routes to known good off-network IP address using the source address of customer CPE blocks to verify routing is working.
- Check logs for error messages using **show log** command.

These **show** commands may be useful in the verification test:

- **show redundancy**
- **show platform**
- **show platform diag**
- **show environment**
- **show redundancy linecard all**
- **show isis neighbors**
- **show ip route rip**
- **show ip mroute**
- **show cops servers**
- **show cable modem voice**
- **show cable calls**
- **show cable metering verbose**
- **show cable licenses all**
- **show cable modem summary total**
- **show inventory**
- **Request platform software console attach** *slot-id*/**0** and **show version**