Installing Cloud Native BNG User Plane Packages

This chapter describes the procedure for installing cloud native BNG user plane packages on Cisco IOS XR platform.

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Installing and Activating the cnBNG Package on the User Plane

Before you begin:

You must follow these guidelines before installing cnBNG package on the user plane:

- The cnBNG user plane functionality requires two packages to be installed on the router—the BNG support package (**asr9k-bng-supp-x64-*.rpm**) and the cnBNG package **(asr9k-cnbng-x64-*.rpm**).
- You can install cnBNG as an optional package on the router. The standard Cisco Golden ISO (GISO) image does not contain the cnBNG package.
- The physical BNG package (**asr9k-bng-x64*.rpm**) and the cnBNG package (**asr9k-cnbng-x64*.rpm**) are mutually exclusive. You cannot install both the packages on the router. The install operation fails if tried.
- You must uninstall and remove the physical BNG package and reboot the router prior to installing the cnBNG package on a router which is already being used as a physical BNG.
- You can either activate the BNG support package and the cnBNG package together as a single step or activate the BNG support package first and then activate the cnBNG package.
- The system does not support standalone PPP use case with cnBNG enabled. You must remove any PPP configuration before activating cnBNG on the router.

Installing and Activating the cnBNG Package on the User Plane

- **Step 1**: Install both the BNG support package and the cnBNG package from the RPM location to the router

  Use the **install add source** command.

```
Router#install add source tftp://209.165.200.225/test-path/
asr9k-bng-supp-x64-1.0.0.0-r73105I.x86_64.rpm asr9k-cnbng-x64-1.0.0.0-r73105I.x86_64.rpm
```

This step adds the BNG support package (**asr9k-bng-supp-x64-1.0.0.0-r73105I.x86_64.rpm**) and the cnBNG package (**asr9k-cnbng-x64-1.0.0.0-r73105I.x86_64.rpm**) from the source location of the RPMs (**tftp://209.165.200.225/test-path/**) to the router.

- **Step 2:** Activate the packages

  Use the **install activate** *activate-id* command.

  Where, *activate-id* is the ID that you see on the router console once the **install add** operation in the previous step is completed.

```
Router#install activate 1
```

  This step activates both the BNG support package and the cnBNG package which were installed as part of step 1.

- **Step 3:** Verify the activated packages.

  Use the **show install active** command.

```
Router#show install active
Sun Apr 19 09:49:34.041 UTC
Node 0/RSP0/CPU0 [RP]
  Boot Partition: xr_lv0
  Active Packages: 5
        asr9k-xr-7.3.1.05I version=7.3.1.05I [Boot image]
        asr9k-bng-supp-x64-1.0.0.0-r73105I
        asr9k-cnbng-x64-1.0.0.0-r73105I

Node 0/0/CPU0 [LC]
  Boot Partition: xr_lv0
  Active Packages: 5
        asr9k-xr-7.3.1.05I version=7.3.1.05I [Boot image]
        asr9k-bng-supp-x64-1.0.0.0-r73105I
        asr9k-cnbng-x64-1.0.0.0-r73105I

Node 0/1/CPU0 [LC]
  Boot Partition: xr_lv0
  Active Packages: 5
        asr9k-xr-7.3.1.05I version=7.3.1.05I [Boot image]
        asr9k-bng-supp-x64-1.0.0.0-r73105I
        asr9k-cnbng-x64-1.0.0.0-r73105I

Node 0/3/CPU0 [LC]
  Boot Partition: xr_lv0
  Active Packages: 5
        asr9k-xr-7.3.1.05I version=7.3.1.05I [Boot image]
        asr9k-bng-supp-x64-1.0.0.0-r73105I
        asr9k-cnbng-x64-1.0.0.0-r73105I
```

  The *Active Packages* parameter in the show command output lists the BNG support package and the cnBNG package. This shows successful activation of the packages.

This step completes the installation and activation of cnBNG package on the user plane.