



Release Notes for the Cisco Cloud Native BNG Control Plane, Version 2025.01.0

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Cisco Cloud Native BNG Control Plane

Introduction

This Release Notes identifies changes and issues related to this software release.

Release Package Version Information

| Software Packages | Version |
|-----------------------|--|
| bng.2025.01.0.SPA.tgz | 2025.01.0 |
| NED package | ncs-5.4.1.1-bng-nc-2025.01.0 ncs-6.1-bng-nc-2025.01.0 |
| NSO | 5.4.1.1 6.1 |

Descriptions for the various packages provided with this release are available in the [Release Package Descriptions, on page 5](#) section.

Verified Compatibility

This version of the cnBNG Control Plane has been verified with the following software components/packages. Consult the individual components/packages release notes for details.

| Products | Version |
|----------------------|------------------------|
| BNG UP (ASR 9K) | IOS XR Release 25.1.1* |
| SMI CEE | 2025.01.1.14 |
| SMI Cluster Deployer | 2025.01.1.14 |
| SMI Base ISO Image | 22.04.0-20250107 |

*Subject to feature availability.

What's New in this Release

New in Documentation

This version of Release Notes includes a new section titled **What's New in this Release** comprising all new features, enhancements, and behavior changes applicable for the release.

This section will be available in all the 5G release notes and will supersede content in the Release Change Reference (RCR) document. Effective release 2024.02, the RCR document will be deprecated.

Features and Enhancements

This section covers a brief description of the features and enhancements introduced in this release. It also includes links to detailed documentation, where available.

| Feature | Description |
|---|---|
| RADIUS Attributes Filtering | You can now customize RADIUS messages by including or excluding specific attributes to meet your server's requirements. This feature enhances your control over shared data between RADIUS clients and servers and optimizes message performance by filtering unnecessary attributes, thus reducing server load. |
| L3 Routed Subscriber Sessions with Subscriber Redundancy Group | This feature enhances routing and redundancy for subscriber sessions by allowing subscribers to connect through a routed (L3) access network. |
| IANA and IAPD Allocation from Same IP Range | You can now reduce the route count by using a single summary route for both Internet Assigned Numbers Authority (IANA) and Internet Address Prefix Delegation (IAPD) from a single IP pool. This feature optimizes the use of IPv6 prefix ranges and offers flexibility in address allocation. By introducing a virtual address range within the IPAM data structure, you can reserve the first prefix for IANA and use subsequent prefixes for IAPD with the split-prefix-iana-first command. |
| Session Disconnect History | This feature enhances troubleshooting by providing detailed records of past session disconnections in cnBNGs. This feature is crucial for understanding why sessions have been disconnected in the past, allowing for effective problem resolution and network management. |
| IPv6 Class Configuration and Static IP Allocation Support | This feature ensures reliable IPv6 client IP allocation by allowing static IP assignments based on class parameters within a DHCPv6 profile. |
| Utilizing Session accounting AAA profiles for Service Accounting and Accounting Send-Stop Setup-Failure | This feature enhances session accounting by allowing the use of a single AAA profile for both session and service accounting, reducing the need for multiple feature templates. This simplifies the configuration process when connecting to multiple RADIUS servers. Accounting Send-Stop Setup-Failure improves session management by sending an accounting stop record in case of session setup failures, ensuring that the RADIUS server clears stale session entries. |

| Feature | Description |
|---|--|
| cnBNG Cluster Deployment Support on Red Hat OpenShift | We now support deploying the cnBNG Control Plane on a Red Hat OpenShift cluster. |
| CP Geo Redundancy support for PPPoE sessions. | We have now introduced CP geo redundancy support for PPPoE sessions. |
| SRG Support for PPPoE Sessions. | We have now added Subscriber Redundancy Group (SRG) support for PPPoE sessions. |

Related Documentation

For a complete list of documentation available for this release, go to:

<https://www.cisco.com/c/en/us/support/routers/cloud-native-broadband-network-gateway-bng/products-installation-and-configuration-guides-list.html>

Installation and Upgrade Notes

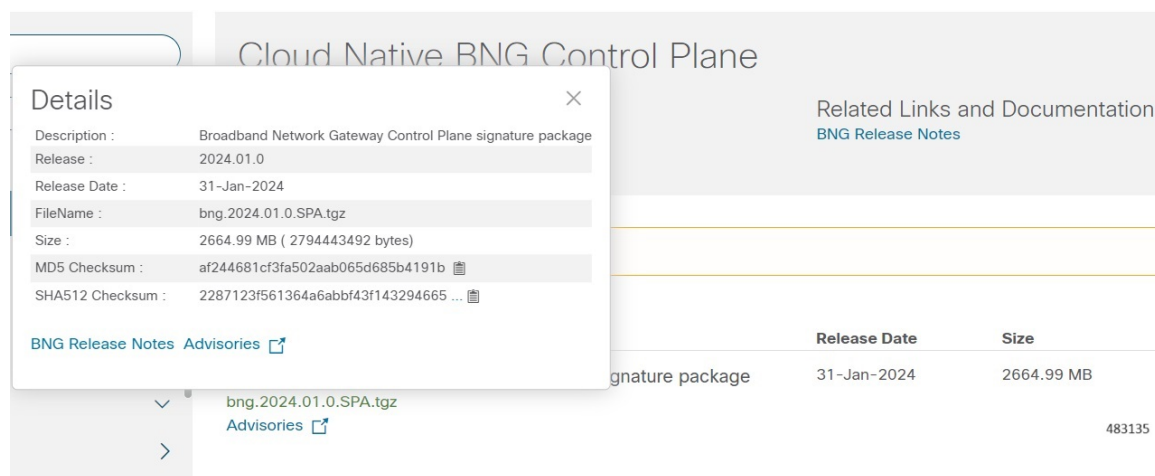
This Release Note does not contain general installation and upgrade instructions. Refer to the existing installation documentation for specific installation and upgrade considerations.

Software Integrity Verification

To verify the integrity of the software image you have from Cisco, you can validate the SHA512 checksum information against the checksum identified by Cisco for the software.

Image checksum information is available through **Cisco.com Software Download Details**. To find the checksum, hover the mouse pointer over the software image you have downloaded.

The following screenshot is an example of a cnBNG CP release posted in the Software Download page.



At the bottom you find the SHA512 checksum, if you do not see the whole checksum you can expand it by pressing the "..." at the end.

To validate the information, calculate a SHA512 checksum using the information in Table 1 and verify that it matches either the one provided on the software download page.

To calculate a SHA512 checksum on your local desktop, refer to the following table.

Table 1: Checksum Calculations per Operating System

| Operating System | SHA512 checksum calculation command examples |
|--|--|
| Microsoft Windows | Open a command line window and type the following command: <code>> certutil.exe -hashfile filename.extension SHA512</code> |
| Apple MAC | Open a terminal window and type the following command: <code>\$ shasum -a 512 filename.extension</code> |
| Linux | Open a terminal window and type the following command: <code>\$ sha512sum filename.extension</code> Or <code>\$ shasum -a 512 filename.extension</code> |
| NOTES: <i>filename</i> is the name of the file. <i>extension</i> is the file extension (for example, .zip or .tgz). | |

If the SHA512 checksum matches, you can be sure that no one has tampered with the software image or the image has not been corrupted during download.

If the SHA512 checksum does not match, we advise you to not attempt upgrading any systems with the corrupted software image. Download the software again and verify the SHA512 checksum again. If there is a constant mismatch, please open a case with the Cisco Technical Assistance Center.

Certificate Validation

cnBNG CP software images are signed via x509 certificates. View the .README file packaged with the software for information and instructions on how to validate the certificates..

Open Bugs for this Release

The following table lists the open bugs in this specific software release.



Note This software release may contain open bugs first identified in other releases. Additional information for all open bugs for this release are available in the [Cisco Bug Search Tool](#).

| Bug ID | Headline |
|----------------------------|--|
| CSCwn62563 | 2025.01.1.i07 - Critical 213097 Ubuntu 20.04 LTS / 22.04 LTS |

Operator Notes

Cloud Native Product Version Numbering System

The show helm list command displays detailed information about the version of the cloud native product currently deployed.

Versioning: Format & Field Description

YYYY.RN.MN[.TTN] [.dN] [.MR][.iBN]

Where,

YYYY → 4 Digit year.

- Mandatory Field.
- Starts with 2020.
- Incremented after the last planned release of year.

RN → Major Release Number.

- Mandatory Field.
- Starts with 1.
- Support preceding 0.
- Reset to 1 after the last planned release of a year(YYYY).

MN → Maintenance Number.

- Mandatory Field.
- Starts with 0.
- Does not support preceding 0.
- Reset to 0 at the beginning of every major release for that release.
- Incremented for every maintenance release.
- Preceded by "m" for bulbs from main branch.

TTN → Throttle of Throttle Number.

- Optional Field, Starts with 1.
- Precedes with "t" which represents the word "throttle or throttle".
- Applicable only in "Throttle of Throttle" cases.
- Reset to 1 at the beginning of every major release for that release.

DN → Dev branch Number

- Same as TTN except Used for DEV branches.
- Precedes with "d" which represents "dev branch".

MR → Major Release for TOT and DEV branches

- Only applicable for TOT and DEV Branches.
- Starts with 0 for every new TOT and DEV branch.

BN → Build Number

- Optional Field, Starts with 1.
- Precedes with "t" which represents the word "interim".
- Does not support preceding 0.
- Reset at the beginning of every major release for that release.
- Reset of every throttle of throttle.

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The appropriate version number field increments after a version has been released. The new version numbering format is a contiguous sequential number that represents incremental changes between releases. This format facilitates identifying the changes between releases when using Bug Search Tool to research software releases.

Release Package Descriptions

The following table provides descriptions for the packages that are available with this release.

| Software Packages | Description |
|---|---|
| bng.<version>.SPA.tgz | The cnBNG CP offline release signature package. This package contains the cnBNG CP deployment software as well as the release signature, certificate, and verification information. |
| nsc-<nso_version>-bng-nc-<version>.tar.gz | The NETCONF NED package. This package includes all the yang files that are used for NF configuration. Note that NSO is used for the NED file creation. |

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, refer to <https://www.cisco.com/c/en/us/support/index.html>.