Release Notes for the Ultra Cloud Core Policy Control Function, Version 2024.01.0

First Published: 2024-01-31

Ultra Cloud Core Policy Control Function

Introduction

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

Release Lifecycle Milestones

Release Lifecycle Milestone	Milestone	Date
First Customer Ship	FCS	31-Jan-2024
End of Life	EoL	31-Jan-2024
End of Software Maintenance	EoSM	31-Jul-2025
End of Vulnerability and Security Support	EoVSS	31-Jul-2025
Last Date of Support	LDoS	31-Jul-2026

These milestones and the intervals between them are defined in the Cisco Ultra Cloud Core (UCC) Software Release Lifecycle Product Bulletin available on cisco.com.

Release Package Version Information

Software Packages	Version
pcf.2024.01.0.SPA.tgz	2024.01.0
NED Package	ncs-6.1-pcf-nc-2024.01.0
NSO Version	6.1.3.1

Descriptions for the various packages provided with this release are available in the Release Package Descriptions section.

Verified Compatibility

Products	Version
Ultra Cloud Core SMI	2024.01.1
Ultra Cloud Core CDL	1.11.6

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 2024.01, 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
NRF Notification on nfStatus Change	PCF receives NF_PROFILE_CHANGED notification from NRF when the nfStatus attribute of the NF Profile changes to SUSPENDED or UNDISCOVERABLE. This notification support is to comply with 3GPP Release 29.510, Release 16. **Default Setting:** Enabled - Always on
Enhancement to URSP Support in PCF	PCF supports the following functionalities in URSP: • Process UPSI list from the UE in UE Policy create request to re-install the delta of UE Policies. • Process the update message from AMF and subscribe to new AMF for notification. • Send UE Policy Control Update messages during LOC Change or PLMN change and connectivity change from UE. • Attempt the URSP delivery when the UE sends MANAGE_UE_POLICY_COMMAND_REJECT message. • Evaluate the Table Driven URSP configuration and derive the UE Policy. **Default Setting:** Enabled - Always on

Related Documentation

For the complete list of documentation available for this release, go to https://www.cisco.com/c/en/us/support/wireless/ultra-cloud-core-policy-control-function/series.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.

At the bottom, you will find the SHA512 checksum. If you do not see the whole checksum, you can expand it by pressing "..." 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: **`> certutil.exe -hashfile`** *`filename.extension`* **`SHA512`**
Apple MAC	Open a terminal window and type the following command: **`$ shasum -a 512`** *`filename.extension`*
Linux	Open a terminal window and type the following command: **`$ sha512sum`** *`filename.extension`* OR **`$ shasum -a 512`** *`filename.extension`*

Operating System	SHA512 checksum calculation command examples
NOTES: *filename* is the name of the file. *extension* is the file extension (for example, .zip or .tgz).	

Certificate Validation

PCF software images are signed via x509 certificates. For information and instructions on how to validate the certificates, refer to the .README file packaged with the software.

Open Bugs for this Release

The following table lists the known bugs that remain open 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
CSCwi77279	Multiple values in SubscCat is not being supported in the table driven URSP

Resolved Bugs for this Release

The following table lists the known bugs that are resolved in this specific software release.

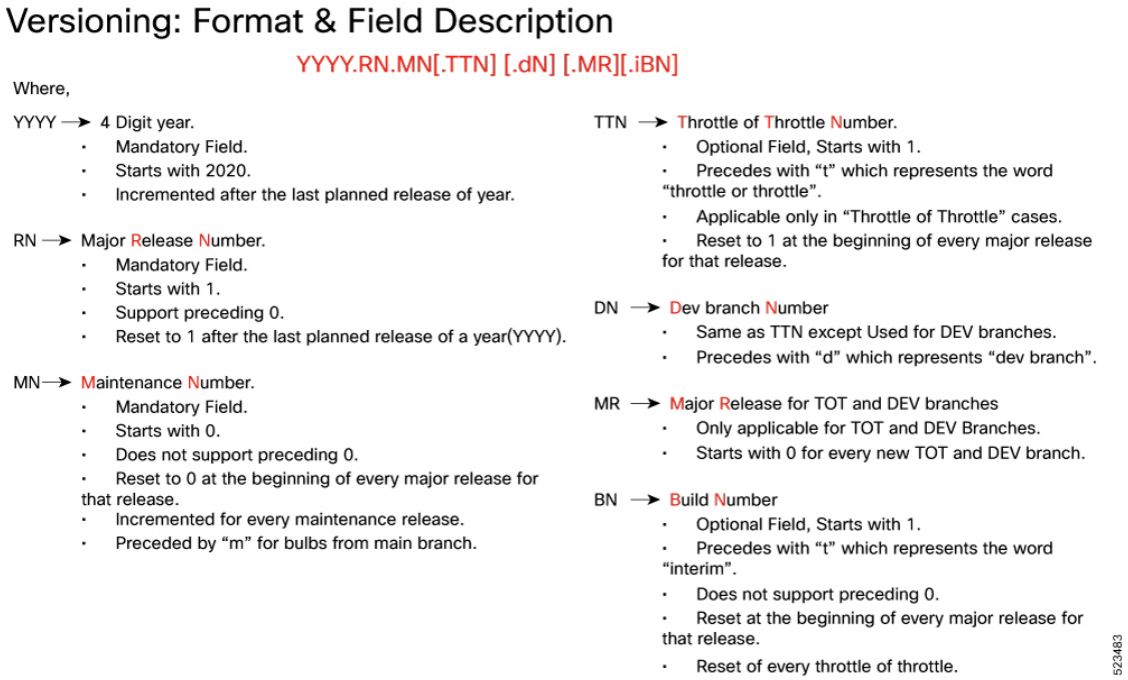
Note This software release may contain bug fixes first introduced in other releases. Additional information for all resolved bugs for this release are available in the Cisco Bug Search Tool.

Bug ID	Headline
CSCwe87529	mTLS Issue - Certificate Unknown - pcf.2023.02.m0.i34
CSCwh20916	NF removal via NRF notification is failing for UDR
CSCwi39750	PROTOCOL_ERROR - NRF Notification - NF Profile Change

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.



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.

Table 2: Release Package Information

Software Packages	Description
pcf.<version>.SPA.tgz	The PCF offline release signature package. This package contains the PCF deployment software, NED package, as well as the release signature, certificate, and verification information.
ncs-<nso_version>-pcf-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.