



# Release Notes for the Ultra Cloud Core Policy Control Function, Version 2024.02

First Published: 2024-04-30

## 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	30-Apr-2024
End of Life	EoL	30-Apr-2024
End of Software Maintenance	EoSM	29-Oct-2025
End of Vulnerability and Security Support	EoVSS	31-Oct-2025
Last Date of Support	LDoS	31-Oct-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.2024.02.0.SPA.tgz	2024.02.0
NED Package	ncs-6.1-pcf-nc-2024.02.0
NSO Version	6.1.5

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	2024.02.1.14
Ultra Cloud Core CDL	1.11.7

## What's New in this Release

### Features and Enhancements

Feature	Description
M7 Functional Qualification	PCF deployment on the M7 server is accessible from 2024.02.0 release.
<a href="#">UDR Notification for Subscriber Category Update in URSP</a>	PCF receives the UDR notification for the SubscCats attribute update and re-evaluates the Table Driven URSP Configuration in the UE.
<a href="#">Updates to LDAP Query in PCF to Perform Blocking Action</a>	PCF sends LDAP query only for the on-net and roaming sessions where the PCF needs to perform a blocking action. The blocking action allows to limit the irrelevant LDAP queries sent from PCF.

## 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.

**Details**

Description : PCF offline signature package  
 Release : 2023.03.0  
 Release Date : 25-Jul-2023  
 FileName : pcf.2023.03.0.SPA.tgz  
 Size : 3904.95 MB ( 4094632015 bytes)  
 MD5 Checksum : 2779f419ae07781f5f371854b378e54d  
 SHA512 Checksum : 698f646f8931d00c1a88506c087fc079 ...

PCF Release Notes Advisories

Policy Control Function

Related Links and Documentation  
[PCF Release Notes](#)

Release Date	Size
25-Jul-2023	3904.95 MB

pcf.2023.03.0.SPA.tgz  
 Advisories

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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: <code>&gt; 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>
<b>NOTES:</b> <i>filename</i> is the name of the file. <i>extension</i> 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
<a href="#">CSCwj39532</a>	PCF should send LDAP query to USD based on Dummy_RAR response

## 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 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	Behavior Change
<a href="#">CSCwi77279</a>	Multiple values in Subscat is not being supported in table driven URSP	No
<a href="#">CSCwj42287</a>	evsNotif IP-CAN and RAT type is not set for N5_create response	No
<a href="#">CSCwj81859</a>	Grafana shows N36_TGPP KPI even though the customer doesn't have N36 sessions in production	No

## 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.

**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>.