



# Release Notes for the 5G Converged Core (SMF and cnSGWc), Release 2025.01.1

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## 5G Converged Core Session Management 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-2025
End of Life	EoL	31-Jan-2025
End of Software Maintenance	EoSM	1-Aug-2026
End of Vulnerability and Security Support	EoVSS	1-Aug-2026
Last Date of Support	LDoS	31-Aug-2027

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
ccg-2025.01.1.SPA.tgz	2025.01.1
NED package	ncs-5.6.8-ccg-nc-2025.01.1 ncs-6.1.14-ccg-nc-2025.01.1
NSO	5.6.8 6.1.14

Descriptions for the various packages provided with this release are available in the [Release Package Descriptions, on page 7](#) section.

## Verified Compatibility

Products	Version
Ultra Cloud Core SMI	2025.01.1.14
Ultra Cloud CDL	1.12.0
Ultra Cloud Core UPF	2025.01.0
Ultra Cloud cnSGWc	2025.01.1

For information on the Ultra Cloud Core products, refer to the documents for this release available at:

- <https://www.cisco.com/c/en/us/support/wireless/ultra-cloud-core-subscriber-microservices-infrastructure/products-installation-and-configuration-guides-list.html>
- <https://www.cisco.com/c/en/us/support/wireless/ultra-cloud-core-user-plane-function/products-installation-and-configuration-guides-list.html>
- <https://www.cisco.com/c/en/us/support/wireless/ultra-cloud-core-serving-gateway-function/products-installation-and-configuration-guides-list.html>

## What's New in this Release

### Features and Enhancements

This section covers a brief description of the features and enhancements introduced in this release.

Feature	Description
New KPI metric for monitoring the default mapped flows	<p>SMF introduces a new metric <b>smf_service_flow_stats</b> in the Policy control total flow statistics category to indicate the mapped flows.</p> <p>The smf_service_flow_stats supports the following labels:</p> <ul style="list-style-type: none"> <li>• app_name</li> <li>• cluster</li> <li>• data_center</li> <li>• dnn</li> <li>• instance_id</li> <li>• mapped_flow</li> <li>• qos_5qi</li> <li>• rat_type</li> <li>• service_name</li> </ul> <p>The following are the sample queries of smf_service_flow_stats:</p> <pre>smf_service_flow_stats{app_name="smf",cluster="Local",data_center="DC",dnn="intershat#cisco.com",instance_id="0",mapped_flow="true",qos_5qi="13",rat_type="EUTRA",service_name="smf-service"} 1</pre> <pre>smf_service_flow_stats{app_name="smf",cluster="Local",data_center="DC",dnn="intershat#cisco.com",instance_id="0",mapped_flow="true",qos_5qi="9",rat_type="EUTRA",service_name="smf-service"} 1</pre>

### Behavior Changes

This section covers a brief description of behavior changes introduced in this release.

Behavior Change	Description
Send service-names in plain string format	<p><b>Previous Behavior:</b> During peer Network Function (NF) discovery, SMF sends service-names to Service Communication Proxy (SCP) in an array format.</p> <p>Example:</p> <pre>3gpp-Sbi-Discovery-service-names:["nudm-uecm"]</pre> <p><b>New Behavior:</b> SMF now sends the service-names in plain string format to SCP during the peer NF discovery.</p> <p>Example:</p> <pre>"sbi_discovery_service_names_3gpp": nudm-uecm</pre>

## Related Documentation

For the complete list of documentation available for this release, see <https://www.cisco.com/c/en/us/support/wireless/ultra-cloud-core-session-management-function/products-installation-and-configuration-guides-list.html>.

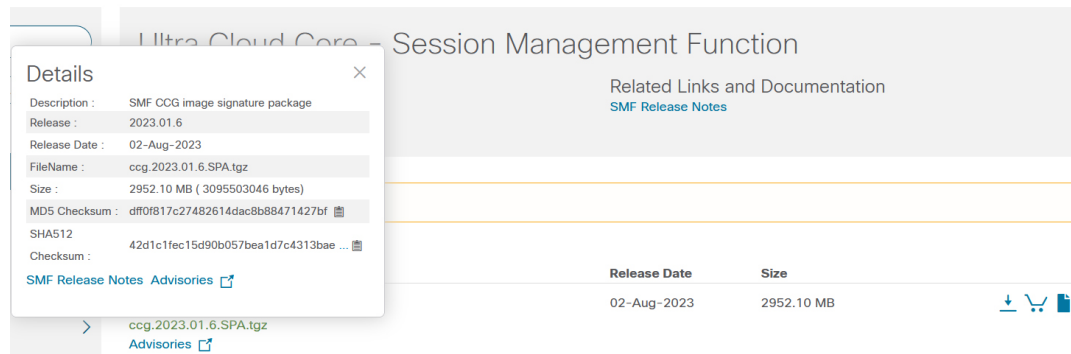
## Installation and Upgrade Notes

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.



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: Checksum Calculations per Operating System](#) 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 table below.

**Table 1: Checksum Calculations per Operating System**

Operating System	SHA512 checksum calculation command examples
Microsoft Windows	<p>Open a command line window and type the following command:</p> <pre>&gt; certutil.exe -hashfile filename.extension SHA512</pre>
Apple MAC	<p>Open a terminal window and type the following command:</p> <pre>\$ shasum -a 512 filename.extension</pre>

Operating System	SHA512 checksum calculation command examples
Linux	<p>Open a terminal window and type the following command:</p> <pre>\$ sha512sum filename.extension</pre> <p>OR</p> <pre>\$ shasum -a 512 filename.extension</pre>
<p><b>Note</b> filename is the name of the file. extension is the file extension (for example, .zip or .tgz).</p>	

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

SMF software images are signed via x509 certificates. Please view the .README file packaged with the software for information and instructions on how to validate the certificates.

## Open Bugs for this Release

There are no open bugs in this software release.

## Resolved Bugs for this Release

The following table lists the resolved bugs 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	Behavior Change
<a href="#">CSCwn05114</a>	Release procedure KPI impact, sending 500 instead of 204	No
<a href="#">CSCwn89053</a>	Need metrics to monitor the default bearer which have 5QI remaped	No
<a href="#">CSCwn90534</a>	snssai label is empty in bulkstats for few procedures	No

Bug ID	Headline	Behavior Change
<a href="#">CSCwn94655</a>	CBR has UL and DL filters set in TFT when more filters present, rejected by MME	No
<a href="#">CSCwn95332</a>	PTI=0, PDU session ID=0 lead to rest pod panic	No
<a href="#">CSCwn96985</a>	Rest EP pod panic during NRF discovery	No
<a href="#">CSCwo06527</a>	Discovery for status notification, multiple n40 release seen	No
<a href="#">CSCwo21940</a>	Not handling smContextStatusUri value as fqdn, svc crashes while creating n40req	No
<a href="#">CSCwo28733</a>	Not sending 3gpp-SBI-discovery-service-names in plain string format to scp	Yes
<a href="#">CSCwo39466</a>	UE decoding problem - SMF sending multiple QOS rules in same container	Yes
<a href="#">CSCwo44505</a>	Unable to handle smContextRetrieveReq w/o payload, throws 503 marshal error	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
csg.<version>.SPA.tgz	The SMF offline release signature package. This package contains the SMF deployment software, NED package, as well as the release signature, certificate, and verification information.
ncs-<nso_version>-csg-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>.