Ultra Cloud Core 5G Access and Mobility Management Function, Release 2023.04 - Release Change Reference

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About this Guide

Note The documentation set for this product strives to use bias-free language. For purposes of this documentation set, bias-free is defined as language that doesn't imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. While any existing biased terms are being substituted, exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

This preface describes the *Release Change Reference (RCR)*, the new and modified features and behavior change informations for one or more applicable 5G AMF releases.

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Conventions Used

The following tables describe the conventions used throughout this documentation.

Notice Type	Description
Information Note	Provides information about important features or instructions.
Caution	Alerts you of potential damage to a program, device, or system.
Warning	Alerts you of potential personal injury or fatality. May also alert you of potential electrical hazards.

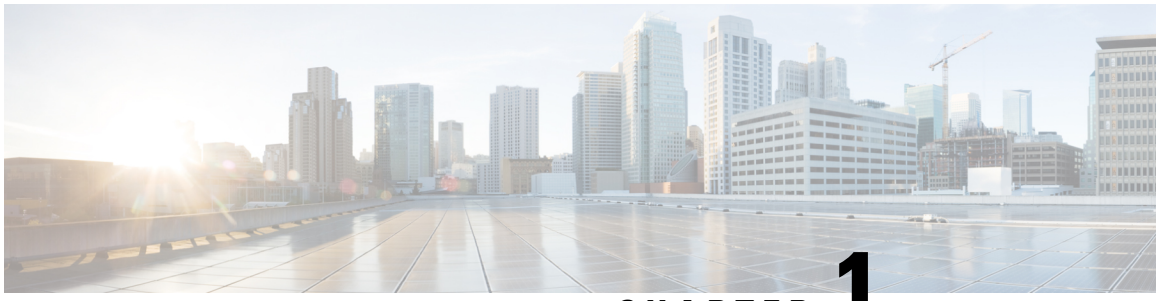
Typeface Conventions	Description
Text represented as a `screen display`	This typeface represents displays that appear on your terminal screen, for example: `Login:`

Typeface Conventions	Description
Text represented as **commands**	This typeface represents commands that you enter, for example: **show ip access-list** This document always gives the full form of a command in lowercase letters. Commands are not case sensitive.
Text represented as a **command** *variable*	This typeface represents a variable that is part of a command, for example: **show card** *slot_number* *slot_number* is a variable representing the applicable chassis slot number.
Text represented as menu or sub-menu names	This typeface represents menus and sub-menus that you access within a software application, for example: Click the **File** menu, then click **New**

Contacting Customer Support

Use the information in this section to contact customer support.

Refer to the support area of http://www.cisco.com for up-to-date product documentation or to submit a service request. A valid username and password are required to access this site. Please contact your Cisco sales or service representative for additional information.



CHAPTER 1

UCC 5G AMF - Release Change Reference

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New in Documentation

Information on new features, enhancements, and behavior changes in the Release Change Reference (RCR) document will now be available under the **What's New in this Release** section in the 5G release notes.

Note This document will be deprecated in 2024.01 and later releases.

Features and Changes Quick Reference

Features / Behavior Changes	Release Introduced / Modified	Default
Enhancements to AMF Statistics, on page 2	2023.04.0	Not Applicable
Monitor Subscriber, on page 3	2023.04.0	Disabled – Configuration required to enable
Service Area Restriction, on page 3	2023.04.0	Not Applicable
Network Slicing Support, on page 4	2023.04.0	Enabled – Always-on

Features / Behavior Changes	Release Introduced / Modified	Default
Enhancement to the Context Release Command Sent to gNB and SMF, on page 5	2023.04.0	Not Applicable

Enhancements to AMF Statistics

Feature Summary and Revision History

Summary Data

Table 1: Summary Data

Applicable Product(s) or Functional Area	AMF
Applicable Platform(s)	SMI
Feature Default Setting	Not Applicable
Related Documentation	Not Applicable

Revision History

Table 2: Revision History

Revision Details	Release
First introduced.	2023.04.0

Feature Description

This feature updates the statistics used in AMF service for all inbound and outbound messages/procedures for better debugging,

This feature also introduces new statistics to track the N14 failure request and response messages.

For more information on this feature, refer to the UCC 5G AMF Metrics Reference document.

Monitor Subscriber

Feature Summary and Revision History

Summary Data

Table 3: Summary Data

Applicable Product(s) or Functional Area	AMF
Applicable Platform(s)	SMI
Feature Default Setting	Enabled - Always-on
Related Documentation	Not Applicable

Revision History

Table 4: Revision History

Revision Details	Release
First introduced.	2023.04.0

Feature Description

The "Monitor Subscriber" is a debugging and troubleshooting tool which captures the N1/N2/N8/N11/N12/N15/N20/N22/N26 interface level messages. The messages are logged only if SUPI is present or can be found from AMF database.

For more information on this feature, refer to the UCC 5G AMF Configuration and Administration Guide > Troubleshooting Chapter.

Service Area Restriction

Feature Summary and Revision History

Summary Data

Table 5: Summary Data

Applicable Product(s) or Functional Area	AMF
Applicable Platform(s)	SMI

Feature Default Setting	Enabled - Always-on
Related Documentation	Not Applicable

Revision History

Table 6: Revision History

Revision Details	Release
First introduced.	2023.04.0

Feature Description

The SAR involves configuring the 5G core network to enforce restrictions on the services that a UE can access based on its location, often identified by specific geographical identifiers such as Tracking Area Codes (TACs). The Service Area Restrictions (SAR) within subscription data can be configured by the Unified Data Management (UDM).

For more information on this feature, refer to the UCC 5G AMF Configuration and Administration Guide > Service Area Restriction Chapter.

Network Slicing Support

Feature Summary and Revision History

Summary Data

Table 7: Summary Data

Applicable Product(s) or Functional Area	AMF
Applicable Platform(s)	SMI
Feature Default Setting	Enabled - Always-on
Related Documentation	Not Applicable

Revision History

Table 8: Revision History

Revision Details	Release
First introduced.	2023.04.0

Feature Description

Note The network slicing support is not fully qualified in this release. Contact your Cisco account representative for more information.

Slice selection is the process of choosing a specific network slice supported by the network. The AMF supports the network slice selection during the registration. The AMF selects the slice based on the requested NSSAI, subscription data from UDM, locally configured slices, and slicing information received from NSSF. Upon successful UE registration, the AMF conveys the allowed NSSAIs to both the AN (gNB) and the UE, so that UE uses the appropriate slice to access the required services.

If AMF is unable to serve any of the slices requested by the UE, the AMF initiates the re-allocation functionality. AMF supports redirection of registration request message through the direct signaling to selected target AMF (received in NSSF response) or by rerouting the NAS message to target AMF through RAN.

When the AMF receives an indication from the UDM about change in slice subscription, the AMF informs the UE with new allowed/rejected and configured slices using UE configuration update procedure.

For more information on this feature, refer to the UCC 5G AMF Configuration and Administration Guide > Network Slicing Support Chapter.

Behavior Changes

Enhancement to the Context Release Command Sent to gNB and SMF

Behavior Change Summary and Revision History

Summary Data

Table 9: Summary Data

Applicable Product(s) or Functional Area	AMF
Applicable Platform(s)	SMI
Feature Default Setting	Not Applicable
Related Changes in this Release	Not Applicable
Related Documentation	*UCC 5G Access and Mobility Management Function - Configuration and Administration Guide*

Behavior Change Summary and Revision History

Behavior Change

Previous Behavior: When a User Equipment (UE) initiates the establishment of new UE-associated logical NG-connection while there is already an existing connection within the AMF, then AMF doesn't send the UE context release command to gNB.

New Behavior: When a user equipment (UE) initiates the setup of a new UE-associated logical NG-connection while there is already an existing connection within the AMF, then:

- A "UE context release command" is sent to the gNB to release the existing context associated with UE.
- A PDU session modify is sent to SMF for the available PDU in AMF with status as deactivated.

Customer Impact: No impact.