UCC 5G AMF - Release Change Reference

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.