Ultra Cloud Core 5G Policy Control Function, Release 2022.03 - Release Change Reference

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CONTENTS

PREFACE

About this Guide v

Conventions Used v

Contacting Customer Support vi

CHAPTER 1

UCC 5G PCF - Release Change Reference 1

Features and Changes Quick Reference 1

Features Defaults Quick Reference 1

Authorization with Required QOS 2

Feature Summary and Revision History 2

Summary Data 2

Revision History 2

Feature Description 2

N7 Notify Retry based on Error Code 2

Feature Summary and Revision History 3

Summary Data 3

Revision History 3

Feature Description 3

PCF-CHF Selection Based on NSSAI 3

Feature Summary and Revision History 3

Summary Data 3

Revision History 4

Feature Description 4

Support for Metrics and Statistics Based on Slice-ID 4

Feature Summary and Revision History 4

Summary Data 4

Revision History 4

Feature Description 5
RAN-NAS Release Cause 5
Feature Summary and Revision History 5
Summary Data 5
Revision History 5
Feature Description 5

About this Guide

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This document is a part of the Ultra Cloud Core 5G Policy Control Function documentation set.

For information about available documentation, see the Ultra Cloud Core 5G Policy Control Function Documentation Map for this release at Cisco.com.

- Conventions Used, on page v
- Contacting Customer Support, on page vi

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.

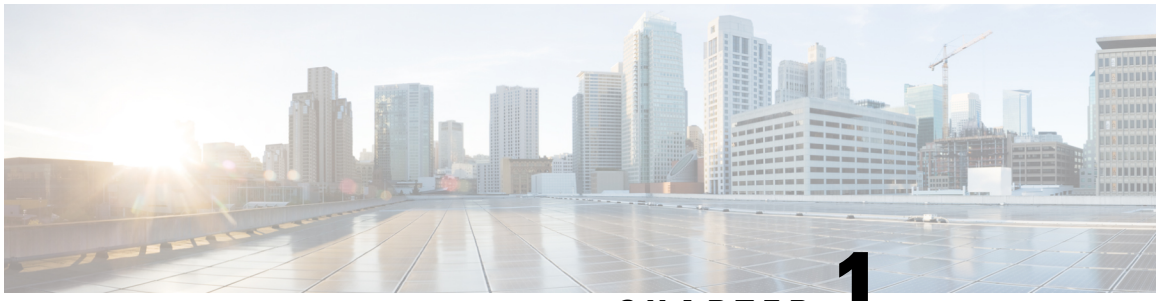
Typeface Conventions	Description
Text represented as a `screen display`	This typeface represents displays that appear on your terminal screen, for example: `Login:`

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 PCF - Release Change Reference

- Features and Changes Quick Reference, on page 1
- Features Defaults Quick Reference, on page 1
- Authorization with Required QOS, on page 2
- N7 Notify Retry based on Error Code, on page 2
- PCF-CHF Selection Based on NSSAI, on page 3
- Support for Metrics and Statistics Based on Slice-ID, on page 4
- RAN-NAS Release Cause, on page 5

Features and Changes Quick Reference

Features / Behavior Changes	Release Introduced / Modified
Authorization with Required QOS, on page 2	2022.03.0
N7 Notify Retry based on Error Code, on page 2	2022.03.0
PCF-CHF Selection Based on NSSAI, on page 3	2022.03.0
RAN-NAS Release Cause, on page 5	2022.03.0
Support for Metrics and Statistics Based on Slice-ID, on page 4	2022.03.0

Features Defaults Quick Reference

Feature	Default
Authorization with Required QoS	Enabled
N7 Notify Retry based on Error Code	Disabled – Configuration required to enable
PCF - CHF selection based on NSSAI	Enabled – Configuration required to disable
PCF to Support Metrics and Stats Based on Slice Info	Enabled – Configuration required to disable

Feature	Default
RAN and NAS Release Causes	Enabled

Authorization with Required QOS

Feature Summary and Revision History

Summary Data

Table 1: Summary Data

Applicable Products or Functional Area	PCF
Applicable Platform(s)	SMI
Feature Default Setting	Enabled
Related Documentation	Not Applicable

Revision History

Table 2: Revision History

Revision Details	Release
First introduced.	2022.03.0

Feature Description

The Application Function (AF) initiates support for Authorization with Required QoS to enable the high-priority traffic and applications for network resources. For more information, see the Authorization with Required QoS chapter in the UCC PCF Configuration and Administration Guide.

N7 Notify Retry based on Error Code

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Feature Summary and Revision History

Summary Data

Table 3: Summary Data

Applicable Products or Functional Area	PCF
Applicable Platform(s)	SMI
Feature Default Setting	Disabled – Configuration required to enable
Related Documentation	Not Applicable

Revision History

Table 4: Revision History

Revision Details	Release
First introduced.	2022.03.0

Feature Description

The Cisco PCF enables the N7 Notify Retry on an error code in the instance of the N7 Notify error response from SMF. The PCF performs the retry to configure the SMF in the OPs center only if there is a response error code in the SMF.

For more information, see the N7 Notify Retry Based on Error Codes chapter in the UCC PCF Configuration and Administration Guide.

Note PCF supports retry on error code only for the same site code.

PCF-CHF Selection Based on NSSAI

Feature Summary and Revision History

Summary Data

Table 5: Summary Data

Applicable Product(s) or Functional Area	PCF
Applicable Platform(s)	SMI
Feature Default Setting	Enabled – Configuration required to disable

Related Documentation	Not Applicable

Revision History

Table 6: Revision History

Revision Details	Release
Enhancement introduced. PCF - CHF selection based on NSSAI.	2022.03.0
First introduced.	2022.03.0

Feature Description

The Cisco PCF supports the Charging Function (CHF) selection with the availability of slice ID in the N7/N5 session. The PCF identifies and specifies the slice information for Protocol buffers messages that are meant for CHF, and the REST endpoint maintains a map for CHF with the slice-id among the keys. PCF configures slice information through a slice-id counter in the Policy Engine and REST endpoint to select the CHF.

For more information, see the Charging Function Selection Based on NSSAI chapter in the UCC PCF Configuration and Administration Guide.

Support for Metrics and Statistics Based on Slice-ID

Feature Summary and Revision History

Summary Data

Table 7: Summary Data

Applicable Product(s) or Functional Area	PCF
Applicable Platform(s)	SMI
Feature Default Setting	Enabled – Configuration required to disable
Related Documentation	Not Applicable

Revision History

Table 8: Revision History

Revision Details	Release
PCF is enhanced to support metrics and statistcs based on slice information.	2022.03.0

Feature Description

PCF Supports the Statistics counters to provide volume of TPS per Service based interfaces (SBI) with slice-ID as one of the labels.

For more information, see the Network Slicing chapter in the UCC PCF Configuration and Administration Guide.

RAN-NAS Release Cause

Feature Summary and Revision History

Summary Data

Table 9: Summary Data

Applicable Products or Functional Area	PCF
Applicable Platform(s)	SMI
Feature Default Setting	Enabled
Related Documentation	Not Applicable

Revision History

Table 10: Revision History

Revision Details	Release
First introduced.	2022.03.0

Feature Description

PCF receives extensive Radio Access Network (RAN) and Network Attached Storage (NAS) release cause code information in the RAN-NAS feature in the access network. Session Management Function (SMF), PCF or Application Function (AF) helps to set up calls and sessions between RAN and Network Attached Storage NAS. If a failure occurs in RAN and NAS, it reports the cause to the SMF, SMF sends information to PCF, and PCF sends information to the AF.

RAN-NAS feature allows you to:

- Request SMF to report RAN and NAS release cause.
- Report RAN and NAS release cause to AF:
  - PCC rule installation and modification failures
  - Deletion of Application Session with AF

- Notify RAN-NAS cause for termination of PDU session.
- Notify RAN and NAS release causes for SDF Deactivation.

For more information, see the RAN and NAS Release Causes chapter in the UCC PCF Configuration and Administration Guide.