UCC 5G PCF- Release Change Reference

Features and Changes Quick Reference

Features	Default	Release Introduced / Modified
NRF Registration Enhancement, on page 2	Disabled – Configuration required to enable	2023.01.0
Serviceability Diagnostics, on page 2	Enabled - Always-on	2023.01.0
UDR Subscribe and Notify, on page 4	Disabled – Configuration required	2023.01.0
UDR Unsubscribe, on page 5	Disabled – Configuration required	2023.01.0
User Agent Implementation, on page 5	Enabled - Always-on	2023.01.0

NRF Registration Enhancement

Feature Summary and Revision History

Summary Data

Table 1: Summary Data

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

Revision History

Table 2: Revision History

Revision Details	Release
First introduced.	2023.01.0

Feature Description

If the PCF is unable to register with the configured NRFs and encounters IO exceptions, then the PCF changes the leadership control to the next Rest-ep.

The other Rest-ep takes up the leadership control and starts sending the subscription, registration, and heartbeat requests to the configured NRFs.

This improvement reduces the problems that arise during NRF registration when the leader-ep is unavailable because of a network failure.

Serviceability Diagnostics

Feature Summary and Revision History

Summary Data

Table 3: Summary Data

Applicable Products or Functional Area	PCF
Applicable Platform(s)	SMI

Feature Default Setting	Enabled
Related Documentation	Not Applicable

Revision History

Table 4: Revision History

Revision Details	Release
First introduced.	2023.01.0

Feature Description

The Cisco Policy Control Function (PCF) doesn't offer capabilities for viewing the system of consolidated health such as Policy and Charging Rules Function (PCRF) Diagnostics. PCF relies significantly on numerous Kubernetes commands to determine the system of health.

PCF implements the diagnostics utility to provide the health check consolidated output of different critical services on the PCF namespace. Validates health of pods, services, and ingress points and produces a pass or fail health check status for each service.

The services for the health check:

- Rest-endpoint

- Engine

- Diameter

- Common Data Layer (CDL)

- ETCD

- Database (DB) Admin

Utility Details:

- Critical Pod Service Health Check and other Pods Check : When the status argument is "all", then all pods health check for previous mentioned services gets executed.

- CDL Pods Health Check:

    - When the status argument is "cdl" for the CDL pods health check, then the health check gets executed.

    - When the cdl-ep pods are up and running, then the geo sync functionality gets validated, and the execution status gets displayed.

- Database Pods Health Check:

    - When the status of the argument is "db" for the DB pod of the health check, then the health check gets executed.

    - When the pods are up, then the accessibility of the database gets performed.

UDR Subscribe and Notify

Feature Summary and Revision History

Summary Data

Table 5: Summary Data

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

Revision History

Table 6: Revision History

Revision Details	Release
First introduced.	2023.01.0

Feature Description

The Unified Data Repository (UDR) offers the Nudr_DataRepository service. The Nudr_DataRepository service allows the Network Function (NF) service consumers to retrieve, create, update, and modify, and delete data stored in the UDR.

PCF supports the following services of UDR for both AMF and SMF Policies:

- Subscribe

- Unsubscribe

- Notify

- Query

Following are the functions of Nudr_DataRepository service:

- Allows NF service consumers to subscribe to the data change notification and notifies the data change.

- Allows the PCF to access subscription data for policy controls and application-specific data stored in the UDR.

The Nudr interface supports the reference point representation and defines the N36 reference point for the interactions between PCF and UDR.

UDR Unsubscribe

Feature Summary and Revision History

Summary Data

Table 7: Summary Data

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

Revision History

Table 8: Revision History

Revision Details	Release
First introduced.	2023.01.0

Feature Description

The Nudr_DataRepository service allows NF service consumers to unsubscribe to the data change notification.

User Agent Implementation

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.	2023.01.0

Feature Description

The user-agent header identifies the Network Function (NF) type of the HTTP/2 client and includes in the HTTP/2 request sent over the SBI. When PCF sends the outbound request, the user agent header includes in the HTTP/2 request. The user agent header values are extracted from all PCF inbound requests and added to the inbound request total statistics.

The nf-type - user-agent-specific-info filled as the pattern for this header. For example, PCF-Inst1ClusterABC.