



## **Cisco Ultra Cloud Core Serving Gateway Control Plane Function, Release 2021.02 - Release Change Reference**

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# CHAPTER 1

## UCC cnSGW-C - Release Change Reference

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### Features and Behavior Change Quick Reference

Features / Behavior Changes	Release Introduced / Modified
<a href="#">Extended and Non-Standard QCI Values Support and Validation, on page 2</a>	2021.02.2
<a href="#">GTPU Error Indication, on page 3</a>	2021.02.2
<a href="#">GTPU Path Failure, on page 4</a>	2021.02.2
<a href="#">show subscriber Output Change—CSCvy40559, on page 5</a>	2021.02.2
<a href="#">Upgraded Kubernetes Version, on page 7</a>	2021.02.02.t1.0

### Feature Defaults Quick Reference

The following table indicates what features are enabled or disabled by default

Feature	Default
Extended and Non-Standard QCI Values Support and Validation	Enabled - Always-on
GTPU Error Indication	Enabled - Configuration Required

Feature	Default
GTPU Path Failure	Enabled - Configuration Required
show subscriber Output Change	Enabled - Always-on
Upgraded Kubernetes Version	Enabled – Always-on

# Extended and Non-Standard QCI Values Support and Validation

## Feature Summary and Revision History

### Summary Data

**Table 1: Summary Data**

Applicable Product(s) or Functional Area	cnSGW-C
Applicable Platform(s)	SMI
Feature Default Setting	Enabled - Always-on
Related Documentation	<i>UCC Serving Gateway Control Plane Function - Configuration and Administration Guide</i> Not Applicable

### Revision History

**Table 2: Revision History**

Revision Details	Release
First introduced.	2021.02.3

## Feature Description

This feature supports the following:

- Extended and Non-Standard QCI values as part of CSR | CBR | UBR | MBC call flows
- Extended and Non-Standard QCI values for DSCP marking
- Extended and Non-Standard QCI values for VoLTE marking

For more information, see the following chapters in the [UCC Serving Gateway Control Plane Function - Configuration and Administration Guide](#):

- [DSCP Marking Support](#)

- [Extended and Non-Standard QCI Values Support and Validation](#)
- [VoLTE Call Prioritization](#)

# GTPU Error Indication

## Feature Summary and Revision History

### Summary Data

**Table 3: Summary Data**

Applicable Product(s) or Functional Area	cnSGW-C
Applicable Platform(s)	SMI
Feature Default Setting	Enabled - Configuration Required
Related Documentation	<i>UCC Serving Gateway Control Plane Function - Configuration and Administration Guide</i> Not Applicable

### Revision History

**Table 4: Revision History**

Revision Details	Release
First introduced.	2021.02.1

## Feature Description

cnSGW-C supports the UPF reported GTPU errors in Session Report Request. UPF reports different GTPU errors to CP (cnSGW-C) in PFCP Session Report Request message.

cnSGW-C supports the following report requests.

- Error Indication Support (ERIR)
- Graceful Termination (GTER)
- Session Replacement (SRIR)

For more information, see the [UCC Serving Gateway Control Plane Function - Configuration and Administration Guide](#) > [GTPU Error Indication](#) chapter.

# GTPU Path Failure

## Feature Summary and Revision History

### Summary Data

**Table 5: Summary Data**

Applicable Product(s) or Functional Area	cnSGW-C
Applicable Platform(s)	SMI
Feature Default Setting	Enabled - Always-on
Related Documentation	<i>UCC Serving Gateway Control Plane Function - Configuration and Administration Guide</i> Not Applicable

### Revision History

**Table 6: Revision History**

Revision Details	Release
First introduced.	2021.02.1

## Feature Description

When UPF detects a GTP-U path failure, it sends Node Report Request (with NodeID and GTPU Peer Information) to cnSGW-C. cnSGW-C clears the PDU sessions belonging to the GTP-U peer and UPF node ID.

This feature supports the following:

- Sending Node Report Success
- Cleaning session or bearer based on the reported value in node-report (Node-ID and Peer Information)
- Incrementing the relevant statistics

For more information, see the [UCC Serving Gateway Control Plane Function - Configuration and Administration Guide > GTPU Path Failure](#) chapter.



# show subscriber Output Change—CSCvy40559

## Behavior Change Summary and Revision History

### Summary Data

**Table 7: Summary Data**

Applicable Product(s) or Functional Area	cnSGW-C
Applicable Platform(s)	SMI
Default Setting	Enabled - Always-on
Related Changes in this Release	Not Applicable
Related Documentation	Not Applicable

### Revision History

**Table 8: Revision History**

Revision Details	Release
First introduced. CDETS ID: <a href="#">CSCvy40559</a>	2021.02.3

## Behavior Change

**Previous Behavior:** In releases prior to 2021.02.3, multiple set of entries for IMSI, MSISDN, and IMEI were displayed as an output of `show subscriber` command.

#### Old sample output:

```
[{"key:imsi-123456789012348",
"imei:123456786666660",
"imsi:123456789012348",
"msisdn:223310101010101",
"id-index:1:1:33587200",
"id-value:2051",
"secKey:imei-123456786666660",
"upf:10.1.6.200",
"upfEpKey:10.1.6.200:10.1.6.199",
"s5s8Ipv4:10.1.6.198",
"s11Ipv4:10.1.6.200",
"namespace:sgw",
"nf-service:sgw"
}]
```

**New Behavior:** In 2021.02.3 and later releases, only single set of entries for IMSI, MSISDN, and IMEI is displayed. MSISDN display is changed to from `msisdn: <msisdn_number>` to `msisdn:msisdn-<msisdn_number>`.

The following `show` commands display single set of entries for IMSI, MSISDN, and IMEI.

- `show subscriber all`
- `show subscriber namespace sgw all`
- `show subscriber nf-service sgw all`



**Important** MSISDN display is not changed for the following command:

```
show subscriber namespace sgw imsi <imsi_value> full command
```

#### New sample output:

- 15 Digit IMEI:

```
[ "id-index:1:1:33587200",
  "id-value:3",
  "imsi:imsi-123456789012348",
  "msisdn:msisdn-223310101010101",
  "imei:imei-123456786666660",
  "upf:10.1.6.200",
  "upfEpKey:10.1.6.200:10.1.6.199",
  "gtpuPeerIpv4:10.1.6.200:10.1.6.198",
  "s5s8Ipv4:10.1.6.198",
  "gtpuPeerIpv4:10.1.6.200:10.1.6.200",
  "s11Ipv4:10.1.6.200",
  "namespace:sgw",
  "nf-service:sgw"
]
```

- 16 Digit IMEI:

```
[ "id-index:1:1:33587200",
  "id-value:3",
  "imsi:imsi-123456789012348",
  "msisdn:msisdn-223310101010101",
  "imei:imeisv-1234567866666600",
  "upf:10.1.6.200",
  "upfEpKey:10.1.6.200:10.1.6.199",
  "gtpuPeerIpv4:10.1.6.200:10.1.6.198",
  "s5s8Ipv4:10.1.6.198",
  "gtpuPeerIpv4:10.1.6.200:10.1.6.200",
  "s11Ipv4:10.1.6.200",
  "namespace:sgw",
  "nf-service:sgw"
]
```

**Note**

- **imsi** displays the IMSI of the session.
- **msisdn** displays the MSISDN of the session.
- **imei** display IMEI of the session.
- imsi, msisdn and imei are added as non unique keys in the CDL.

# Upgraded Kubernetes Version

## Feature Summary and Revision History

### Summary Data

*Table 9: Summary Data*

Applicable Products or Functional Area	cnSGW-C
Applicable Platforms	SMI
Feature Default Setting	Not Applicable
Related Documentation	Not Applicable

### Revision History

*Table 10: Revision History*

Revision Details	Release
First introduced.	2021.02.2.t1.0

## Feature Description

cnSGW-C is built on Cisco Cloud Native infrastructure, which is a Kubernetes-based platform that provides a common execution environment for container-based applications.

In this release, the Kubernetes (K8s) version is upgraded from 1.21.0 to 1.22.0.

