



Multiple cnSGW Support

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Feature Summary and Revision History

Summary Data

Table 1: Summary Data

| | |
|-------------------------------------------|----------------------------------------------------------|
| Applicable Product (s) or Functional Area | 5G-UPF |
| Applicable Platforms | VPC-SI |
| Feature Default Setting | Disabled – Configuration Required |
| Related Changes in this Release | Not Applicable |
| Related Documentation | <i>UCC 5G UPF Configuration and Administration Guide</i> |

Revision History

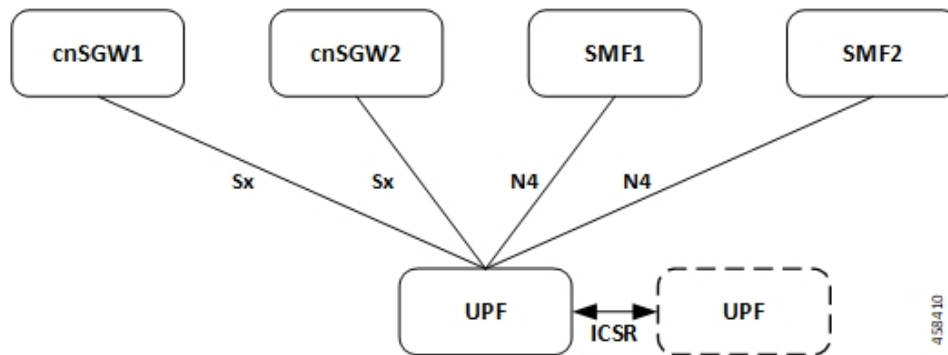
| Revision Details | Release |
|-------------------|-----------|
| First introduced. | 2021.02.0 |

Feature Description

The Multiple SMF/cnSGW Support feature enables a single UPF to establish multiple N4/Sx interfaces with cnSGWs and their paired SMFs. Integration of multiple SMF and cnSGW combinations with a single UPF results in optimal usage of resources.

Architecture

The following illustration depicts the architecture of multiple cnSGWs/SMFs.



Relationship to Other Features

The Multiple cnSGW Support feature is related to *Multiple N4/Sx Interface* feature.

How it Works

The functionality of Multiple cnSGW feature involves:

- Single UPF has multiple N4/Sx interface associations with SMF/cnSGWs.
- There's no slicing of configuration in UPF per individual SMF.
- Cumulatively, a maximum of four peers—combination of cnSGW/SMF or individual cnSGW/SMF as per the need—are connected to a single UPF.
- Individual N4/Sx association release purges sessions of the impacted peer.
- UPF redundancy works seamlessly.
- All cnSGWs paired with a UPF is associated with a single user plane service.

Configuring Multiple SMF/cnSGWs

This section provides information about CLI commands that are available in support of this feature.

Configuring Multiple SMF/cnSGWs on UPF

Use the following CLI commands to configure multiple SMF/cnSGWs on UPF by adding multiple peer node under Control Plane Group Configuration mode.

```
configure
  user-plane-service service_name
    associate control-plane-group group_name
  control-plane-group group_name
    peer-node-id ipv4-address ipv4_address interface n4
    peer-node-id ipv4-address ipv4_address interface n4
    peer-node-id ipv4-address ipv4_address
    peer-node-id ipv4-address ipv4_address
  end
```

Monitoring and Troubleshooting

This section provides information about monitoring and troubleshooting the Multiple cnSGW feature.

Show Commands and/or Outputs

This section describes the show commands that are available in support of this feature.

show subscribers user-plane-only full all

The output of this CLI command is enhanced to display the corresponding Control Plane address.

show sx peers

The output of this CLI command is enhanced to display the peer ID with corresponding number of sessions.

show sx peers