EPS to 5Gs Mobility Procedure without n1 Mode Support

Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	MME
Applicable Platform(s)	• ASR 5500 • VPC-DI • VPC-SI
Feature Default	Enabled-Always-On
Related Changes in This Release	Not Applicable
Related Documentation	• *Command Line Interface Reference* • *MME Administration Guide*

Revision History

Revision Details	Release
CLI configuration support is added for enabling the reject EPS to 5Gs procedure without n1 mode support.	2024.02.0

Revision Details	Release
Support is introduced for dynamic selection mechanism to select SGW-C+SMF through s11 interface.	21.28.m7
Support is introduced for dynamic selection mechanism to select PGW-C+SMF and peer-AMF.	21.25
The N26 interface for interworking with 5GS functionality is fully qualified in this release.	21.20.3
MME supports N26 interface between AMF in 5GC and MME in Evolved Packet Core (EPC) to provide seamless session continuity for single registration mode UE. **Important** This feature is not fully qualified in this release, and is available only for testing purposes. For more information, contact your Cisco Account Representative.	21.20
First introduced. This release supports N26 Interface for interworking with 5GS functionality. **Important** This feature is not fully qualified in this release, and is available only for testing purposes. For more information, contact your Cisco Account Representative.	21.19

Feature Description

The MME accepts context requests from AMF regardless of the n1-mode support that UE indicates to EPS. This feature is enabled by default.

To reject context requests when the UE indicates that it does not support n1-mode, you can disable this feature by enabling the **reject-EPS-to-5GS-without-n1-mode** configuration.

Disabling EPS to 5G Mobility without n1 Mode

Use the following configuration to disable EPS to 5GS mobility without n1 mode support.

```
configure
  context context_name
    mme service  service_name
      [ no ] n1-mode 5gs-interworking-with-n26 [ sgw-selection |
reject-EPS-to-5GS-without-n1-mode ]
      end
```

NOTES:

- **mme-service** *service_name*: Configures MME Service. *mme_service* and must be a string of 1–63 characters.

- **n1-mode**: Configures interworking with 5Gs for UEs supporting N1 mode.

- **5gs-interworking-with-n26**: Enables 5GS-EPS interworking with N26 interface.

- **no**: Enables EPS to 5GS mobility without n1 mode support.

- **reject-EPS-to-5GS-without-n1-mode**: If this CLI is configured, MME enables rejection EPS to 5GS context request from AMF when the UE indicates N1 Mode is not supported.

Disabling EPS to 5Gs Mobility in Call Control Profile

Use the following configuration to disable EPS to 5GS mobility without n1 mode support in the Call Control Profile.

```
configure
   call-control-profile profile_name
       [ no | remove ] n1-mode 5gs-interworking-with-n26 sgw-selection
ue-usage-type | reject-EPS-to-5GS-without-n1-mode
     end
```

NOTES:

- **call-control-profile** *profile_name*: Creates an instance of a call control profile. *profile_name* specifies the name of a call control profile entered as an alphanumeric string of 1-64 characters.

- **n1-mode** : Configures interworking with 5GS for UEs supporting N1 mode.

- **5gs-interworking-with-n26** : Enables 5GS-EPS interworking with N26 interface.

- **no** : Disables the configuration..

- **remove**: Removes the configuration from the Call Control Profile and the MME service configuration applies.

- **reject-EPS-to-5GS-without-n1-mode**|: If this CLI is configured, MME enables rejection of EPS to 5GS context request from AMF when the UE indicates N1 Mode is not supported.

Monitoring and Troubleshooting

This section provides information regarding show commands and outputs available to monitor and troubleshoot the N26 Interface feature.

Show Commands and Outputs

show call-control-profile full name

The output of this command includes the **5GS-EPS interworking with N26 interface** field, which indicates if the 5GS-EPS interworking with N26 interface feature is enabled or disabled under N1 mode at call control profile.

show mme-service all

The output of this command includes the following fields:

- **5GS-EPS interworking with N26 interface**

- • **Peer AMF GUAMI**

- • **Peer AMF TAI**

show configuration verbose

Following are the sample configuration commands of **show configuration verbose** and **show configuration** CLI commands.

The **show configuration verbose** with reject-EPS-to-5Gs-without-n1-mode not configured in the MME service.

```
call-control-profile ccp1
    remove n1-mode 5gs-interworking-with-n26
  exit

  mme-service mme1
    no n1-mode 5gs-interworking-with-n26 reject-EPS-to-5GS-without-n1-mode
  exit
```

The **show config verbose** with **n1-mode 5gs-interworking-with-n26** and **reject-EPS-to-5GS-without-n1-mode** disabled.

```
show configuration verbose/show configuration
    call-control-profile ccp1
   n1-mode 5gs-interworking-with-n26
     no n1-mode 5gs-interworking-with-n26 reject-EPS-to-5GS-without-n1-mode

  #exit

  mme-service mme1
    n1-mode 5gs-interworking-with-n26
      no n1-mode 5gs-interworking-with-n26 reject-EPS-to-5GS-without-n1-mode
  #exit
```

The following is the sample configuration of **show configuration verbose** and **show configuration** commands where, n1-mode 5gs-interworking-with-n26, sgw-selection, and reject-EPS-to-5GS-without-n1-mode option is enabled.

```
show configuration verbose/show configuration
  call-control-profile ccp1
    n1-mode 5gs-interworking-with-n26 sgw-selection s11
    n1-mode 5gs-interworking-with-n26 reject-EPS-to-5GS-without-n1-mode
  #exit

    mme-service mme1
    n1-mode 5gs-interworking-with-n26 sgw-selection s11
    n1-mode 5gs-interworking-with-n26 reject-EPS-to-5GS-without-n1-mode
   #exit
```

The following is the sample configuration of **show configuration verbose** and **show configuration** commands where, n1-mode 5gs-interworking-with-n26, reject-EPS-to-5GS-without-n1-mode is enabled and sgw-selection is not configured.

```
show configuration verbose/show configuration
  call-control-profile ccp1
       n1-mode 5gs-interworking-with-n26 reject-EPS-to-5GS-without-n1-mode
  #exit

      mme-service mme1
        n1-mode 5gs-interworking-with-n26 reject-EPS-to-5GS-without-n1-mode
         #exit
```

show configuration verbose