Dynamic S-GW Selection for Interworking-5GC

- Feature Summary and Revision History , on page 1
- Feature Description, on page 2

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
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

Revision Details	Release
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 Evoloved 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

MME supports selection of combined SGW-C/SMF on the base of DNS S-NAPTR queries using the **3gpp-x-3gpp-sgw:x-s11** service parameter for UEs supporting N1 mode and optionally matching an UE Usage type.

DNS Mechanism to Select SGW-C+SMF

MME supports the SGW-C+SMF selection for Nonemergency PDN connection based on the following conditions:

- UE N1 Mode capability (UE Network Capability)

- (Optional) Matching a UE Usage type

S-NAPTR query is performed to identify the SGW-C+SMF based on the below S-NAPTR procedure with service parameters:

- MME considers the **n1-mode 5gs-interworking-with-n26 sgw-selection s11** CLI when forming the service parameter in the SGW-C+SMF DNS S-NAPTR requests.

  If the UE is in N1 mode and CLI is configured with S11 and no UE usage type is specified, then, MME sends the DNS S-NAPTR query using the x-3gpp-sgw:x-s11 service parameter to select the SGW-C+SMF.

- If UE is in N1 mode and CLI is configured with S11 and UUT, MME matches the UE's UUT with CLI UUTs. Then MME, sends DNS S-NAPTR query using the x-3gpp-sgw:x-s11 service parameter. Else, sends the DNS S-NAPTR query using the **x-3gpp-sgw:x-s11** service parameter to select the S-GW.

  ```
  Example: n1-mode 5gs-interworking-with-n26 sgw-selection s11 ue-usage-type 128 129 130
  131 132 133 134 135
  ```

The S-NAPTR procedure logically displays a list of host names each with a service, protocol, port, and a list of IPv4 and IPv6 addresses. From the candidate list, MME selects the best node based on the Topology, Collocation, Order, or Weight.

For more information, see the *5GS Interworking using N26 Interface Support* chapter in the *MME Configuration and Administration Guide*.