

DNS-based discovery for MMEs

A DNS-based discovery of MMEs is a dynamic selection mechanism that enables the AMF to discover and select peer Mobility Management Entities (MMEs) by performing DNS queries. This approach supports both IPv4 and IPv6 address selection, adapting to the local endpoint configuration. In situations where DNS resolution fails, the system automatically falls back to a static configuration to ensure continued operation.

Table 1: Feature History

Feature Name	Release Information	Description
DNS-based discovery of MMEs	2026.02.0	This feature enhances seamless interworking between 5G Core (5GC) and Evolved Packet Core (EPC) networks by enhancing the MME selection process using DNS queries (S-NAPTR) as well as static peer MME configuration. Command introduced: **amf-services** *amf_service_name* **{ peer-mme dns-discovery enabled }**— Activates DNS-based dynamic discovery of peer MMEs for the specified AMF service. **Default Setting**: Disabled – Configuration Required

- Supported scenarios for DNS-based MME discovery, on page 1
- Fallback Mechanism for N26 Connected Mode - 5G to 4G, on page 2
- Configure DNS-based MME discovery , on page 2

Supported scenarios for DNS-based MME discovery

Supported scenarios:

- DNS-based MME discovery is available for both idle mode (registration with 4G GUTI) and connected mode (handover to EPC) mobility procedures.

- Both IPv4 and IPv6 MMEs can be selected, depending on the AMF's local endpoint configuration.
- If DNS resolution fails, AMF falls back to static peer MME configuration.
- When multiple IPs are received in a DNS response, AMF selects one IP address.

If the DNS discovery feature is enabled, the AMF prefers the IP addresses resolved from the DNS server.

Fallback Mechanism for N26 Connected Mode - 5G to 4G

AMF supports retrying up to three MMEs if the MMEs are not reachable. These MMEs can come from DNS-resolved MME IPs, static configuration, or both.

Configure DNS-based MME discovery

Enable and manage dynamic peer MME selection for the AMF using DNS queries.

Use this configuration to allow AMF to discover peer MMEs dynamically via DNS, or to revert to static configuration as needed.

Follow these steps to configure DNS-based MME discovery:

Procedure

Step 1 Enter the AMF service configuration mode.

amf-services *amf_service_name*

Step 2 Enable DNS-based peer MME discovery.

peer-mme dns-discovery enabled

Step 3 Save and commit the configuration.