

AMF capability exchange with NRF during registration

- AMF capability exchanges with NRF, on page 1
- Configure AMF capability exchange with NRF, on page 2

AMF capability exchanges with NRF

AMF capability exchanges with NRF is a feature that enables

- Real-time updates enable NRF awareness of AMF's capacity, priority, and load for optimized network operations.
- Standards compliance ensures interoperability by using 3GPP TS 29.510 protocols for NF profile management.

In typical scenarios, an AMF sends its configured priority and capacity to NRF at registration, and updates these values whenever configuration or load changes. If the load overload feature is enabled, AMF calculates and reports its current load to NRF.

Table 1: Feature History Table

Feature Name	Release Information	Feature Description
AMF capability exchange with NRF during registration	2026.03.0	You benefit from more efficient network function selection because AMF shares its priority, capacity, and load information with NRF in real time during registration and on any changes. This enables dynamic load balancing by allowing NRF to maintain an accurate network function view.

How AMF capability exchange with NRF works

This feature enables the operator to configure the priority and capacity values of the AMF relative to other AMFs in the deployment. These values are sent to the NRF during NF registration. Any updates to these parameters in the configuration are communicated to the NRF through an NFUpdate request.

In addition, this feature provides configuration options for periodic AMF load calculation, where the AMF calculates the system load at the configured interval and compares it with the previously calculated value. If the difference exceeds the configured change factor, the updated load information is reported to the NRF through an NF patch request. When the feature is enabled, the AMF also includes the most recently calculated load factor and its corresponding timestamp in the periodic NRF heartbeat messages.

Configure AMF capability exchange with NRF

Before you begin

Follow these steps to configure AMF capability exchange with NRF.

Procedure

Step 1 Enter the AMF services configuration mode with the specified AMF service name.

amf-services *amf_services_name*

Step 2 Configure the AMF service parameters such as amf-name, compliance-profile, validate-Tais, locality, oauth2-enabled, priority, and capacity.

amf-services *amf_services_name* **{ priority** *priority_value* **| capacity** *capacity_value* **}**

- **priority** *priority_value* : Priority relative to other AMFs; To be sent towards NRF , and default value is 1.
- **capacity** *capacity_value* : Capacity relative to other AMFs; To be sent towards NRF , and default value is 10.

Step 3 Save and exit the **amf-services** configuration mode.

Step 4 Enter the AMF global configuration mode to bring up the specified load profile.

amf-global { load-profile *load-profile-name* **}**

Step 5 Save and exit the **amf-global** configuration mode.

Step 6 Configure the load profile parameters such as load-calc-frequency and change-factor.

profile load *load_profile_name***{ load-calc-frequency** *load_calc_frequency_value* **| change-factor** *change_factor_value* **}**

- **load-calc-frequency** *load_calc_frequency_value* : Specify the frequency value in seconds ranging from 5 to 3600 seconds. The default value is 120 seconds.
- **change-factor** *change_factor_value* : Specify the change factor value. Range is between 1 to 20. The default value is 5.

Step 7 Save and commit the configuration.