

3gpp-Sbi-Target-apiRoot Headers

A 3gpp-Sbi-Target-apiRoot header is a configuration parameter that

- enables the operator to specify a target API root URI,
- is included in messages exchanged with the Network Repository Function (NRF), and
- allows operators to control network function registration and discovery behavior according to deployment needs.

Feature History

Product Impact	Feature	Description
Software Reliability	sbi-target-apiroot URI update for NRF	

Product Impact	Feature	Description
		The 3gpp-Sbi-Target-apiRoot header lets operators set a target API root URI for registration, deregistration, subscribe, unsubscribe, update, and discovery messages. SMF includes this header in each HTTP request to NRF, ensuring requests reach the desired destination based on deployment needs. Command introduced: • **profile message-handling nf-type** *nf_type* **{ mh-profile** *mh_profile_name* **{ service name type** *service_name_type* **{ message type [nf-register { header 3gpp-sbi target-apiroot** *api_root_uri* **} | nf-deregister { header 3gpp-sbi-target-apiroot** *api_root_uri* **} | nf-update { header 3gpp-sbi-target-apiroot** *api_root_uri* **} | nf-status-subscribe { header 3gpp-sbi-target-apiroot***api_root_uri* **} | nf-status-unsubscribe { header 3gpp-sbi-target-apiroot***api_root_uri***}] } } }** — Used to configure the target API root URI for NF management messages. • **profile message-handling nf-type** *nf_type* **{ mh-profile** *mh_profile_name* **{ service name type** *service_name_type* **{ message type nf-discover { header 3gpp-sbi target-apiroot** *api_root_uri* **} } } }** — Used to configure the target API root URI for NF discovery.

Product Impact	Feature	Description
		Default Setting: Disabled – Configuration Required

• Configure the 3gpp-Sbi-Target-apiRoot header for NF management interactions, on page 4
• Configure the 3gpp-Sbi-Target-apiRoot header for NF discovery interactions, on page 5

Configure the 3gpp-Sbi-Target-apiRoot header for NF management interactions

Enables SMF to send a custom API root header to the NRF for network function management operations. Operators use this task when their 5G deployment requires explicit control over which API root the SMF communicates with for NRF services.

Before you begin

- Obtain the correct API root URI required by your deployment.
- Ensure access to the SMF configuration interface (CLI or configuration file).

Procedure

Step 1 Enter the NRF message-handling profile configuration mode.

profile message-handling nf-type *nf_type* **{ mh-profile** *mh_profile_name* **{ service name type** *service_name_type* **} }**

Example:

```
profile message-handling nf-type nrf
 mh-profile MHNRF
  service name type nnrf-nfm
```

Step 2 Specify the 3gpp-Sbi-Target-apiRoot header for each message type.

- For registration:

  message type *nf-register* **{ header 3gpp-sbi-target-apiroot** *api_root_uri* **}**
- For deregistration:

  message type *nf-deregister* **{ header 3gpp-sbi-target-apiroot** *api_root_uri* **}**
- For update:

  message type *nf-update* **{ header 3gpp-sbi-target-apiroot** *api_root_uri* **}**
- To subscribe:

  message type *nf-status-subscribe* **{ header 3gpp-sbi-target-apiroot** *api_root_uri* **}**
- To unsubscribe:

  message type *nf-status-unsubscribe* **{ header 3gpp-sbi-target-apiroot** *api_root_uri* **}**

Example:

```
(config-nnrf-nfm)# message type nf-register
(config-nf-register)# header 3gpp-sbi-target-apiroot https://nrf.example.com/api
(config-nf-register)# exit

(config-nnrf-nfm)# message type nf-deregister
(config-nf-deregister)# header 3gpp-sbi-target-apiroot https://nrf.example.com/api
(config-nf-deregister)# exit

(config-nnrf-nfm)# message type nf-update
(config-nf-update)# header 3gpp-sbi-target-apiroot https://nrf.example.com/api
(config-nf-update)# exit

(config-nnrf-nfm)# message type nf-status-subscribe
(config-nf-status-subscribe)# header 3gpp-sbi-target-apiroot https://nrf.example.com/api
(config-nf-status-subscribe)# exit

(config-nnrf-nfm)# message type nf-status-unsubscribe
(config-nf-status-unsubscribe)# header 3gpp-sbi-target-apiroot https://nrf.example.com/api
(config-nf-status-unsubscribe)# exit
```

Step 3 Enter the NF management group configuration to associate `message-handling profile` with `group nf-mgmt`.

group nf-mgmt *group_nf_mgmt_name* **{ nrf-mgmt-group** *nrf_nfmgmt_grp* **| locality** *locality_name* **| heartbeat interval** *heartbeat_interval* **message-handling-profile** *message-handling-profile_name* **| failure-handling-profile** *failure_handling_profile_name*

Example:

```
group nf-mgmt NFMGMT1
 nrf-mgmt-group           nrf-nfmgmt-grp
 locality                 LOC1
 heartbeat interval 50
 message-handling-profile MHNRF
 failure-handling-profile FHNRF
exit
```

Step 4 Save and commit the configuration.

Configure the 3gpp-Sbi-Target-apiRoot header for NF discovery interactions

This configuration enables SMF to send a custom API root header to the NRF for network function discovery operation. Operators use this task when their 5G deployment requires explicit control over which API root the SMF communicates with for NRF services.

Procedure

Step 1 Enter the NRF message-handling profile configuration mode.

profile message-handling nf-type *nf_type* **{ mh-profile** *mh_profile* **{ service name type** *service name type* **} }**

Example:

```
config
(config)# profile message-handling nf-type nrf
```

```
(config-msg-handling-nrf)# mh-profile MHNRFDISC
(config-msg-handling-MHNRFDISC)# service name type nnrf-nfd
```

Step 2 Specify the 3gpp-Sbi-Target-apiRoot header for the discovery message type.

message type *message_type* **{ header 3gpp-sbi-target-apiroot** *api-root-uri* **}**

Example:

```
(config-nnrf-disc)# message type nf-discover
(config-DiscoverNF)# header 3gpp-sbi-target-apiroot https://nrf.example.com/api
(config-DiscoverNF)# exit
```

Step 3 Enter the NRF discovery group configuration mode to associate `message-handling profile` with `group nrf discovery`.

group nrf discovery *nrf_discovery_group* **{ service type nrf** *service_type* **{ failure-handling-profile** *failure_handling_profile* **| message-handling-profile** *message_handling_profile***} }**

Example:

```
config
(config)# group nrf discovery nfdiscovery
(config-nrf-discovery-nfdiscovery)# service type nrf nnrf-disc
(config-nrf-discovery-nfdiscovery)# failure-handling-profile FHDISC
(config-nrf-discovery-nfdiscovery)# message-handling-profile MHNRFDISC
(config-nrf-discovery-nfdiscovery)# exit
```

Step 4 Save and commit the configuration.