

MTU Support in PCO

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Feature Summary and Revision History

Summary Data

Table 1: Summary Data

Applicable Product(s) or Functional Area	SMF
Applicable Platform(s)	SMI
Feature Default Setting	Enabled – Always-on
Related Changes in this Release	Not Applicable
Related Documentation	Not Applicable

Revision History

Table 2: Revision History

Revision Details	Release
First introduced.	2021.02.0

Feature Description

This feature allows sending a Maximum Transmission Unit (MTU) value to a subscriber device for modification in settings and performing tasks, such as avoiding fragmentation and blocked traffic. If UE requests, configuration links MTU in Protocol Configuration Options (PCO) IE. When CSR comes with PCO requesting

IPv4 link MTU, SMF sends create session response with PCO containing link MTU configured under network-capability policy. When N1 PDU session establishment request includes PCO requesting IPv4 link MTU, SMF sends N1 PDU session establishment response with PCO containing link MTU configured under network-capability policy.

If CSR comes with PCO, EPCO, or APCO requesting MTU, SMF sends the configured IPv4 MTU in CSR response, if the network-capability policy is associated to the operator policy.

If 5G PDU session establishment request is received with PCO requesting MTU, SMF sends the configured IPv4 MTU in PDU session establishment accept, if network-capability policy is associated to the operator policy.

If the PGW-C decides to return Extended Protocol Configuration Options (ePCO) to the UE during an Initial Attach, UE-requested PDN Connectivity procedure initiates. If the PGW-C supports the ePCO and the EPCOSI flag is set to 1 in the Create Session Request message, the PGW-C sends ePCO to the S-GW. If the S-GW receives the ePCO IE, the S-GW forwards it to the MME.

In roaming scenarios, the vSMF decodes the input N1 message, fills and encodes the n1SmInfoFromUE IE with the N1 message in a PDU session create or update request. Similarly, if the hSMF receives the ePCO with a request for MTU and the policy network-capability is configured with a link MTU value, it sends the link MTU value in the n1SmInfoToUE IE. Otherwise, the hSMF sends the default MTU value, which is 1500.

If it's a network-initiated session modification and the session was established with an ePCO, the hSMF includes the ePCO in the session update request.

Configuring IPv4 Link MTU

This section describes how to configure the MTU to be included in PCO IE sent to the UE.

To configure the IPv4 MTU, use the following sample configuration:

```
config
   policy network-capability network_capability_name
      link-mtu link_mtu_range
      end
```

NOTES:

- **link-mtu** *link_mtu_range* : Configure network capability policy to include link MTU in PCO IE, if it is requested by UE.

  link_mtu_range must be an integer in the range of 1280-2000. The default value is 1500 bytes.

Configuration Verification

To verify the configuration, use the following show command:

```
show running-config policy network-capability
```

If the IPv4 MTU is configured, then the value appears as part of the **link-mtu** configuration in the following output.

```
[unknown] smf# show running-config policy network-capability
policy network-capability nc1
 link-mtu 1500
 max-supported-pkt-filter 20
```

```
 nw-support-local-address-tft true
exit
```