



# Router Solicit and Router Advertisement

This chapter covers the following topics:

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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. | Pre-2020.02.0 |

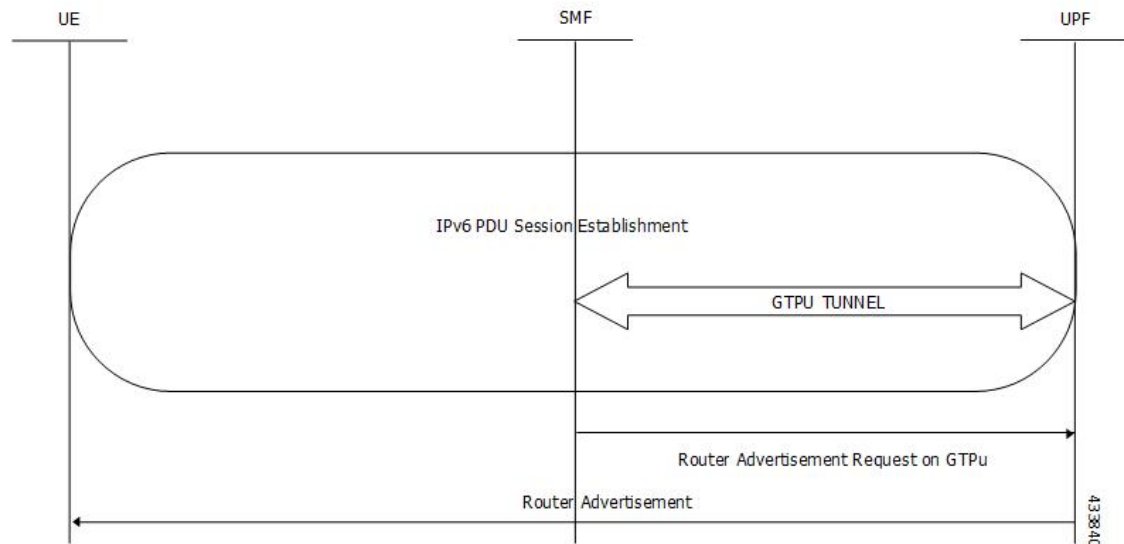
## Feature Description

To comply to IPv6 Stateless Auto-configuration, SMF supports ICMPv6 Router Solicit and Advertisement. The following ICMPv6 options are supported in Router Advertisement:

- Prefix Information - Allocated UE IPv6 Prefix is sent.
- MTU - Value is taken from configuration. Default is 1500.
- Source Link Layer Address: Value is taken from configuration local virtual mac.

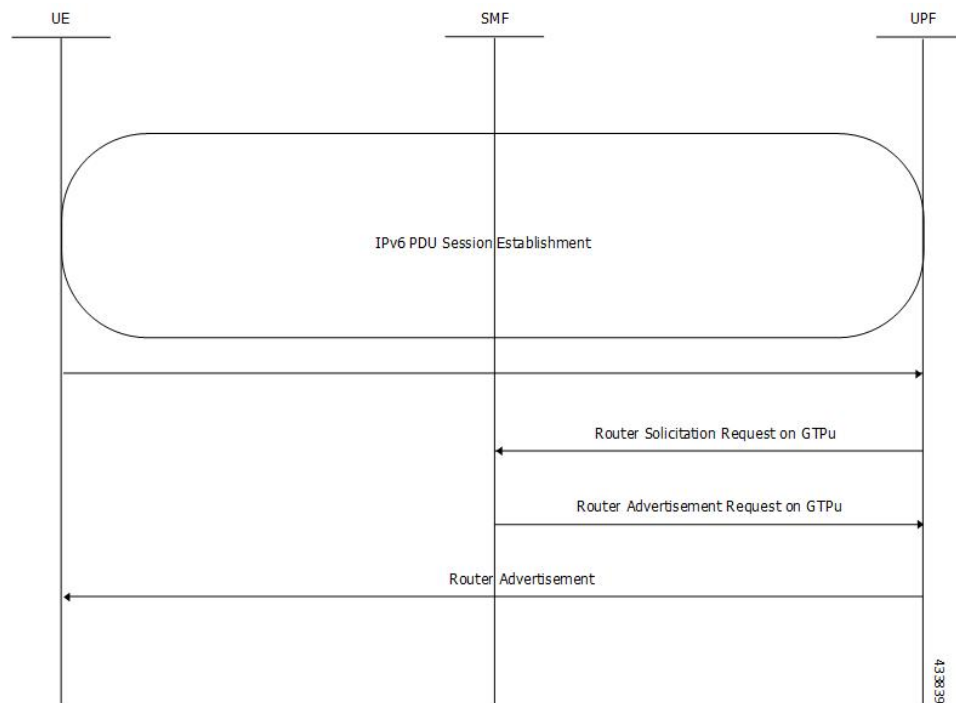
## Unsolicited Router Advertisement

SMF sends unsolicited router advertisement on successful PDU session establishment to share the allocated IPv6 prefix to UE. RA message is sent over the GTPU tunnel, which is created between the SMF and UPF during the Session Establishment procedure. SMF also installs PDRs and FARs on the UPF to enable routing for RS/RA messages.



## Solicited Router Advertisement

To get the allocated IPv6 prefix, UE can send a router solicit message. On receiving router solicit message, SMF sends router advertisement message towards UE containing the allocated UE IPv6 prefix.



## ICMPv6 Profile Configuration

The following configuration is used to configure Router Advertisement parameters:

```
scheduler(config-icmpv6-profile-icmp1# show full
icmpv6-profile icmp1
local-virtual-mac ac:de:48:00:11:22
hop-limit          64          default 255
router-lifetime    100 (seconds) default 65535
reachable-time     30 (milliseconds) default 0
retrans-timer      1 (milliseconds) default 0
mtu                1500 default 1500
!

dnn-profile dnn1
remote-virtual-mac fa:00:4c:a8:22:05 default(00:14:22:01:23:45)
ipv6-pool name pool1
    prefix          2001:300:4001::/48
    prefix-lifetime 3456 (seconds) default 4294967295
!
!
smf-profile prof
service name srv1
    associate-icmpv6-profile icmp1
!
!
```

**NOTES:**

- /48 is the only prefix supported in this release.