

Telenet Update

IPv6 Council BE, December 2023 @ Google



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Agenda

- IPv6-specific activities ongoing or done @ Telenet
- SmartHome - Matter/thread: Some observations



IPv6-specific activities

- Adding Dual Stack on mobile
- Adding more IPv6 traffic
 - More IPv6 peering for apps
 - IPv6-only apps and device management
- EOL of docsis 2.0 devices – being replaced with Docsis 3.0 units



Matter/Thread: What ?

- What ?
 - New Smarthome standard
 - Thread = successor of Zigbee
 - Matter = application standard for SmartHome/IoT Equipment
 - Push by giants in industry (Google, Apple, Amazon, ...)



Matter/Thread: IPv6 ?

- IPv6 ?
 - Used for communication (LL and ULA)
- Popular devices: (not all versions)
 - Google Nest
 - Apple TV
 - Amazon Echo
 - ...



Matter/Thread: Field issues ?

- Non-Routers doing RA for ULA
 - OK/ NOK ?
 - Breaking certain IPv6 hosts ?
 - Result: more ... IPv6 disabling ?



RA: IETF vs Matter

(RFC4861, chapter6.2.4)

A host **MUST NOT** sent RA messages at any time

vs

Matter/Thread

Hosts sent RA messages with ULA information



RA: SmartHome device RA content

Internet Control Message Protocol v6

Type: Router Advertisement (134)
Code: 0
Checksum: 0x7d4d [correct]
[Checksum Status: Good]
Cur hop limit: 0
Flags: 0x00, Prf (Default Router Preference): Medium
0... = Managed address configuration: Not set
.0.. = Other configuration: Not set
..0. = Home Agent: Not set
...0 0... = Prf (Default Router Preference): Medium (0)
.... .0.. = Proxy: Not set
.... ..0. = Reserved: 0
Router lifetime (s): 0
Reachable time (ms): 0
Retrans timer (ms): 0

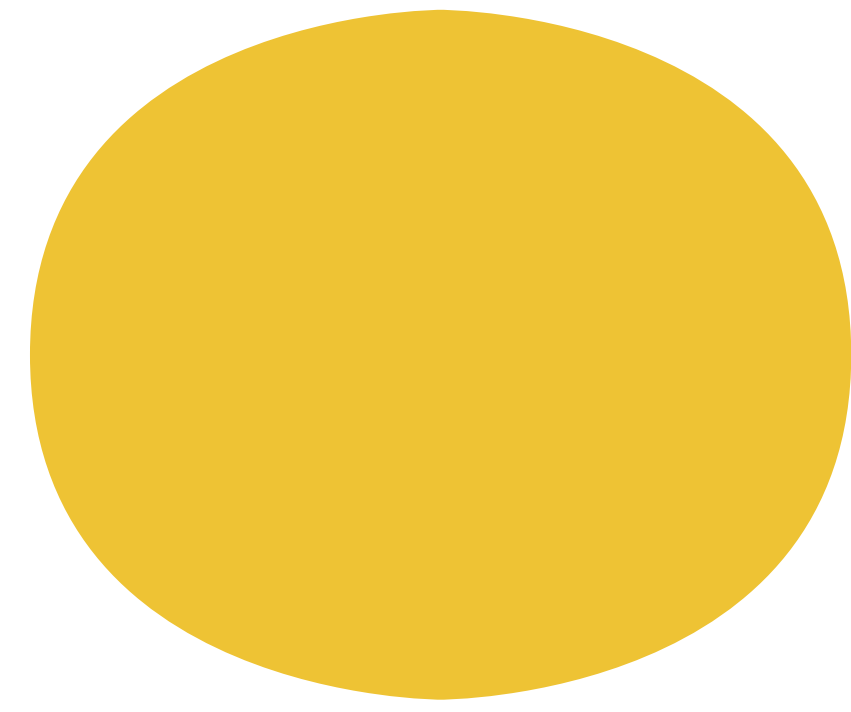
ICMPv6 Option (Prefix information : fda3: /64)

Type: Prefix information (3)
Length: 4 (32 bytes)
Prefix Length: 64
Flag: 0xc0, On-link flag(L), Autonomous address-configuration flag(A)
1... = On-link flag(L): Set
.1.. = Autonomous address-configuration flag(A): Set
..0. = Router address flag(R): Not set
...0 0000 = Reserved: 0
Valid Lifetime: 1800
Preferred Lifetime: 1800
Reserved
Prefix: fda3:

ICMPv6 Option (Route Information : Medium 2a02: ::/64)

Type: Route Information (24)
Length: 2 (16 bytes)
Prefix Length: 64
> Flag: 0x00, Route Preference: Medium
Route Lifetime: 1800
Prefix: 2a02: ::
ICMPv6 Option (RA Flags Extension)
Type: RA Flags Extension (26)
Length: 1 (8 bytes)
Flags Expansion Option: 0x8000, Managed address configuration, Prf (Default Router Preference): Medium
1... = Managed address configuration: Set
.0.. = Other configuration: Not set
..0. = Home Agent: Not set
...0 0... = Prf (Default Router Preference): Medium (0)
.... .0.. = Proxy: Not set
.... ..0. 0000 0000 = Reserved: 0
Reserved





Questions?



Thank
You!

