RIPE 72 IPv6 WG
Community Wi-Fi and IPv6

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Background

• IETF I-D draft-ietf-v6ops-unique-ipv6-prefix-per-host
• Initially to deploy IPv6 support for community Wi-Fi
  – Applies to other environments including environments where shared media is utilized
• Focus on IPv6 only for UE
  – And IPv6 for the underlying transport
• Ensure there is no impact to network performance care of IPv6
COMMUNITY WI-FI AND IPV6

- **Single broadband / 64 (via PD)**
- **Private SSID**
- **Public SSID**
- **Unique IPv6 /64 (not PD)**
- **Access Network (CMTS)**
- **Dual stack Wi-Fi**
- **IPv6 only transport**
- **Wi-Fi Aggregator**
- **Broadband**
- **Internet**
Overview

• Leveraging unique IPv6 prefixes per device
  – /64
• Maximize coverage for IPv6 only
  – IPv4 is out of scope but is present
• Addressing
  – SLAAC
  – Privacy and temporary addressing
  – No stateful DHCPv6 for address assignment
• Configuration
  – RDNSS
  – Stateless DHCPv6
• Initially focused on hosts, not routers
IPv6 Plumbing

• IPv6 Router Discovery
  – Ensure widest range of compatibility for Wi-Fi capable devices
  – Leverage RDNSS [RFC6106] to enable IPv6 only experiences

• IPv6 Neighbor Discovery
  – Minimize impact of link local communication impact to Wi-Fi (access) network
  – See I-D for specific attributes and configuration options

• Overarching objective is an IPv6 only experience
Futures

• Incorporate comments and edits based on WG feedback to date
• Update based on initial trials and deployment
• Post initial deployment assess support for IPv6 prefix delegation