

# Proxy Mobile IPv6

draft-sgundave-mip6-proxymip6-02.txt

NETLMM WG, IETF 68

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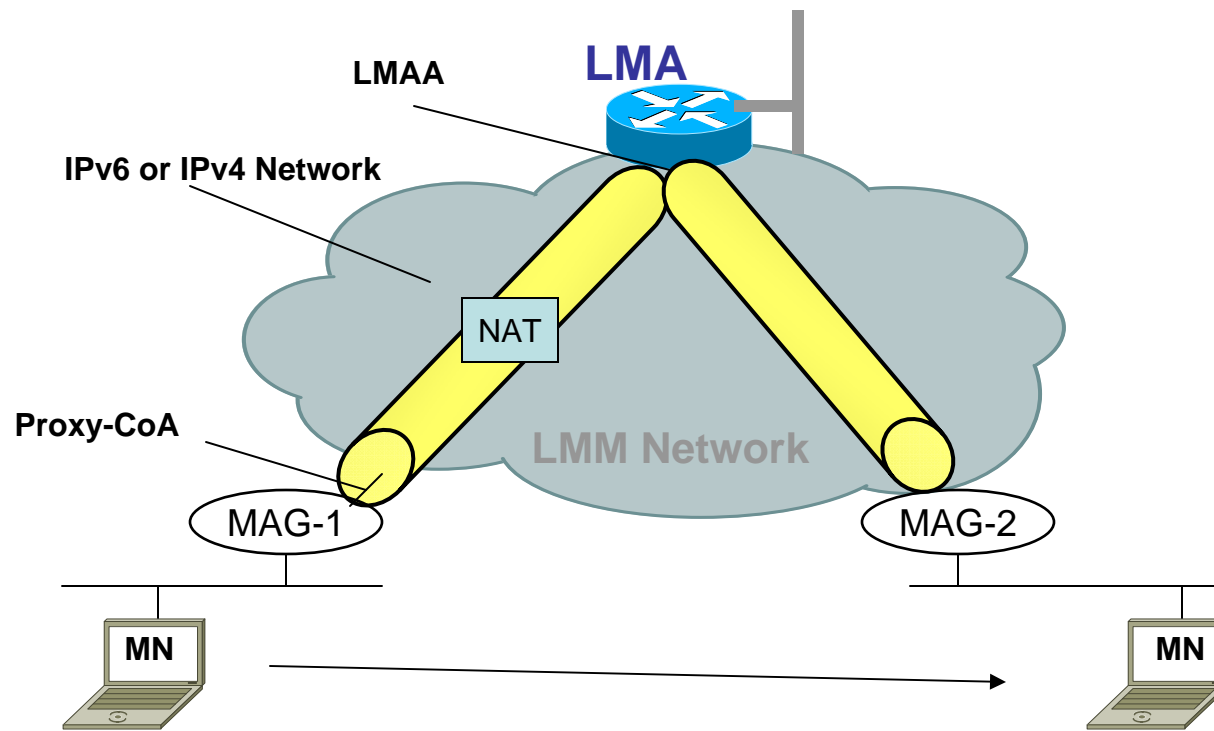
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# Main Protocol Features supported in the Draft

- Describes a network-based mobility management protocol based on MIPv6
- Optimizations
  - Does not require per-MN security associations
  - Can use a single tunnel or multiple tunnels between the MAG and the LMA for mobile traffic
- Supports dual stack, IPv6-only and IPv4-only mobile nodes
- Supports IPv4 transport including NAT traversal
- Allows dynamic configuration of IPv6 and IPv4 home addresses
- Describes how to setup security associations between the MAG and the LMA in detail
- Works with various link layers between the MN and the MAG
- Multilayer Mobility Management Support. Allows the same home agent to support MIPv6 and PMIPv6 at the same time
  - Other scenarios like moving out of a PMIPv6 domain and switching to MIPv6 also supported
- Interactions with DHCP on the access link specified
- DNaV6 Implications and Operational guidance

# Proxy Mobile IPv6 Domain



# Changes in -02 Version

- Terminology Changes
- Removed Shared-Prefix Model support and AAA Interaction sections and moved it to Appendix section
- Added Multi-layer Mobility Management Use Cases in Appendix section
- Added Time-Stamp Option details and relaxed the MUST requirement for this option in PBU, falls back to sequence number based logic in the absence of Time-Stamp Option
- Used the generic MN-Identifier term as supposed to NAI Identifier
- Added the IPv4 Transport Network Support, \*leveraging\* DSMIP6 work. Encapsulation Modes
  - IPv6-over-IPv4-UDP (Presence of NAT)
  - IPv4-over-IPv4-UDP (Presence of NAT)
  - IPv6-over-IPv4
  - IPv4-over-IPv4
- Clarified text on the supported mobile node modes. The mobile node can be operating in IPv4-only, IPv6-only or dual-stack modes
- De-registration scenario when the mobile node deregisters it host-based mobility session from an access link attached to the MAG

# Open Issues

- IPv4 Support
- Integrated Mobility Management Scenario's:
  - Enabling network-based mobility support in Mobile IPv6 home domain. MN-HoA = MIPv6-HoA
  - Mobile node after having established MIPv6 mobility session, moves into the Proxy Mobile IPv6 network and the de-registration scenario's
- Access Link
  - Link-Local Address Uniqueness under DNv6 scope
  - Domain-Wide DAD
- Should GRE option be present in the base document

# Working Code !

- Implemented the Proxy Mobile IPv6 protocol by a group in Cisco
  - Built the LMA function from the Cisco's Mobile IPv6 Home Agent code base and with minimal changes
  - Implemented the MAG function leveraging some code from the Cisco's NEMO code base for the signaling and other data structures
- Will present on the Implementation and Scalability Results at IETF69.

# Why draft-sgundave ?

- Amount of reviews and discussions that took place on the document
- The document evolved based on the discussions from the working group
- The amount of detail that is present in the document on the protocol operation
- Working Prototype based on this Specification

Comments/Questions?