

Reserved IPv6 Interface Identifier for Proxy Mobile IPv6

Sri Gundavelli (Cisco)

draft-gundavelli-v6ops-pmipv6-address-reservations-00.txt

Problem Statement

- Proxy Mobile IPv6 base specification, RFC 5213, requires the following configuration on every access link.
 - the use of a fixed link-layer address
 - the use of a fixed interface-identifier
- The specification did not reserve any specific addresses for this purpose.
- In the absence of any reserved addresses, it is now requiring coordination across vendors and a manual configuration of these addresses on all the mobility elements in a Proxy Mobile IPv6 domain. This is proving to be an operational headache.

Proxy Mobile IPv6 Domain

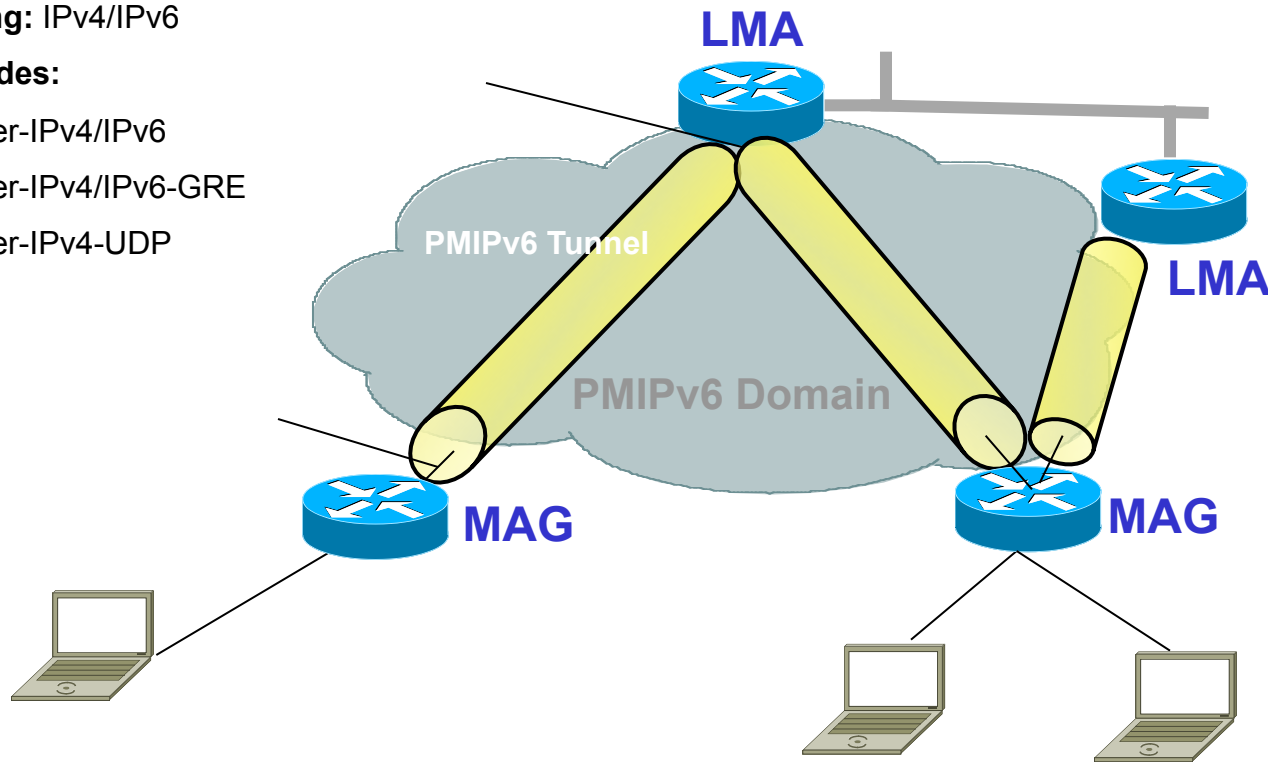
Mobility Entities: LMA & MAG

Transport Network: IPv4/IPv6

MN Addressing: IPv4/IPv6

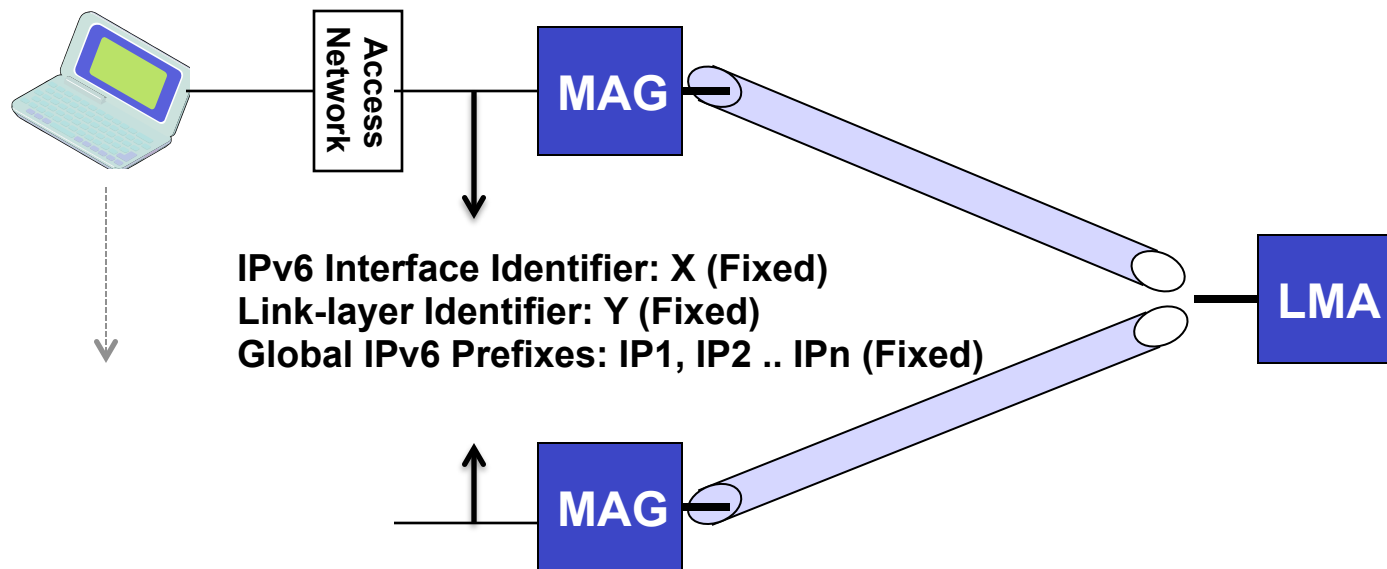
Tunneling Modes:

- IPv4/IPv6-over-IPv4/IPv6
- IPv4/IPv6-over-IPv4/IPv6-GRE
- IPv4/IPv6-over-IPv4-UDP



Requirements on the Access Link

- Proxy Mobile IPv6 protocol requires the MAG to configure the same IPv6 interface identifier, link-layer address and advertise the mobile node's home network prefixes on every access link, so the mobile node does not detect any change with respect to its layer-3 configuration.



Proposal

This document proposes the following two IANA actions for reserving a fixed interface-identifier and link-layer address for the use of Proxy Mobile IPv6.

Action-1: This specification reserves an IPv6 interface identifier for Proxy Mobile IPv6 [RFC5213]. This fixed identifier needs to be reserved from the registry, "Reserved IPv6 Interface Identifiers".

Action-2: This specification reserves a IANA Ethernet unicast address for Proxy Mobile IPv6. This address needs to be reserved from the block. "IANA Ethernet Address block - Unicast Use".

Next Steps

- Propose to take the draft to IESG review for initiating the IANA actions.

Thank You

