

Prefix Delegation for Proxy Mobile IPv6

draft-zhou-netext-pd-pmip

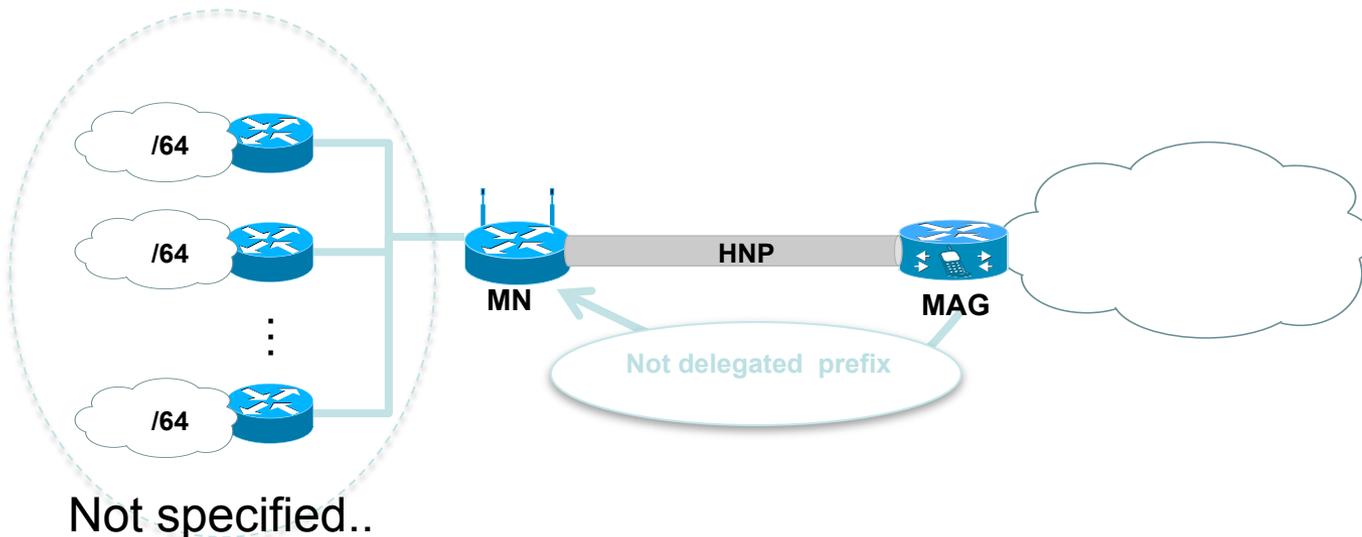
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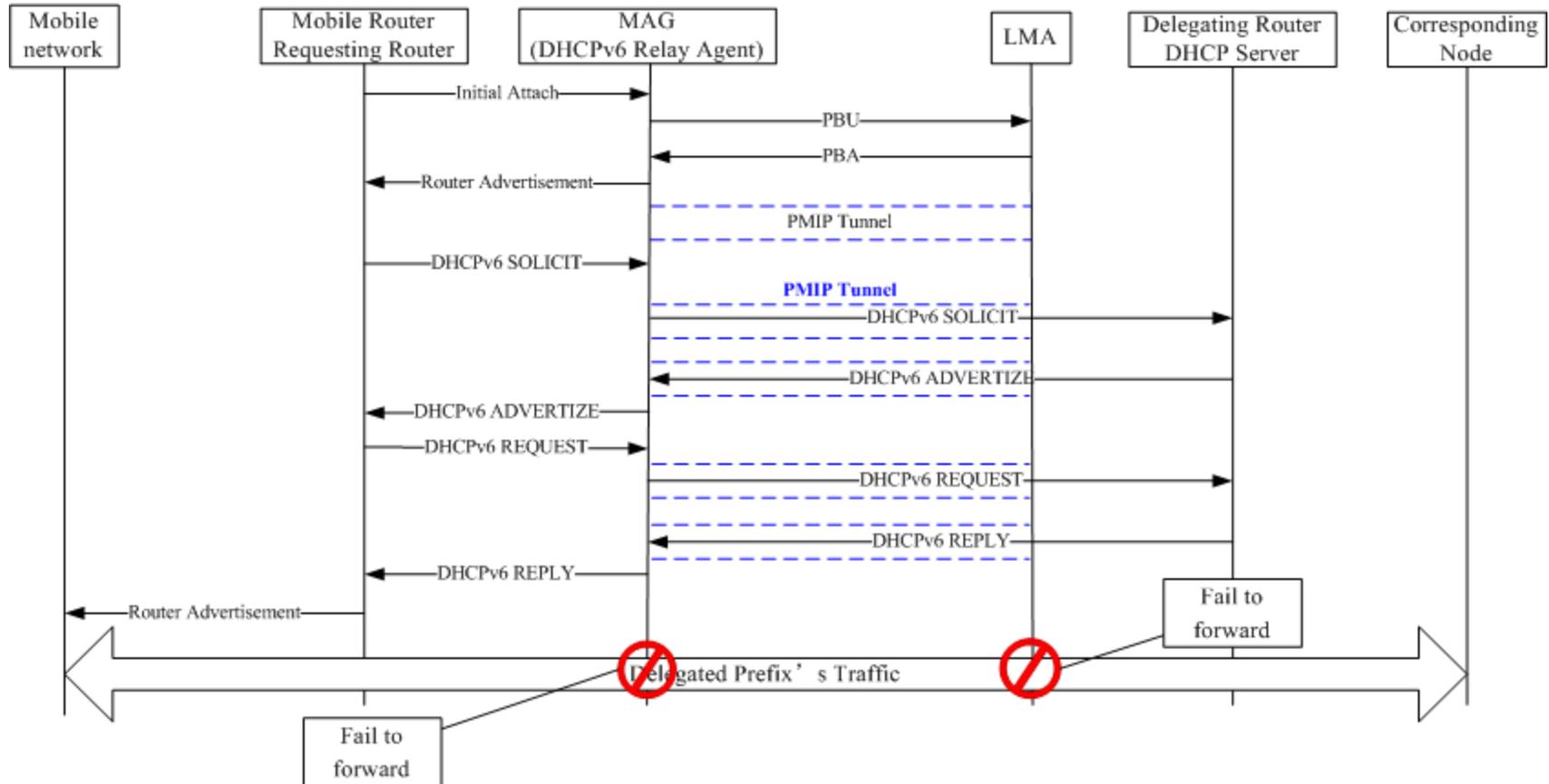
Carl Williams

What is the problem?

- There is a gap currently for supporting NEMO [RFC3963] and generally DHCPv6-PD in PMIPv6 architecture.
- In Proxy Mobile IPv6, the prefix that is assigned to a mobile node is hosted on the access link shared between the mobile node and the MAG. These prefixes are not delegated prefixes.



What is the problem?



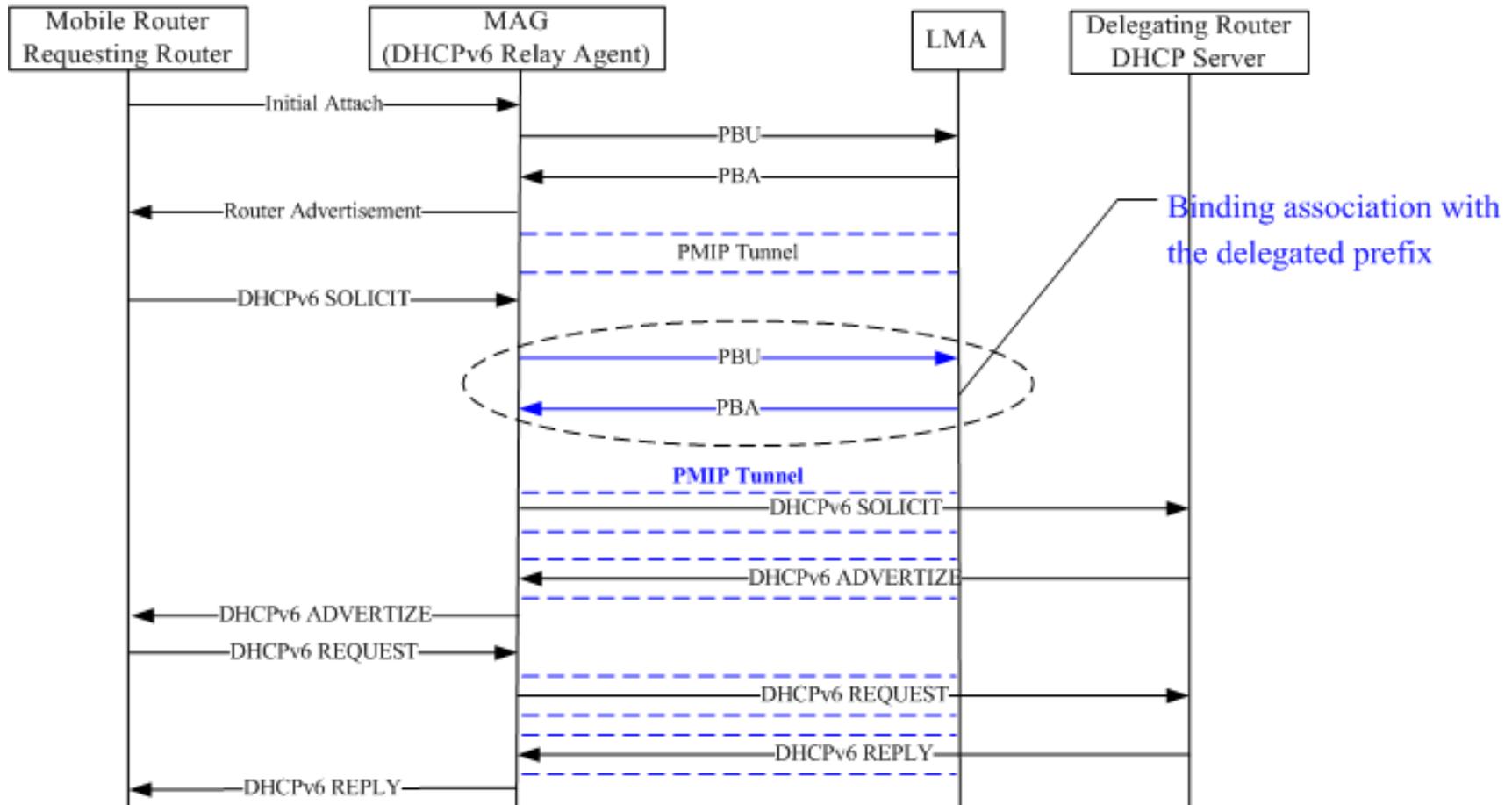
Approach for solving the problem

- For supporting a deployment where the mobile node is a mobile router, we need to be able to allow the hosts behind the mobile node to obtain address configuration
- The right model is to make this a routed network with the mobile node as the mobile router and by allowing DHCP-PD. This model was already adopted for client-based mobility (RFC-6276, RFC-3963) and is also specified in 3GPP Rel-10 for GTP (TS 29.061).

Approach for solving the problem

- Key point: delegated prefix(es) need to be associated with PMIPv6 binding and forwarding state:
 - Extend or clarify Proxy Mobile IPv6 signaling to make the association in case of prefix delegation.

Approach to solving the problem (one signaling example, there are others)



Next Step: Adopt

- NETEXT is expected to make an consensus to address this problem.
- **Adopt as a Working Group document.**

BACKUP SLIDE

Extension in the handover procedure

- After a handover the new target MAG has to be aware of the delegated prefix, not only the HNP. Otherwise, the forwarding to and from MN fails:
 - The target MAG may know the delegated prefix “out of band”. In this case the forwarding in the target MAG is up to date and the MAG informs the LMA about this by including the delegated prefix in lifetime extending PBU (after a handover).
 - Otherwise, the LMA is responsible to notify the target MAG of the previously assigned mobile network prefix in the PBA sent as a response to lifetime extending PBU.