Proxy Mobile IPv6

draft-ietf-netlmm-proxymip6-01.txt

NETLMM WG, IETF 69

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Between Prague (Rev-00) and Chicago (Rev-01)

- draft-sgundave-mip6-proxymip6-02.txt was adopted as the WG document.

- It was decided to split the document and move the IPv4 Support and the PMIP-CMIP Integrated Scenario support from the base document.

- I-D was reviewed and commented on by many people in the mailing list.

- Revised the I-D based on the received feedback.
  - Details of changes on next slide

Changes from -00 Version

- Adopted the NETLMM/PMIP Domain Definition as discussed in the mailing list.
- Removed support for Shared-Prefix addressing Model.
- Details on the supported link models. Support for Shared-link model is removed.
- Removed the text related to the PMIP/CMIP and multi-layer mobility scenarios.
- Identified the fields that are optional/mandatory in the Policy Store.
- Specified the Routing details on the MAG
    - Direct Routing
    - Tunnel Selection for the outgoing traffic
- Specified the PBU/PBA formats
- Non-normative section on the MN behavior in PMIP domain is updated to reflect the changes in the document
- Fixed some of the editorial nits.

Issue# 149: IPv4 Related Text

The -00 version of the Proxy Mobile IPv6 draft had left over text related to the IPv4 support. Since, the IPv4 support for PMIP6 is specified in a separate document and any text should be moved to the other document.

- This issue was fixed in Rev-01 version of the document.

Issue# 150: LMA Failover

Should LMA fail-over be part of the base protocol specification?

- This issue was discussed in the ML and it was decided that this is out of scope for the base document.

- HA Reliability work can be leveraged for achieving this or other vendor specific solutions may be adopted for solving this deployment issue.

Issue# 151: Shared-link Model

Discussion on the support for shared-link model.

- Support for the shared-link model is not in the scope of the base document. The draft currently supports only point-to-point link model.

Issue# 153: Addressing Models

Discussions related to the supported addressing models.

- The draft supports only Per-MN prefix model.
- The shared-prefix model is not in scope of the base document.
- The text related to the shared-prefix model is removed in the Rev-01 version of the document. Refer to Section 6.2 on the supported addressing models. Also, the relevant sections are updated to reflect the registered mobile node's MN-HNP.

Issue# 154 &158: Mandatory and Optional fields in the Policy Store

Mandatory fields:

- MN-Identifier
- Local Mobility Anchor Address
- Supported Address Conf Procedures (Stateful/Stateless/both)

Optional Fields:

- Mobile Node's Home Network Prefix
- Mobile Node's Home Network Prefix Length

- This issue was discussed in the ML and the Rev-01 version of the document reflects the WG consensus.

8

Issue# 156: MAG Actions when PBU is rejected by the LMA

• The MAG MUST withdraw the prefix by sending a Router Advertisement with zero prefix life time for the previously advertised mobile node's home network prefix.

• The -01 version of the document has the clarifying text.

Issue# 157: Editorial Issues

We addressed quite a few issues in the -01 version of the document. It requires one more edit to bring in the over all editorial consistency and to provide additional clarifying text where ever required.

Issue# 160: Time Stamp vs Sequence Number

- This issue was opened for the WG input. Multiple approaches were provides and the conclusion was to adopt the Time Stamp based approach for PBU sequencing.

- The -02 version of the document will be updated to reflect the consensus.

Issue# 161: NETLMM Scope

Discussions in the mailing lists on the NETLMM/PMIP6 scope, Local/Global mobility management. Adopted text as agreed upon in the WG:

"Proxy Mobile IPv6 domain refers to the network where the mobility management of a mobile node is handled using Proxy Mobile IPv6 protocol as defined in this specification. The Proxy Mobile IPv6 domain includes local mobility anchors and mobile access gateways between which security associations can be setup and authorization for sending Proxy Binding Updates on behalf of the mobile nodes can be ensured."

Issue# 162: Support for Network Renumbering

• As per the discussions in the ML, it was decided not to address the details on how the LMA notifies the MAG about prefix renumbering. This requires some investigation and extensions to ICMPv6 messages for carrying the NAI option.

Issue# 163 and 164: Local Routing on the MAG

There were discussions in the ML on how the MAG should route the traffic between two visiting mobile nodes attached to its access link.

• Based on the configuration parameter (enforced by the home domain policy, through out of band mechanisms), the MAG will either reverse tunnel the traffic or enable direct local routing.

• It is left to implementations on how to select the outgoing tunnel for reverse tunneling the traffic. It could be based on the MN-HoA, MAC Address or the Input interface of the received packet.

Issue-165 (Open Issue): Home Network Prefix Allocation

• Should the base PMIPv6 spec leave MN-HNP assignment exclusively to the LMA, or should it provide an option for the MAG to assign/retrieve the MN-HNP before it contacts the LMA?

Open Issue – Auth Option Support

• There are some currently active discussion threads in the ML.

 Should IPSec be the only mechanism for securing the PMIP6 signaling messages. Should we allow room for other mechanisms.

Next Steps

- Publish the -02 version of the document. Hopefully, that should be the last version of the document before the WG announces the last call.

- The document will be published in the August time frame.

Comments/Questions?