

Heartbeat Mechanism for Proxy Mobile IPv6

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Vijay Devarapalli (vijay.devarapalli@azairenet.com)

Heeseon Lim (heeseon.lim@azairenet.com)

Nishi Kant (nishi.kant@azairenet.com)

Suresh Krishnan (suresh.krishnan@ericsson.com)

Heartbeat Mechanism

- MAG and LMA manage routes for a mobile node in a PMIPv6 domain
- If MAG or the LMA become unavailable, or if there is a path failure, it takes quite some time for this to be discovered
 - MAG realizes that the LMA is not available only when it sends the next Proxy BU and gets no response
 - LMA realizes that the MAG is not reachable only when it receives ICMP Destination Unreachable messages in response to tunneled MN traffic
- Some of the interfaces where PMIPv6 is being planned for use in SDOs require path failure detection quickly
 - Reaction could include finding alternate nodes or releasing resources
- draft-devarapalli-netlmm-pmipv6-heartbeat
 - Describes a heartbeat mechanism between the MAG and the LMA if there is an active binding cache entry at the LMA for a MN attached to the MAG
 - Heartbeat messages exchanged periodically
 - Failure/unreachability detection based on the exchange of heartbeat messages
 - Similar to the GTP path management mechanism developed by 3GPP