NetLMM MN-AR Interface
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Status

- **New draft:**
  - **Tailored to p2p MN-MAG link**
  - **Address collisions considerations**
  - **MN_ATTACH function**
    - **MAG_GET_MN_ID subfunction**
    - **MN_GET_ADDR_PARMS subfunction**
    - **MN_GET_DEFAULT_ROUTER subfuntion**
    - **MAG_GET_MN_MCAST_GROUPS subfunction**
  - **MN_DETACH function**

Address Collisions

- **Issue:**
  - **MN and MAG LL addresses collide**
- **Current solution:**
  - **All MAGs have same LL address**
  - **MN DAD with 1st attached MAG avoid collisions with other MAGs**
- **Issues:**
  - **Doesn't work well with SEND since it means all MAGs share same public/private key pair**

Address Collisions

- **Another Solution ?!**
  - **MAG picks a LL on the p2p link after it knows the MN LL**
  - **LL can be stored in MN profile, or**
  - **MAG knows LL after it receives RtSol**

MAG_ATTACH function

- Occurs upon MN attachment to MAG:
  - **MAG_GET_MN_ID subfunction**
    - MAG authenticates MN identity
  - **MN_GET_ADDR_PARMS subfunction**
    - MAG provide the MN with addressing parameter
  - **MN_GET_DEFAULT_ROUTER subfuntion**
    - MAG provide the MN with default router information
  - **MAG_GET_MN_MCAST_GROUPS subfunction**
    - provide MAG with multicast listener state of the MN

MAG_GET_MN_ID subfunction

- **provides the MAG with an authenticated MN identifier**
  - **Can occurs as part of network access authentication (e.g. EAP), or**
  - **Use the SEND public key:**

MN   MAG

|------>| RS(Nonce_MN,PK_MN,Signature_MN)

|<------| REQ2. NS(Nonce_MAG,PK_MAG,Signature_MAG)

|------>| REP2. NA(Nonce_MAG,PK_MN,Signature_MN)

|<------| REP1. RA(Nonce_MN,PK_MAG,Signature_MAG)

MAG_GET_ADDR_PARMS subfunction

– **MAG provide the MN with addressing parameter**

- **Stateless Address Autoconfiguration (SLAAC) [RFC2462]**
- **Dynamic Host Configuration Protocol for IPv6 (DHCPv6) [RFC3315]**
- **IP Version 6 over PPP [I-D.ietf-ipv6-over-ppp-v2]**

MAG_GET_DEFAULT_ROUTER subfunction

– **MAG provide the MN with default router information**

- **Router Discovery as specified by the Neighbor Discovery Protocol [RFC2461]**
- **IP Version 6 over PPP (PPPv6) [I-D.ietf-ipv6-over-ppp-v2]**

MAG_GET_MN_MCAST_GROUPS subfunction

- provide MAG with multicast listener state of the MN
  - context transfer b/w old and new MAG
  - new MAG send MLDv2 [RFC3810] General Query to the link-scope all-nodes multicast address

MAG_DETACH function

- Occurs upon MN detachment to MAG:
  - L2 provides reliable indication of MN deatchment, or
  - NUD is executed periodically to detect MN detachment
- MAG removes MN from multicast listener data structures