NetLMM MN-AR Interface
draft-ietf-netlmm-mn-ar-if-01

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Resolved issues

- **#22 Multicast IPv6 ND triggers do not provide MN with confirmation of MAP registration success/failure.**

- **#24 Setting MN/AR/MAP as DHCPv6 client/relay/server fixes issues #22 and #23**

- **#25 MN-AR interface specifying REDIRECT behavior**

- **#26 link-local scoping in a NetLMM domain is undefined**

- **#27 Broken security procedure for DAD**

Issues with pending resolution

- **#88 Need to update assumed NETLMM protocol**

- **#89 Discuss per-MN prefix addressing model (e.g. 3GPP)**

- **#90 Configure DNA default router switching eagerly**

Unresolved issues

- **#23 Multicast IPv6 ND triggers cause many ARs to send UPDATEs when there are many ARs on the link.**

- **#28 No generic requirements for MN-AR interface**

- **#91 Re-establishing MN multicast listener state at new AR**

- **#92 No TTL decrement for inter-link tunneled SEND-protected NA**

Issue **#22**

- **Issue:**
  - **Multicast IPv6 ND triggers do not provide MN with confirmation of MAP registration success/failure.**

- **Resolution:**
  - **No text change**
  - **Confirmation occurs via reception of RA by MN**

Issue **#24**

- **Issue:**
  - **Setting MN/AR/MAP as DHCPv6 client/relay/server fixes issues #22 and #23**

- **Resolution:**
  - **Added triggers based on DHCP**
  - **Triggers on reception of SOLICITs**

Issue #25

- **Issue:**
  - **MN-AR interface specifying REDIRECT behavior**

- **Resolution:**
  - **An AR SHOULD NOT send a redirect message unless it can determine that the sending node and better first-hop node reside on the same link and will remain on the same link.**

Issue **#26**

- **Issue:**
  - **Link-local scoping in a NetLMM domain is undefined**

- **Resolution:**
  - **an AR MUST NOT forward packets sent by a MN from or to a link-local address (unicast or multicast)**

Issue **#27**

- **Issue:**
  - **Broken security procedure for DAD**
- **Resolution:**

```
MN1          AR1                        MAP                     AR2            MN2
 |   NS(DAD) |                           |                       |              |
 |-----------| UPDATE(MNID,CGA,NS)       |                       |              |
 |           |-------------------------->| QUERY[DAD](NS)        |              |
 |           |                           |---------------------->|   NS(DAD)    |
 |           |                           |                       |------------->|
 |           |                           |                       |   NA(DAD)    |
 |           |                           | REPLY[DAD](NA)        |<-------------|
 |           | REPLY[COLLIDE](NA)        |<----------------------|              |
 |  NA(DAD)  |<--------------------------|                       |              |
 |<----------|                           |                       |              |
```

Issue **#88**

- **Issue:**
  - **Need to update assumed NETLMM protocol**
- **Pending resolution:**
  - **Will do as soon as WG adopt a protocol draft as a working item**

Issue #89

- **Issue:**
  - **Discuss per-MN prefix addressing model (e.g. 3GPP)**
- **Pending resolution:**
  - **Will add text describing implications of such model on the MN-AR interface**
    - **Subnet confined to one link (where MN is)**
    - **No multi-link subnet issues**
    - **No DAD relaying required**

Issue **#90**

- **Issue:**
  - **Configure DNA default router switching eagerly**
- **Pending resolution:**
  - **There is no such configuration**
  - **Close the issue**

Issue **#23**

- **Issue:**
  - **Multicast IPv6 ND triggers cause many ARs to send UPDATEs when there are many ARs on the link.**
- **Three possible resolutions:**
  - **Synchronize on-link ARs via**
    - **Variation of DNA FastRA algorithm?**
    - **AR selection built-in NetLMM protocol?**
    - **Router redundancy protocol (e.g. VRRP)?**
    - **More?**

Issue **#28**

- **Issue:**
  - **No generic requirements for MN-AR interface**

- **Possible resolutions:**
  - **Requirements mostly security relevant**
    - **Specify that threats listed in draft-ietf-netlmm-threats must be countered ?**
  - **More?**

Issue **#91**

- **Issue:**
  - **Re-establishing MN multicast listener state at new AR**

- **Possible Resolution:**
  - **LMA maintains MNs' multicast listener states**
  - **AR track changes of state:**
    - **Retrieves state at LMA when new MN attaches**
    - **Update the LMA with state changes by snooping MLD**

Issue **#92**

- **Issue:**
  - **No TTL decrement for inter-link tunneled SEND-protected NS/NA**

- **Possible resolution:**
  - **Include in the NetLMM protocol a facility to tunnel unmodified NS/NA**

Questions…