

NEMO Terminology and Requirements Updates 57th IETF Wien

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NEMO Terminology

- Draft-ietf-nemo-terminology-00.txt
- Changes since previous meeting
 - General terminology moved to draft-ietf-seamoby-mobility-terminology
 - WG document
- May be useful to add more terms related to multihoming
- Terms peculiar to NEMO Basic Support
 - Best defined in draft-ietf-nemo-basic-support
- Would be submitted to IESG at the same time as the NEMO Basic Support solution

NEMO Requirements

- draft-ietf-nemo-requirements-01.txt
- Title changed to “NEMO Support Goals and Requirements
- Section 4:
 - Title changed to NEMO Design Goals
 - Removed “MAY” and “MUST”
- Section 5: Actual REQUIREMENTS for NEMO Basic Support

Requirements: Moving Forward

- R01: The solution MUST be implemented at the IP layer level.
- R02: The solution MUST set up a bi-directional tunnel ~~between a MR and its Home Agent~~
-> **between each MR and its HA**
- R03: All traffic exchanged between a MNN and a CN in the global Internet MUST transit through the bidirectional tunnel.
- R04: MNNs MUST be reachable at a permanent IP address and name.

Requirements: Moving Forward

- R05: The solution MUST maintain continuous sessions (both unicast and multicast) between MNNs and arbitrary CNs after IP handover of (one of) the MR.
- R06: The solution MUST not require modifications to any node other than MRs and HAs.
- R07: The solution MUST support fixed nodes, mobile hosts and mobile routers in the mobile network
- R08: The solution MUST allow MIPv6-enabled MNNs to use a mobile network link as either a home link or a foreign link.

Requirements: Moving Forward

- R09: The solution MUST not prevent the proper operation of Mobile IPv6 (i.e. the solution MUST allow MIPv6-enabled MNNs to operate either the CN, HA, or MN operations defined in (MIPv6)) **(MOVED UNDER R17 ?)**
- R10: The solution MUST treat all the potential configurations the same way (whatever the number of subnets, MNNs, nested levels of MRs, egress interfaces, ...)
- R11: The solution MUST support **at least 2 levels of nested mobile networks**, while, in principle, arbitrary levels of recursive mobile networks SHOULD be supported.

Requirements: Moving Forward

- **R12:** The solution MUST **function for multihomed MR and multihomed mobile networks** as defined in (NEMO-TERMS).
 - **R12.1:** The solution MUST function for multi-MR mobile networks
 - **R12.2:** The solution MUST function for multi-egress interfaces
 - **R12.3:** The solution MUST function for MR with multiple global addresses on an egress interface.
- **(R12.1, R12.2 and R12.3 COULD BE REMOVED BECAUSE SELF-CONTAINED IN THE DEFINITION IN TERMINOLOGY DRAFT)**

Requirements: Moving Forward

- R13: NEMO Support signaling over the bidirectional MUST be minimized **(NEW REQUIREMENT PROPOSED BY EDITOR)**
- R14: Signaling messages between the HA and the MR MUST be secured:
 - R14.1: The receiver MUST be able to authenticate the sender
 - R14.2: The function performed by the sender MUST be **authorized** for the content carried
 - R14.3: Anti-replay MUST be provided
 - R14.4: The signaling messages **MAY** be encrypted **(REMOVED or SOFTENEN TO "MAY" (?))**

Requirements: Moving Forward

- R15: The solution MUST ensure transparent continuation of routing and management operations over the bi-directional tunnel when the MR is away from home. (this includes e.g. routing protocols, router renumbering, DHCPv6, etc)
- R16: The solution MUST not impact on the routing fabric neither on the Internet addressing architecture. **(ACCORDING TO IETF56 minutes, SHOULD BE REMOVED ?)**
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Requirements: Moving Forward

- R17: The solution MUST ensure backward compatibility with other standards defined by the IETF. Particularly: ???? (SPECIFIC PROTOCOLS SHOULD BE EXPLICITLY LISTED: MLD, PLEASE CONTRIBUTE THE NAMES OF PROTOCOLS TO BE INCLUDED ON THE MAILING LIST. MIPV6 COULD BE INCLUDED HERE INSTEAD OF R09.)
- R18: The solution SHOULD preserve sessions established through another egress interface when one fails (PROPOSED BY EDITOR OF THIS DOCUMENT AT THE IETF56 MEETING. TO BE DISCUSSED)

Requirements: Moving Forward

- What do we do next with this draft ?