

Nemo WG, IETF 58

Status of NEMO Basic Support Protocol

Vijay Devarapalli

Design Team: Ryuji Wakikawa
Alexandru Petrescu
Pascal Thubert
Vijay Devarapalli

Status

- Version 01 has been out for a while
- WG last call completed
- Issues status
 - 19 issues in total
 - 12 Accepted, 4 rejected, 3 open

<http://people.nokia.net/vijayd/nemo/issues.html>

Major Issues Resolved

- Prefix Table
 - Used only with explicit mode
 - Home Agent can verify if the Mobile Router owns the MNP it claims
 - Optional even with explicit mode
- In Implicit mode, the Home Agent uses pre-configured information to setup forwarding for the mobile network
 - No mechanism specified in the draft
 - Internal to the Home Agent, implementation dependent

Major Issues Resolved (contd.)

- Extended Home Network terminology
 - Too confusing; not the right place; this is a protocol description document
 - A separate usage scenarios draft produced
- IANA action for Binding Ack status values
 - Binding Ack status values split across MIPv6 specification and Nemo draft
 - MIPv6 spec does not require IANA action currently
 - But needed
 - This is being fixed for the MIPv6 specification
 - Add Binding Ack status values to the IANA section

Open Issues

- Legacy MIPv6 Home Agents (Issues 15 and 16)
 - MIPv6 Home Agents ignore the Mobile Router flag and process the binding updates
 - Mobile Router assumes forwarding was setup for the mobile network
 - Just a configuration error?
 - A new status value
 - 2 (Mobile Router Binding Update Accepted)
 - MIPv6 Home Agents send 0 (Binding Update Accepted)
 - A flag in Binding Ack
 - Set when the Home Agent sets up forwarding
 - MIPv6 Home Agents don't set the flag
 - A flag in DHAAD reply to indicate support for Mobile Routers
 - Cant include MIPv6 Home Agents and Nemo Home Agents in the same reply
 - Needs a flag in Home Agent Information option too

Open Issues

- Home Agent behavior with non-link home addresses (Issue 19)
- MIPv6 Home Agent rejects binding updates if home address is not on-link with respect to the home link
- Mobile Router cannot register home address configured from the MNP or from some prefix in the home network other than the prefix advertised on the home link
- Proposal - Relax MIPv6 restriction
 - Home Agent rejects the binding update only if the home address is not from the Home Prefix that the Home Agent is currently configured to serve

Open Issues

- ESP Encryption for tunneled routing protocol messages (Issue 17)
 - The routing protocol updates could contain information about the internal routing structure of the home network
 - There could be link layer encryption on the Mobile Router's access links
 - HA and MN could use something other than ESP tunnel mode for encryption
 - SHOULD or a MUST?