NEMO WG Status, Hot Topics and Recharteing

NEMO additional page
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66th IETF,

Montreal, Canada11[th] July 2006
18:50-19:50

66th IETF - NEMO WG Agenda

- Welcome, Agenda Bashing 05mins
- NEMO WG Documents Status 10mins
- Recent Discussions on the ML ....
  - Deployment Requirements 10mins
  - IPv4 Network Mobility 05mins
  - IPv4/NAT Traversal Scenarios 10mins
  - Rechartering Items 20mins

NEMO WG Document Status

66th IETF NEMO WG: Status

- NEMO Basic Support
  - RFC 3963 Standards track (Jan.05)
  - Implementations available
    - e.g. Linux 2.6 (NEPL) and BSD (Shisa)
    - http://www.nautilus6.org/implementation
  - Commercial products exist
  - Considered in the CALM architecture for ITS communications
    - cf ISO TC 204 WG 16 and 63th IETF NEMO WG proceedings http://www3.ietf.org/proceedings/05aug/index.html
    - http://www.calm.hu

66th IETF - NEMO WG Status

- ## NEMO Home Network Models
  - draft-ietf-nemo-home-network-models-06.txt (Feb.06)
  - Companion document on 'usages'
  - RFC Editor Queue
  - Issue List:
    http://www.mobilenetworks.org/~pthubert/draft-ietf-nemo-home-network-models-issu

- ## NEMO Management Information Base
  - draft-ietf-nemo-mib-01.txt (Jul.05)
  - New version (probably last) expected shortly

66th IETF - NEMO WG Status

- NEMO Support Terminology
  - draft-ietf-nemo-terminology-05.txt (Mar.06)
  - Passed NEMO WG Last Call.
  - Remaining inconsistency with Home Network Models, updated version to be shipped to IESG.
  - Issue List: http://www.sfc.wide.ad.jp/~ernst/nemo
- NEMO Support Requirements
  - draft-ietf-nemo-terminology-05.txt (Oct.05)
  - Passed NEMO WG Last Call. To be shipped to IESG.
  - Issue List: http://www.sfc.wide.ad.jp/~ernst/nemo

66th IETF - NEMO WG Status

- NEMO RO Problem Statement
  - 2 WG drafts
  - Draft-ietf-nemo-ro-problem-statement-02 (Dec.05)
  - Draft-ietf-nemo-ro-space-analysis-02 (Feb.06)
  - Passed NEMO WG Last Call
  - To be sent to IESG shortly

66th IETF - NEMO WG Status

- Analysis of Multihoming in Network Mobility Support
  - draft-ietf-nemo-multihoming-issues-06.txt (Jun.06)
  - Issue List
    http://www.mobilenetworks.org/nemo/draft-ietf-nemo-multihoming-issues/
  - NEMO WG Last Call to be issued
  - Any concern ?

66th IETF - NEMO WG Status

- NEMO Prefix Delegation
  - 2 WG drafts
    - draft-ietf-nemo-dhcpv6-pd-01 (Mar.06)
    - draft-ietf-nemo-prefix-delegation-00 (Aug.05)
    - Authors are considering merging the 2 drafts
  - Draft(s) must be updated to take into account multihoming considerations
    - cf draft-ietf-nemo-multihoming-issues
  - Not enough comments have been expressed on the ML so far, or not reasonably well taken into account
    - Some people have expressed concerns that the documents where accepted as WG without enough prior discussion

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66th IETF - NEMO WG Status

- IPv4 and NAT Traversal
  - DSMIPv6: draft-ietf-mip6-nemo-v4-traversal-02 (Jun.06)
  - Design Team: mip6trans
  - Both MIP6 WG and NEMO WG doc
    - linked from the MIP6 WG page only due to technical reasons.

- IPv4 Basic Support
  - draft-ieft-nemo-v4-base-01 (Jun.06)
  - Informational draft
  - Seems ready for WGLC

Recent Discussions on the ML: NEMO Basic Support (RFC 3963) Deployment Requirements

Deployment Requirements

- Was proposed to add a section in draft-ietf-nemo-requirements
    - AD & Chairs decided to ship draft-ietf-nemo-requirements right away to the IETF.
- General requirements and industry specific requirements
- Individual submissions expected for industry-specific req.
- Note that deployment requirements may involve other WGs (e.g. IPv6, Mipshop)

Deployment Requirements

- Aviation industry: Internet access for passengers and traffic control
  - Worldwide sites, NEMOs moving in between
  - cf Connexion by Boeing (presentation during IAB plenary Mar.2005) and discussion on the ML
  - Req:
    - RO
    - Multiple ISPs and Navigation Service Providers
    - Air control traffic separated from passengers' traffic
    - Global HAHA

Deployment Requirements

- Car industry: remote monitoring, navigation, and emergency calls
  - Communications vehicle-infrastructure and vehicle-vehicle
    - cf ISO's CALM, C2CCC, CVIS, SafeSpot, ...
  - Safety
  - Reliability
  - QoS requirements
    - RO between the NEMO and the access network
    - Fast Horizontal Handovers (with RFC 3963)
    - Resource Reservation for MNNs
  - Vertical handovers

Deployment Requirements

- Public transport industry: Internet access for passengers
  - No specific need for reliability and safety
  - Billing and access control: AAA (Diameter)
  - Nested NEMO

Recent Discussions on the ML: IPv4 Network Mobility

IPv4 Network Mobility Reminder

- WG initially proposed to work on IPv6 only (cf MONET BOF in Mar.02)
- Limited set of people said they would work on IPv4 (so, it was added in the charter) but didn't
- No input until 2005
- Sudden request to accept a standard for IPv4 network mobility
- Was finally accepted as a WG doc provided:
  - Requestors commit to produce the document
  - This incurs minimum work load to the NEMO WG
  - The document is informational
  - This would be the only document

IPv4 Network Mobility - Next

- Questions whether work on IPv4 is considered useful or not at the IETF

- Questions about where this should be done at the IETF, if work on IPv4 is appropriate
  - NEMO WG originally set up to work on IPv6 (see previous slide), and must focus on RFC 3963 deployments and improvements.
  - Working on IPv4 and IPv6 in the same WG is confusing (this is why formet MobileIP WG was split into MIP4 and MIP6
  - MIP4 chairs seem to favor work been done in their group (provided the work is needed)

- Better approach might be to support IPv4 mobile subnets using IPv6 mobility support

- Relation/redundancy between draft-ietf-mip6-nemo-v4-traversal and plain IPv4 work

Recent Discussions on the ML: NEMO WG Rechartering

NEMO WG Rechartering

- Should this be happening now, or later once we get input on deployment requirements ?

  - Conclusion: Recharter now with an updated charter

NEMO WG Rechartering

- Charter updated since IETF 65th Dallas
  - http://www.mobilenetworks.org/nemo/charter2_2.txt
  - Still a draft version
  - Comment: charter must be more specific on which exact work to be done on multihoming and RO

NEMO WG Rechartering - RO

- Next steps: slides "RO next steps" at 63rd IETF
- RO Pb well understood
  - draft-ietf-nemo-ro-pb-statement
  - draft-ietf-nemo-ro-space-analysis
  - RO slides 63rd IETF
- RO Needs not well understood
  - define use cases => deliverable (deployment requirements ?)
  - Standardize 2 or 3 drafts as experimental
    - Limited to bidirectional tunneling based solutions which utilize MIP signaling
    - Investigate possible RO extensions to add to HMIPv6 (currently under revisions in the MIPSHOP WG)

NEMO WG Rechartering

- Fault Tolerance
  - When MR-HA link is affected
  - Failures on that link are much more likely to occur
  - Somewhat related to "Ingress Filtering" in the (n,n,n) case
    - the solution for fault tolerance can solve the ingress filtering problem
    - Discussed on the ML in 2006-Apr-05
  - Solution could be based on Appendix B from draft-ietf-nemo-multihoming-issues

NEMO WG Rechartering

- Deployment Requirements
  - Gathering deployment requirements is necessary before an in-depth recharterting of the NEMO WG (for the long run)
  - Could be a WG item to gather the req.
    - include a deliverable on use cases & deployment requirements
- Global HAHA for RO and multihoming
  - http://www.ietf.org/internet-drafts/draft-thubert-nemo-global-haha-01.txt

NEMO WG Rechartering

- Misc
  - RFC 3963 revision needed ?
  - Loop Prevention
    - cf draft-ietf-nemo-multihoming-issues
  - MANEMO work ?