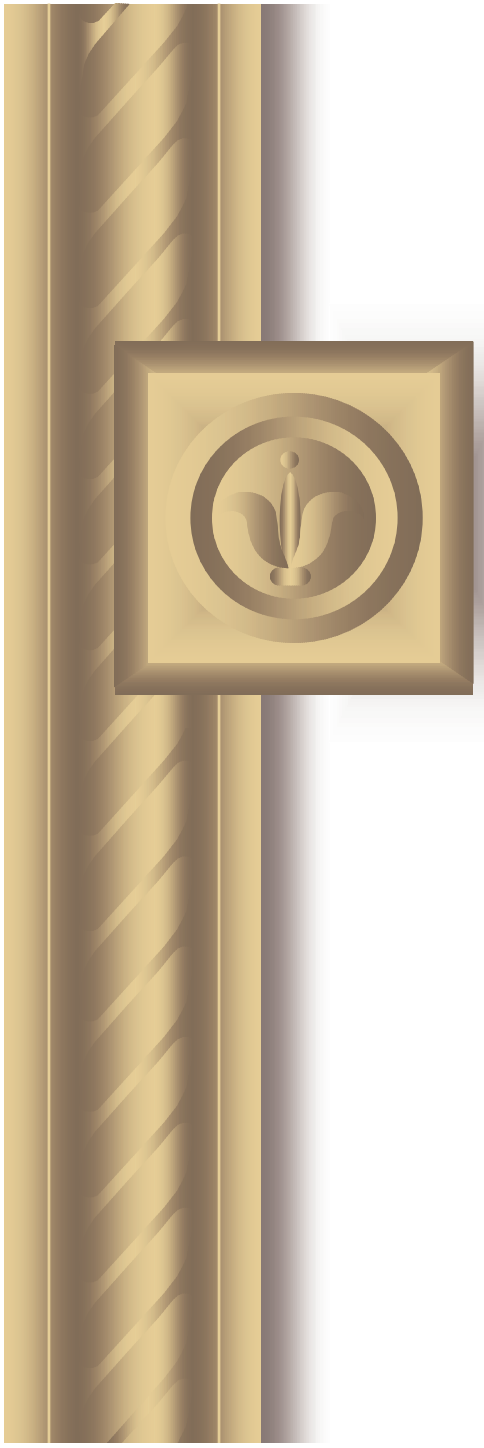

NEMO Working Group

- Welcome
- Charter Bashing
- Status, Charter, and Milestones

TJ Kniveton

IETF57

8/4/2003

A Brief Review..

Welcome to NEMO at IETF57!

NEMO means NEtwork MObility

Our work enables a network to change its point of attachment to the Internet

This is the 6th meeting of NEMO

- pre-BOF: IETF52 (aka MONET)
- BOFs: IETF53,54
- working group meetings: IETF55,56,57

Agenda for NEMO (1/2)

- Agenda Bashing .....5 mins
  Chairs
- NEMO status and milestones .....5 mins
  Chairs
- NEMO Basic Support .....30 mins
  draft-ietf-nemo-basic-support-00.txt
  Report from the design team and left issues
  Ryuji Wakikawa
- Multihoming .....20 mins
  draft-ng-nemo-multihoming-issues-01.txt
  draft-charbon-nemo-multihoming-evaluation-00.txt
  - what scenarios must be supported in Basic
  - issues with NEMO Basic Support
  - how are we going to proceed

Chan-wah Ng

Agenda for NEMO (2/2)

- IPR Status.....10 mins
  TJ Kniveton
- Threat Analysis Discussion ..... 15 mins
  draft-jung-nemo-threat-analysis-00.txt
  - what are the potential threats
  - how are we going to proceed
  Souhwan Jung
- Terminology and Requirements Updates.....15 mins
  draft-ietf-nemo-requirements-01.txt
  draft-ietf-nemo-terminology-00.txt
  Thierry Ernst
- Conclusion and next steps..... 5 mins

Status of Charter

- Last updated in Jan 03
- Does charter text still fit what the working group is working on? (Hopefully YES!)
- Let's review current milestones and what we have accomplished, and see if anything needs adjustment or updating..

Charter

The NEMO Working Group is concerned with managing the mobility of an entire network, which changes, as a unit, its point of attachment to the Internet and thus its reachability in the topology. The mobile network includes one or more mobile routers (MRs) which connect it to the global Internet.

A mobile network is assumed to be a leaf network, i.e. it will not carry transit traffic. However,it could be multihomed, either with a single MR that has multiple attachments to the internet, or by using multiple MRs that attach the mobile network to the Internet.

Initially,the WG will assume that none of the nodes behind the MR will b e aware of the network's mobility, thus the network's movement needs to be completely transparent to the nodes inside the mobile network. This assumption will be made to accomodate nodes inside the network that are not generally aware of mobility.

A basic approach for network mobility support is for each Mobile Router to have a Home Agent, and use bidirectional tunneling between the MR and HA to preserve session continuity while the MR moves. The MR will acquire a Care-of-address from its attachment point much like what is done for Mobile Nodes using Mobile IP. This approach allows nesting of mobile networks, since each MR will appear to its attachment point as a single node.

The WG will take a stepwise approach by standardizing some basic support mechanisms based on the bidirectional tunneling approach, and at the same time study the possible approaches and issues with providing more optimal routing than can be had with (potentially nested) tunneling. However, the WG is not chartered to actually standardize a solution to such route optimization for mobile networks at this point in time.

The WG will work on:
- A threat analysis and security solution for the basic problem (tunneling between HA and MR)
- A solution to the basic problem for both IPv4 and IPv6. The solution will allow all nodes in the mobile network to be reachable via permanent IP addresses, as well as maintain ongoing sessions as the MR changes its point of attachment within the topology. This will be done by maintaining a bidirectional tunnel between the MR and its Home Agent. The WG will investigate reusing the existing Mobile IPv6 mechanisms for the tunnel management, or extend it if deemed necessary.
- An informational document which specifies a detailed problem statement for route optimization and looks at various approaches to solving this problem. This document will look into the issues and tradeoffs involved in making the network's movement visible to some nodes, by optionally making them "NEMO aware". The interaction between route optimization and IP routing will also be described in this document. Furthermore, security considerations for the various approaches will also be considered.

The WG will:
- Ensure that solutions will scale and function for the different mobile network configurations, without requiring changes to Correspondent Nodes in the Internet. All solutions will aim at preserving route aggregation within the Internet and will satisfy an acceptable level of security (a thorough survey of new threats and an analysis of their severity will be conducted)
- Ensure that various mechanisms defined within other IETF WGs will be useful for mobile networks. To achieve this, the NEMO WG will interact with other WGs when needed, and may place requirements on the protocols developed by those WGs.

The WG will not:
- consider routing issues inside the mobile network. Existing routing protocols (including MANET protocols) can be used to solve these problems.

Detail on tasks

- MAR 03 **Submit Terminology and requirements doc (for Basic Support)**
  - **Complete.**
  - **What should happen to these documents now? Wait for completion of basic support draft and advance together?**
- MAY 03 **Submit Threats analysis and security requirements for NEMO**
  - **A draft has been submitted (presentation later)**
  - **Move date forward to allow wg time to discuss?**
- AUG 03 **Submit solution for basic support to IESG**
  - **Design Team was formed after last IETF to complete this**
  - **Draft was submitted; presentation to follow**
  - **Is August still realistic to submit a solution to IESG?**
- NOV 03 **Submit MIB for Basic support to the IESG**
  - **Can we identify parties that are willing to work on this?**
- MAR 04 **Submit the analysis of the solution space for route optimization**
- JUN 04 **Shut down or recharter the WG to solve the route optimization**