Route Optimization for Proxy MIPv6

Julien Abeillé, Marco Liebsch

NetLMM WG
IETF#69, Chicago
24th July 2007
Background

- Proxy MIPv6 relocates mobility control from client (MN) to network (AR)

- MIPv6 supports route optimization
  - Designed for end-to-end optimization
  - Implies end-to-end signaling
  - Implies RR-Tests to support some level of authentication

- Relocation of MIPv6 RO Control to AR works, but...
Some thoughts...

- RR-Tests really needed in Proxy MIPv6?
- Key netImm scenario
  - Local RO between (MAGs of) two MNs
- What about RO between MAG and client MN?
  - Operator policy issues
  - Privacy issues
- Other means to secure and authenticate RO signaling more appropriate (exploit existing SAs)
- Solution should support multiple LMA topology!
- MAG-based control not sufficiently stable
Some ideas...

• Give some control for RO to LMA(s)
• Select one of a relevant pair of LMAs as active RO Controller
• Allow reuse of (P)MIPv6 control messages
• Support different modes for RO setup
  – **Direct Mode** (MAGs mutually share an SA)
  – **Proxy Mode** (MAGs share an SA only with LMAs)
• Protocol draft in

  draft-abeille-netlmm-proxymip6ro-00.txt
Protocol Modes and Interfaces

Direct Mode

Proxy Mode
More extensions...

- Flush mechanism proposed in
  
  draft-jaehwoon-netlmm-flush-00.txt

- Identifies and solves reordering issues