Proxy Mobile IPv6 extensions for Distributed Mobility Management

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Outline

• History & Status

• Overview

• Network-based DMM

• Next Steps
History & Status

• Adopted as WG document after London

• -01 version addressed all the comments received during the WG adoption call

• -02 addressed Lyle’s review comments

• -03 (current) Danny’s review comments
Overview

• Network based DMM approach
  • Based on Proxy Mobile IPv6 (RFC 5213)
• Mobility management pushed to the edge
  • Access router level
• Partially distributed solution
  • Centralized control plane
    • A central node (kind-of LMA) stores mobility sessions of MNs
  • Distributed data plane
    • Only the edge routers handle the data forwarding
Changes since IETF102

-02 (mainly addressing Lyle’s review)
  • Improved terminology
  • Added text about de-registration
  • Lots of clarifying text added

-03 (mainly addressing Danny’s review)
  • Lots of text improvements
  • Some procedures (with figures) described differently to improve readability
Next steps

• Document has been improved and it is stable now

• Go WGLC?
BACKUP
Network-based DMM: Entities

- **Mobility Anchor and Access Router (MAAR)**
  - One IP hop distance from the MN
  - Concentrates AR, LMA & MAG functions per-MN, per-prefix
    - Access-DPN, Home-DPA and Access-CPN
  - Delegates and anchors an IP prefix to each MN attached
    - Serving MAAR (S-MAAR)
    - Anchor MAAR (A-MAAR)
  - Forwards data packets to/from IP networks

- **Central Mobility Database (CMD)**
  - Central node storing the BCEs of all the MNs in the domain
    - H-CPA
  - It plays the role of the LMA for the control plane
Network-based DMM Operations: initial registration

- The S-MAAR registers the MN at the CMD through a PBU/PBA handshake

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PMIPv6 DMM and DLIF
Network-based DMM

CMD as PBU/PBA proxy

• The CMD receives a PBU from the new S-MAAR announcing the MN attachment
• The CMD sends instructions to the S-MAAR and A-MAAR(s) on how to establish the proper routing configuration