Fast handovers for PMIPv6
<draft-yokota-mipshop-pfmipv6-03>

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Background

- RFC 5268 specifies Fast Handovers for (Client) Mobile IPv6
- This document, first presented at IETF 69, specifies Fast Handovers when Proxy Mobile IPv6 is used
- Provides performance (uplink and downlink packet loss, delay and context transfer) during inter-gateway handovers
Design principles

- Reuse FMIPv6 (RFC5268)
- Extend FMIPv6 to work without MN’s involvement
  - MN-initiated fast handover messages, explicit handover indication are not available
  - Rely on Access Network procedures (as in PMIPv6)
- Define Network Layer containers (such as MN-ID, LMA-A, HoA,..) for context transfer
- Allow deployments to define access-specific containers
PMIPv6 basic operation

- MN (Mobile Node)
- pMAG (Proxy Mobility Anchor)
- nMAG (New Mobility Anchor)
- LMA (Local Mobility Anchor)

- L2 detach
- UL/DL delay (& loss)
- L2 attach

- HO event

- UL/DL packets

- PBU
- PBA

- RS
- RA
PFMIPv6 operation (Intra-tech HO)

L2 detach

UL/DL reduced delay (no loss)

L2 attach

L2 attach

HO event

HI/HAck

DL packets

HO complete

No changes to PMIPv6 protocol
PFMIPv6 operation (Inter-tech HO)

No changes to PMIPv6 protocol
Changes from -02

- Mobility Header HI/HAck messages
  - For deployments where ICMP is not preferred
- IPv4 HI/HAck messages
  - For MAGs that support only IPv4
Usage

- PFMIPv6 provides fast handover and context transfer during gateway handovers with no IP mobility support in MN

Example: The (HRPD Serving) Gateway handovers in 3GPP2 is based (normatively) on the PFMIPv6 document

- (See specification X.P0057 “EUTRAN - eHRPD Interworking”)

- On 3GPP2 dependency list, priority high
Way forward

- Adopt and progress the document in the WG