MN Agnostic Fast Handover for Proxy Mobile IPv6

draft-xia-netlmm-fmip-mnagno-01.txt

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Main Ideas in the proposal

• Mobile Node Agnostic Fast Handover

• Temporary Data Tunnel between Previous MAG and New MAG

• Context transfer
  • For expediting IP connectivity
  • Context as per the base draft draft-ietf-netlmm-proxymip6

• Layer 2 dependence is abstract
Predictive Flow

MN | s-BS | PMAG | NMAG t-BS |
---|------|------|-----------|
1 Network Entry | <--------- | <-------- | |
2 L2 HO Signalling | <---------- | =---------- | |
disconnect | |
3 L2-HO-IND | <---------- | |
buffering 4 HI | 5 HAck | <-------- | |
connect | | 6 forward packets | <=--------- | |
| | | | 7 LUP |
| | | | 8 RA | <=------ | |
| | | | 10 deliver packets | 9 PBU | <=------>LMA |
Main Steps for Predictive Mode

- L2 event of Network side triggers Fast Handover Procedure (FMIPv6)
- HI/Hack exchange builds bi-directional tunnel between Previous MAG and New MAG. Proxy-CoAs of PMAG and NMAC are tunnel’s two ends respectively.
- Packets are buffered in previous MAG and new MAG during handover.
- Packets are tunneled through temporary tunnel before new proxy binding update.
- Context is transferred using HI message to accelerate IP connectivity establishment in new MAG
Reactive flow

MN | s-BS PMAG | | NMAG | t-BS |

1 Network Re-entry

2 movement detection and buffering

3 LUP

4 FBU

5 PBU

6 FBack

7 forward packets

8 RA

9 deliver packets

LMA
Main Steps for Reactive Mode

- Movement detection and packet buffering are essential in reactive case
- FBU/FBack exchange (adopted from FMIPv6) is used for establishing bi-directional tunnel
- FBU is used for fetching context information from previous MAG
- PBU is sent to LMA in parallel with the temporary tunnel establishment
Make it a WG document?
Thank You.
Questions?