PMIPv6-based distributed anchoring
draft-bernardos-dmm-distributed-anchoring-00

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Common to other approaches

- Routers at the edge (called Distributed Gateways, D-GWs in our proposal) are able to assign locally anchored prefixes to the MNs
- Solution based and compatible with RFC5213
- D-GWs behave as LMA/MAG
  - As LMA for locally anchored prefixes
  - As MAG for attached MNs that have active prefixes anchored elsewhere
- Benefits from MN preferring a locally anchored IP address over any other for new communications
- It does not require end-host modifications
Specific to this proposal

- Distributed Logical Interface (DLIF) concept
  - The DLIF is a software construct allowing to hide the change of anchor from the MN
  - Each serving D-GW exposes itself towards a given MN as multiple routers, one per active anchoring D-GW associated to the MN
    - This is achieved is by the serving D-GW configuring different logical interfaces
    - From the point of view of the MN, the anchoring D-GWs are portrayed as different routers, although the MN is physically attached to a single interface of the serving D-GWs
  - The DLIF concept is applicable to other network-based solutions
Solution overview

Operator’s core

IP stack

mn1dgw1

phy interface

D-GW1

IP stack

mn1dgw1

mn1dgw2

phy interface

D-GW2

PrefA::/64

(DLIFs)

PrefA::/64

(AdvPrefLft=0)

PrefB::/64

MN1

PrefA::MN1/64 (deprecated)

PrefB::MN1/64