

A PMIPv6-based solution for Distributed Mobility Management

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Common to other proposals

- Extend RFC 5213 with few mobility options
- Allow local routing at the MAG and extend the LMA binding cache structure
- Enable on-demand tunneling between MAGs for seamless handover support
- No host modifications

Specific to this proposal

- Focus on the partially distributed model and have considerations on fully distributed
- The Mobility Access Anchor Router can act as a MAG and LMA (data plane forwarding)
 - Traffic can be locally routed at the MAAR or tunneled to a new location
- Tunneling establishment between MAARs is performed via standard PMIP signaling
 - The extended LMA plays the role of Central Mobility Database (CMD)
 - Three operational modes are proposed (relay, proxy, locator)
- Alternatively proposes to use the DHCP infrastructure to play the role of CMD (based on RFC 5213)
 - Extensions are defined to feed the DHCP relay@MAAR

An Example

```

+-----+          +-----+          +-----+          +-----+          +-----+
|MAAR1|          |CMD|          |MAAR2|          |CN|          |CN|
+-----+          +-----+          +-----+          +*--+          +*--+
|              |              |              |              *              *
|              |              |              |              *              *
|              |              |MN              |              *              *
|              |              |attach.         |*****      |_|CMD|_      *
|              |              |det. flow1    |*              /  +-+--+ \      *flow2
|              |<-- PBU ---|              |*              /      |      \      *
|              |BCE              |              |*              /      |*****|
|              |check+          |              |*              /      |*      \
|              |update          |              |+----*--+?    +---+--+    `+-----+
|<-- PBU*----x---- PBA*-->|              |*|              |*|              |
route              |              route      |MAAR1|_____|MAAR2+-----+MAAR3|
update            |              update     |**(_____)**  *|              |
|---- PBA*-->|              |              +-----+          +*--+          +-----+
|              |              |              |*      *
|              |              |              |Pref1 * *Pref2
|              |              |              |*--+*+
|              |              |              |---move-->|*MN*|
|              |              |              +-----+

```