Distributed Logical Interface concept

draft-bernardos-dmm-distributed-anchoring-04

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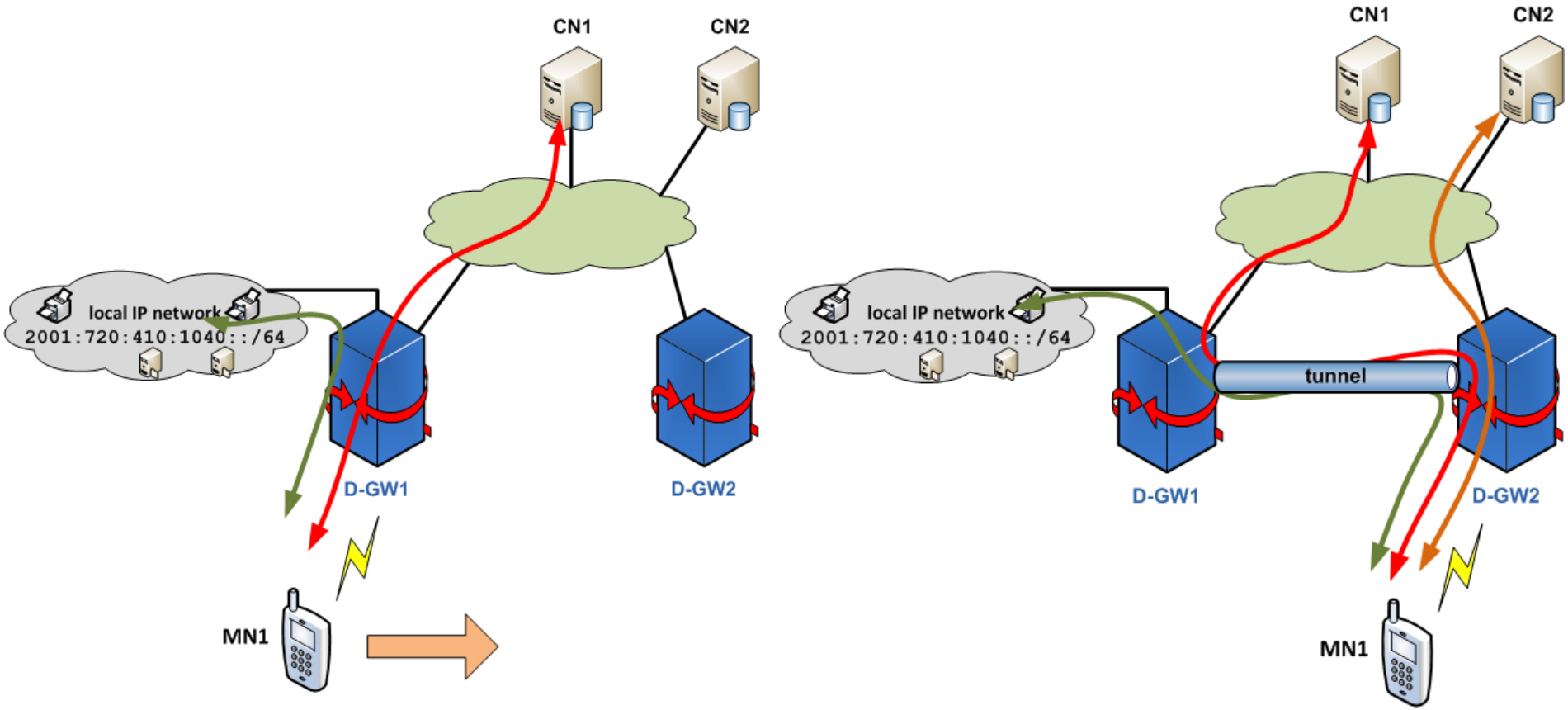
Where are we in the DMM ocean?

- Different ways of categorize our solution
  - IP mobility based solutions
    - Re-uses PMIPv6 signaling
  - Network-based
    - PMIPv6-based solution, no support required on the host
  - Access network anchoring & IP anchor selection (Alper's categorization)
    - Anchoring IP address within the access network using IP-in-IP tunneling

What is common to other approaches

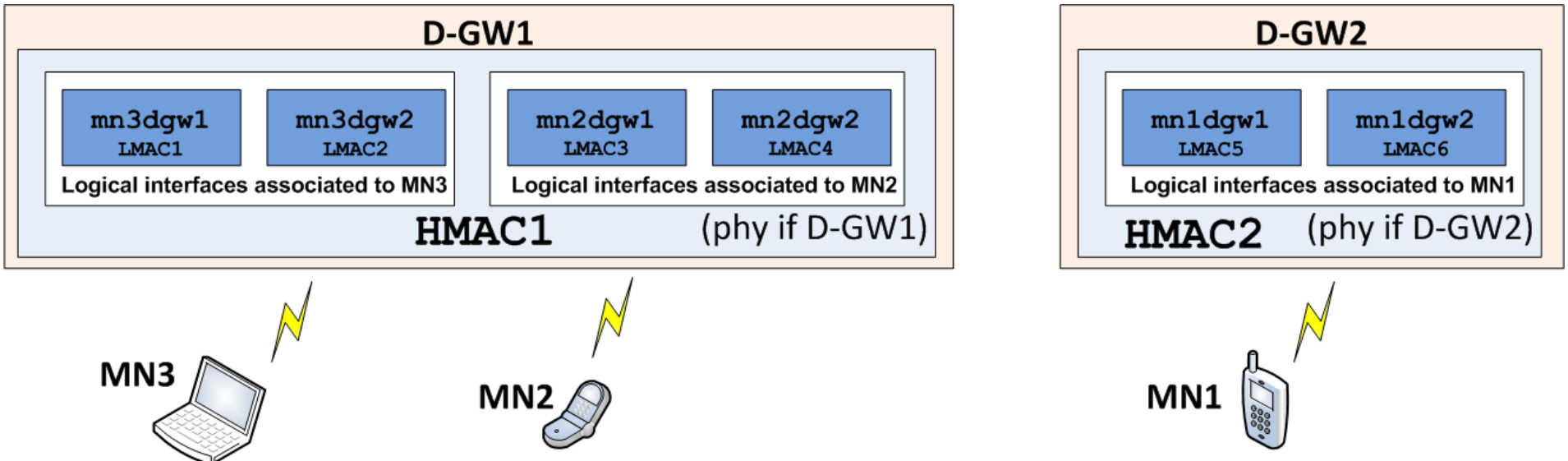
- Routers at the edge (D-GWs) assign locally anchored prefixes to the MNs
- Solution is based on, and compatible with RFC5213
- D-GWs behave as LMA/MAG
  - As LMA for locally anchored prefixes
  - As MAG for attached MNs that have active prefixes anchored elsewhere
- It does not require end-host modifications

The Distributed Logical Interface (DLIF): Motivation

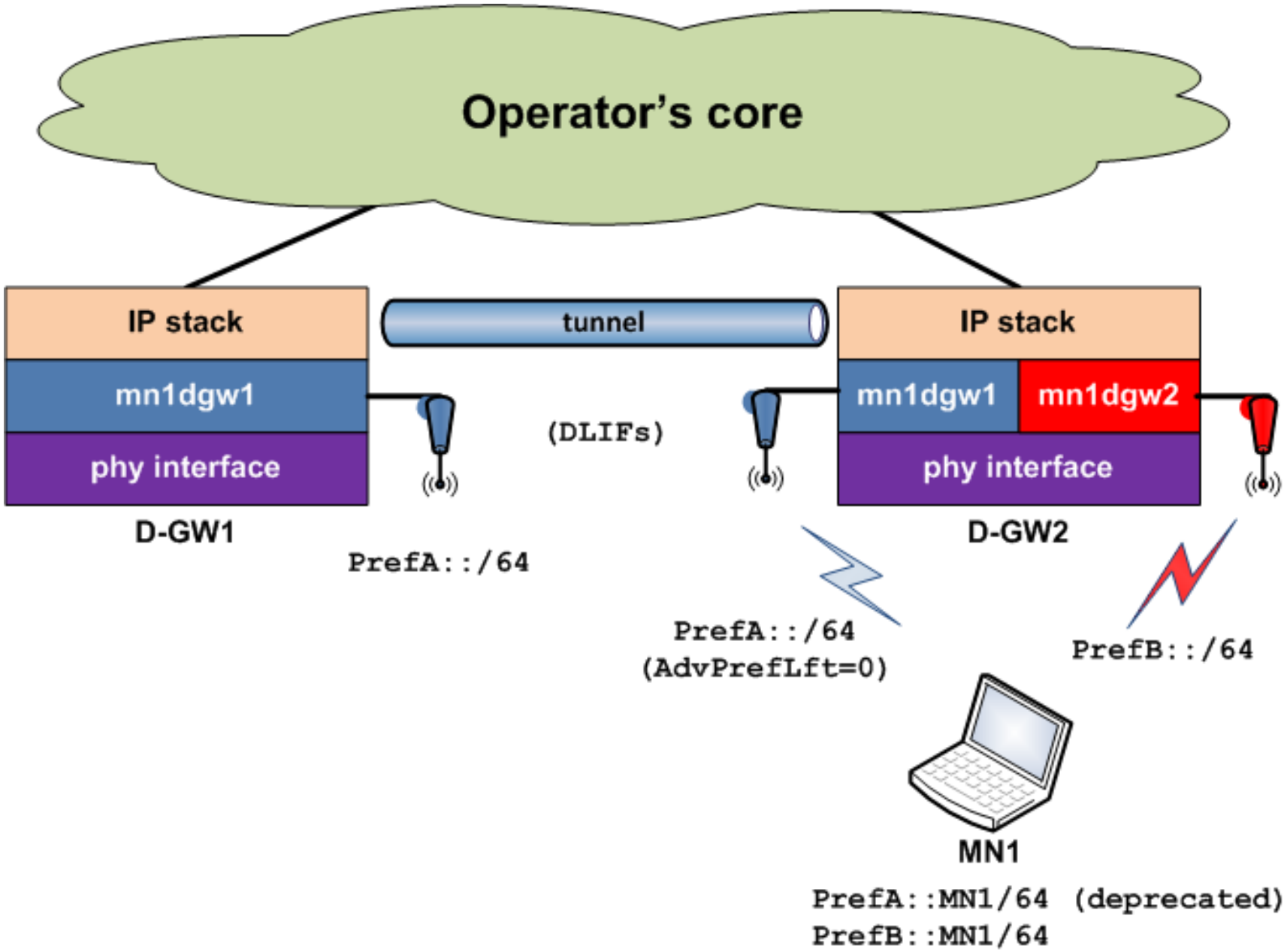


The DLIF concept

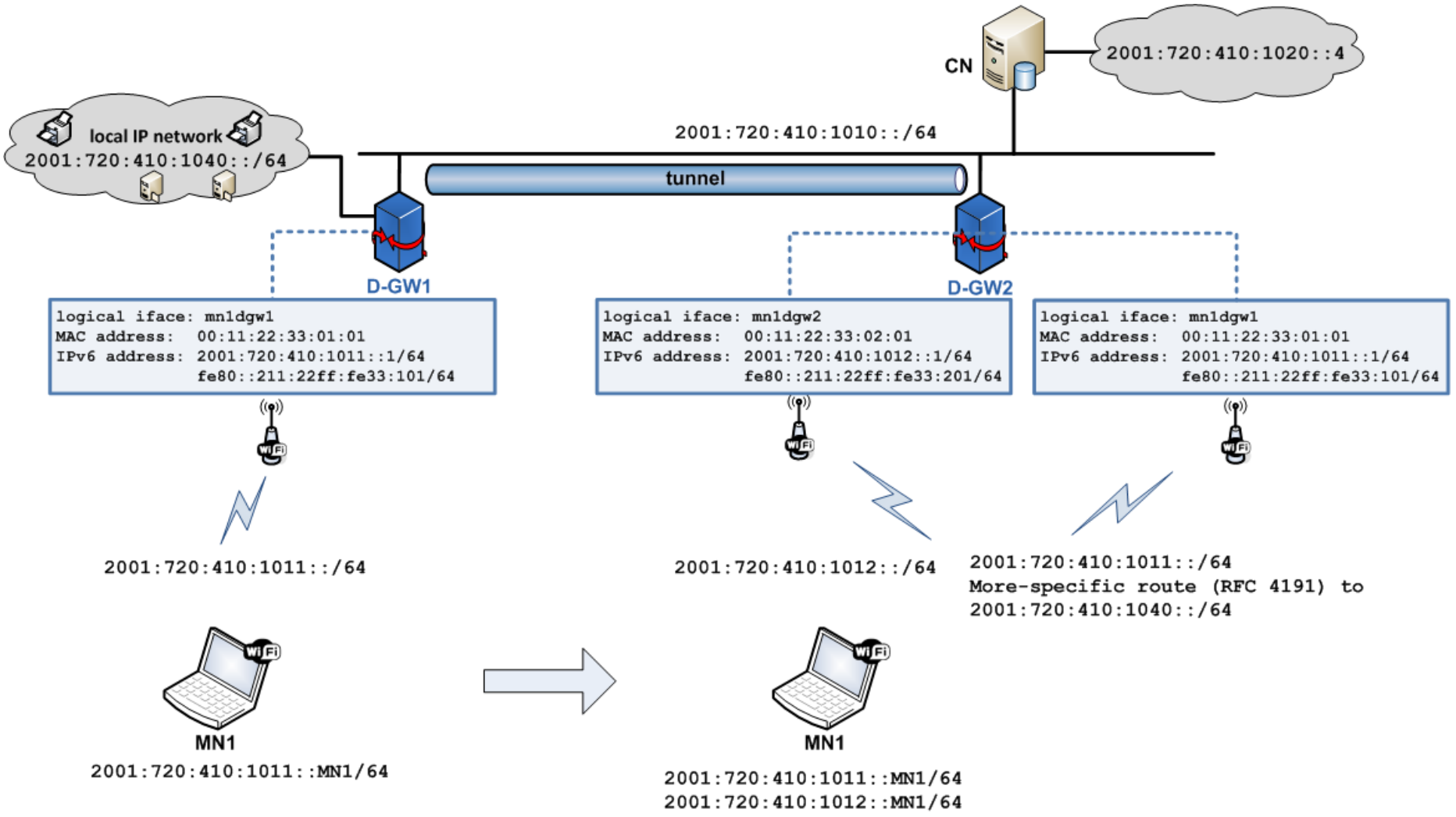
- The DLIF is a software construct allowing to hide the change of anchor to the MN
- Each serving D-GW exposes itself towards a given MN as multiple routers, one per active anchoring D-GW associated to the MN
  - This is achieved is by the serving D-GW configuring different logical interfaces
  - From 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 (I)



Solution overview (II)



Summary

- The I-D details D-GW protocol operations and new message formats
  - Anchored Prefix Option, Local Prefix Option
  - DLIF Link-local and Link-layer Address Options
- DLIF concept addressing new DMM charter
  - Enhanced mobility anchoring
  - Helps meeting DMM requirements, e.g.:
    - REQ2: Bypassable network-layer mobility support for each application session
  - Might help solutions exposing mobility state to MNs

Questions?