MANET Internetworking

IETF 123 MANET Session – June 24, 2025

https://datatracker.ietf.org/doc/draft-templin-6man-omni3

https://datatracker.ietf.org/doc/draft-templin-6man-aero3

https://datatracker.ietf.org/doc/draft-templin-6man-mla

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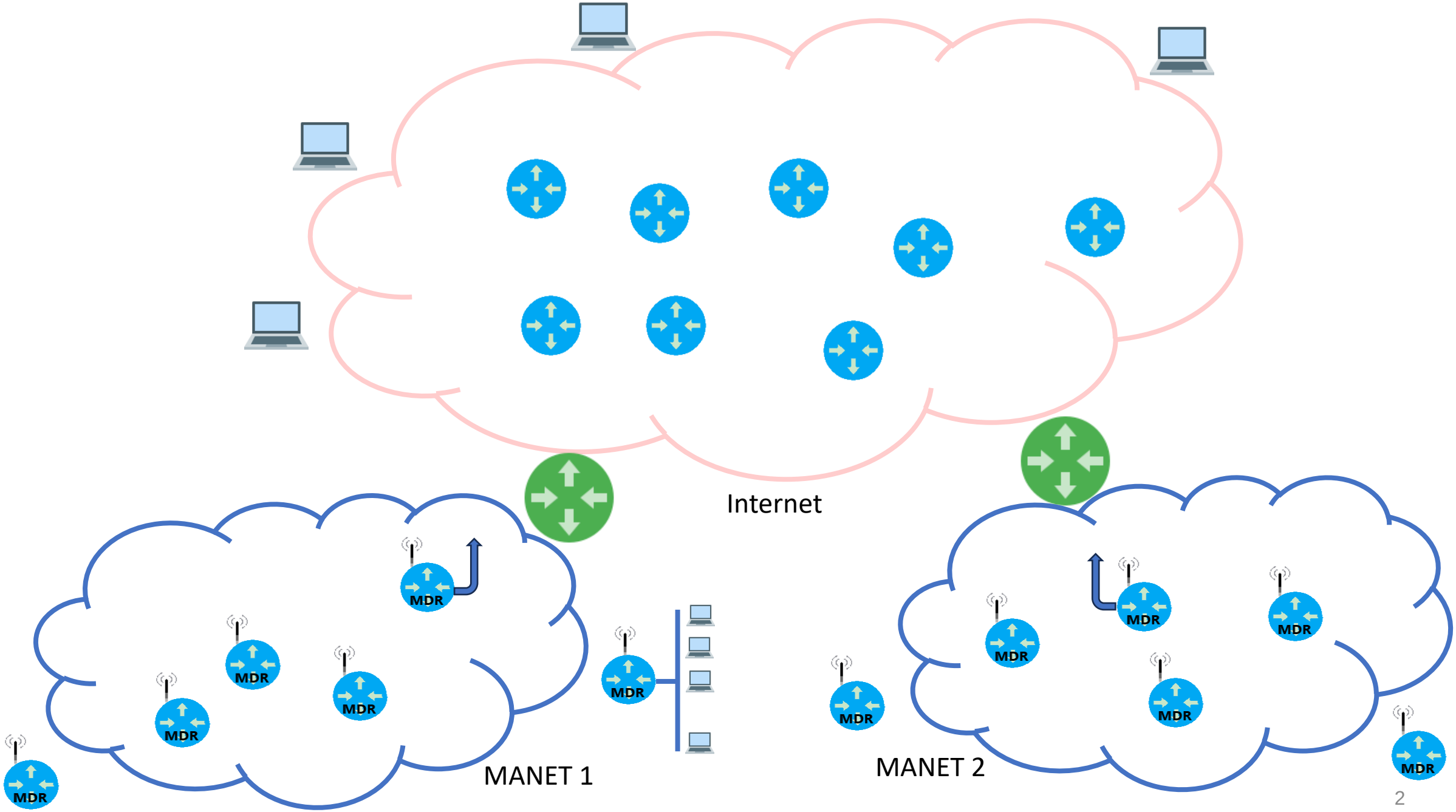
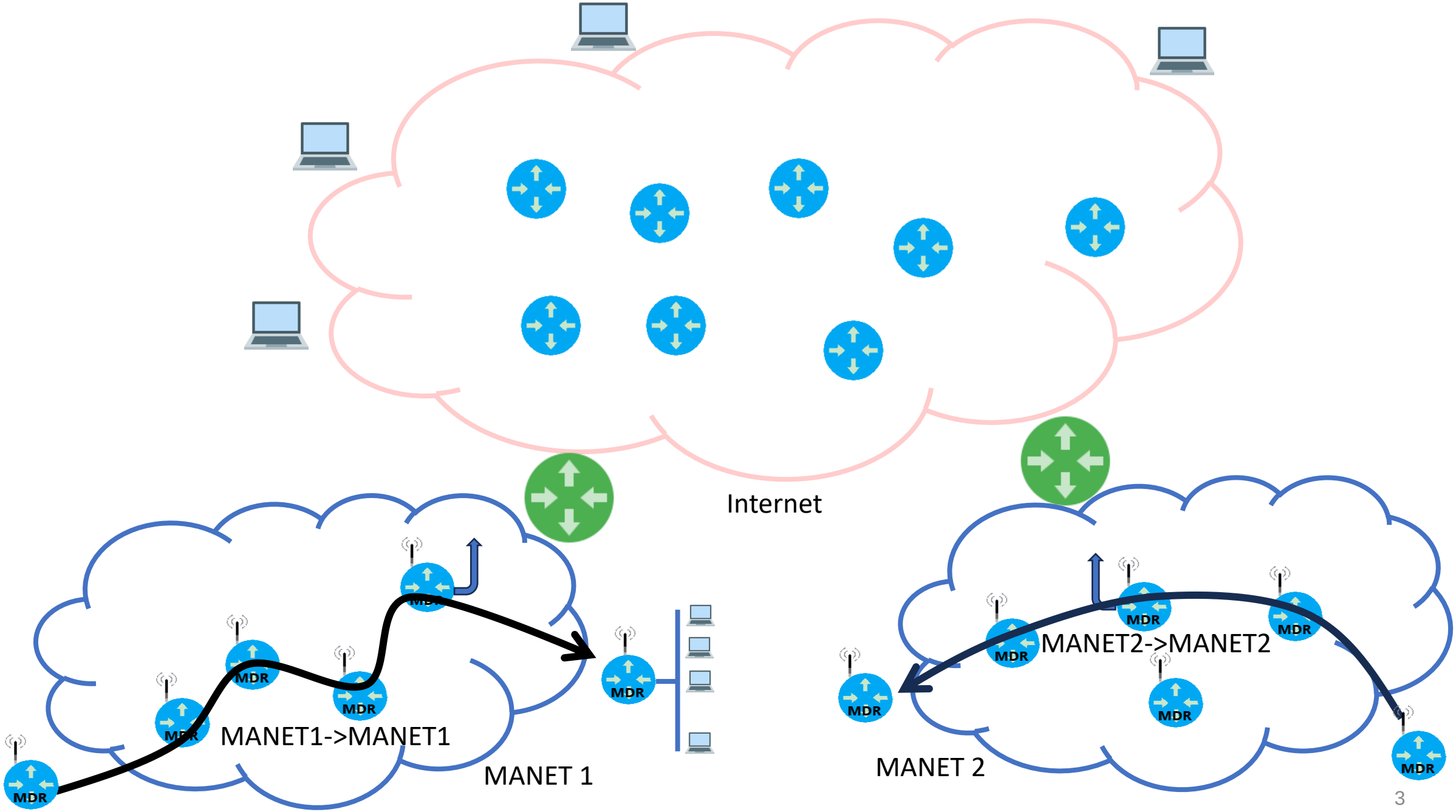
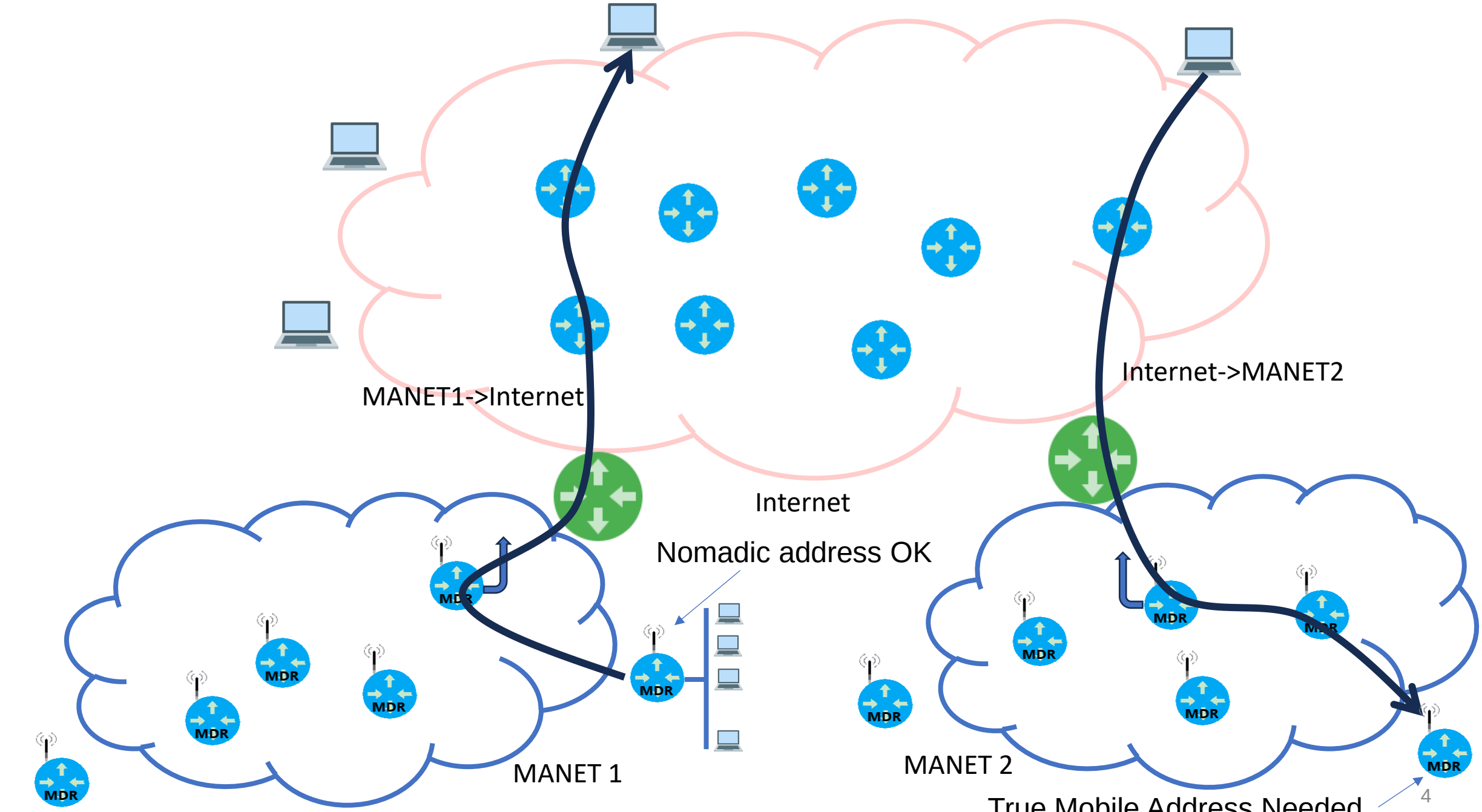
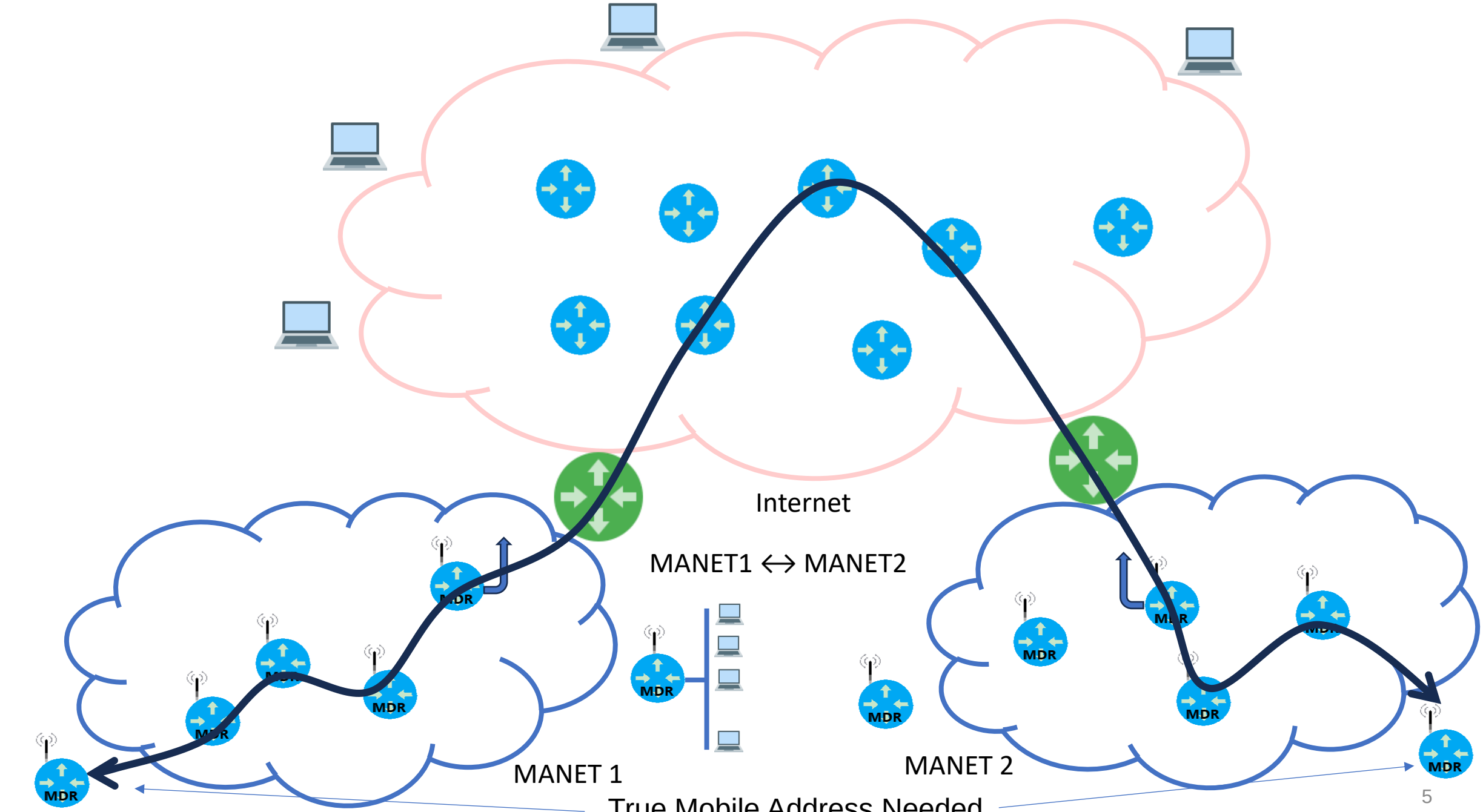
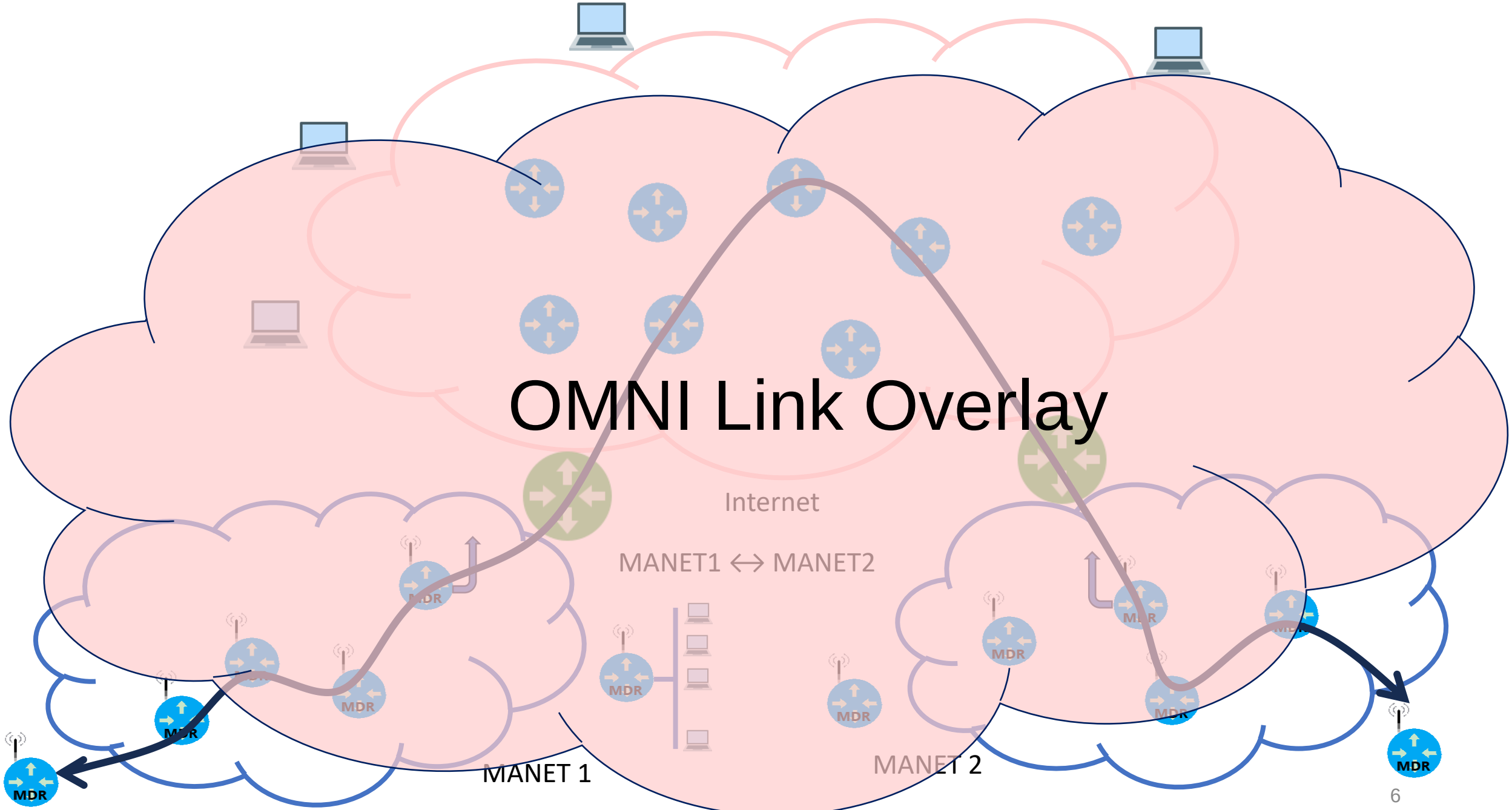

Internet
MDR
MDR
MDR
MDR
MDR
MDR
MDR
MDR
MDR
MDR
MDR
MANET 1
MANET 2


Internet
MDR
MDR
MDR
MDR
MANET1->MANET1
MANET 1
MDR
MDR
MDR
MDR
MANET2->MANET2
MANET 2


MANET1->Internet
Internet->MANET2
Internet
Nomadic address OK
MDR
MANET 1
MANET 2
True Mobile Address Needed


Internet
MANET1 ↔ MANET2
MDR
MANET 1
MANET 2
True Mobile Address Needed

OMNI Link Overlay



MANET List Post 7/17/2025

“Juliusz, thank you for bringing this information forward. I understand the motivation but when we configure an Overlay Multilink Network Interface on each MANET router we can use standard and unmodified IPv6 autoconfiguration protocols (IPv6 ND per RFC4861/2 and DHCPv6 per RFC8415) since all MANET routers are single-hop neighbors on a shared NBMA link. It would work the same way for any MANET routing protocol (including your BABEL system) and take advantage of widely-deployed standard protocols - I use unmodified kea and radvd in the reference implementation I am building.”

MANET List Post 7/18/2025

“Hi Jim, thanks for bringing this discussion forward. As others said, MANET routing within the context of this WG assumes standard IP forwarding rules including the hop by hop decrementing of Hop Limit/TTL. Which means that if you want to treat the MANET as a single unified link you need to configure an overlay which is exactly what AERO/OMNI does. The AERO/OMNI overlay is based on IPv6 encapsulation as an adaptation layer service, Then, in the network layer above, Hop Limit/TTL is not decremented and standard services like DHCPv6 and IPv6 ND work as normal. The overlay approach also supports heterogeneous radio types and multiple interfaces per node in lower layers. But, most importantly, the overlay provides a Global Mobile Internetworking service for all air/land/sea/space mobility use cases.”