

60th IETF, NEMO WG

Home Network Models

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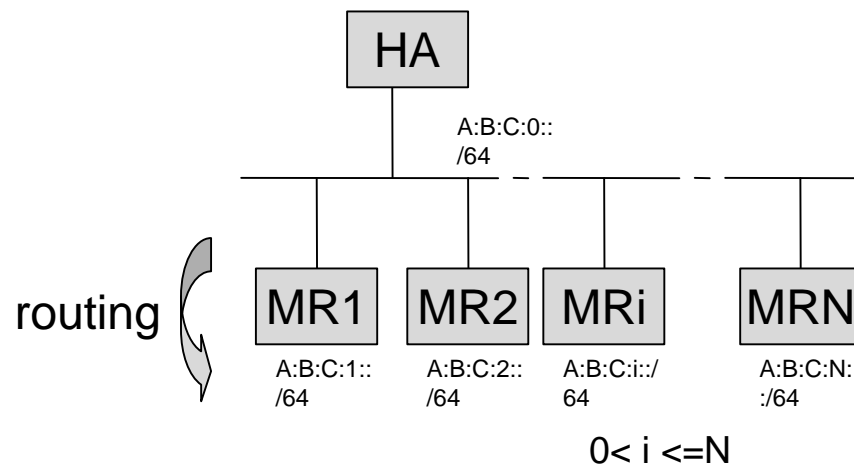
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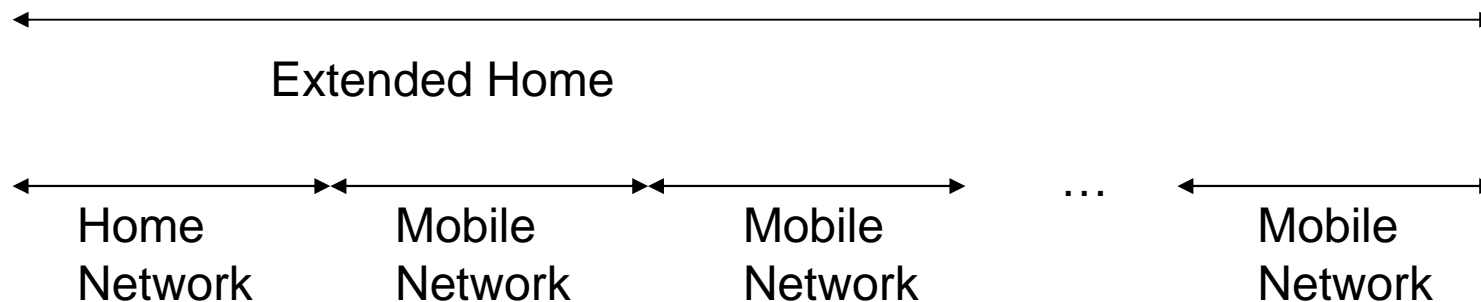
The concept of Home Network

- ✓ The MIPv6 Home is a subnet on a physical link
 - ✓ tied to a LINK due to Proxy ND stuff
- ✓ NEMO: Home Network becomes an aggregation:
 - The Home Network IS NOT NECESSARILY contained on a Home Link (eg extended Home Network)
- ✓ NEMO: Home Link can be virtual:
 - Virtual Home Network
 - When MR does not need to return Home

Extended Home Network

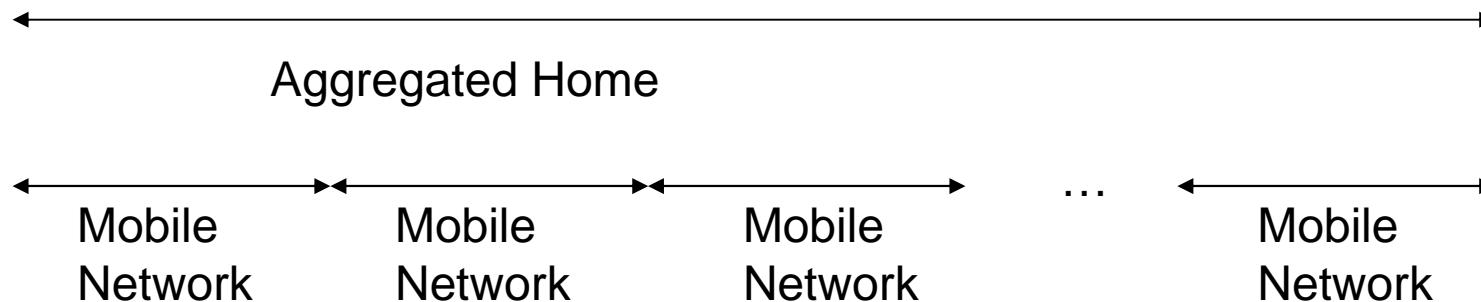
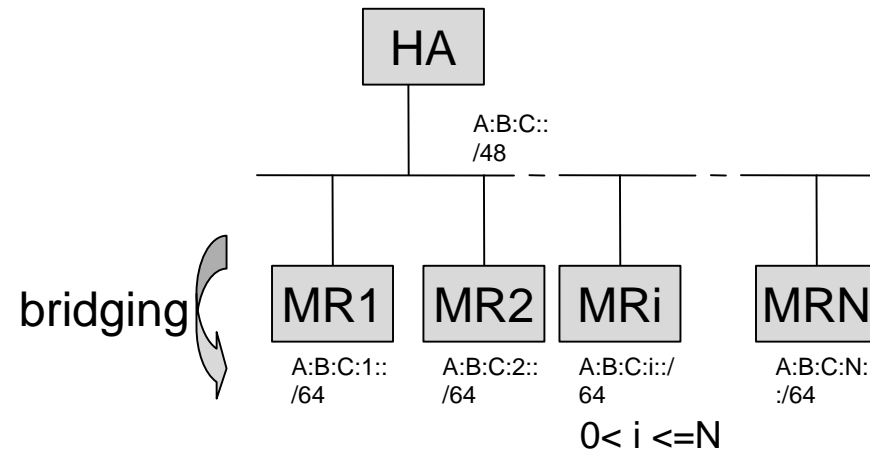


- In this disposition, the Home Network is one subnet, contiguous to the Mobile Networks.
- Their aggregation is called extended Home Network.
- When a Mobile Router is at Home:
 - ✓ the HA is configured with static routes to Mobile Network prefixes or the MRs participate to the local IGP when at Home
 - ✓ The Mobile Router performs normal routing between the Home Link and the Mobile Networks



Aggregated Home Network

- In this disposition, the Home Network actually overlaps with the Mobile Networks.
- When a Mobile Router is at Home:
 - ✓ HA expects its MNNs to be on link.
 - ✓ The MR acts as a bridge between the Home Link and the Mobile Networks.



Virtual Home Network

✓ Examples:

- Home Link on a virtual link
- Home Link on an automatic tunnel
(tunnel end point resolved dynamically using BCE)

✓ Works for all the previous models:

- Extended, Aggregated (even locally)

✓ Pros:

- Higher availability of Home Link
- Saves ND related activity (HA discovery, DAD, proxy ND)

✓ Cons:

- No HA redundancy for the prefix on the Home Link
- No returning Home

Mobile Home Network

- ✓ A bitwise hierarchy of Home Networks
 - MRs are recursively Home Agent(s) for their NEMO-prefixs
- ✓ A head HA advertises the global Home to the infrastructure
 - Head HA gets packets from the infrastructure
 - tunnels them to the MR that is responsible of the next level of hierarchy
- ✓ Home is further subnetted in NEMO-prefixs that are Home Networks as well
 - MRs decapsulate the packets as MR and reencapsulate them as HA
 - MRs are recursively Home Agent(s) for their NEMO-prefixs

Mailing List issues

✓ Scope (aimed at Informational):

- Does not cover how to fix Virtual Network Cons
- Limited to HA configurations.

✓ Title

- Changed to reflect draft content
- Ready to last call

✓ Little activity on the subject