

Enabling IPv4 access over IPv6 mobility

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Purpose of this presentation

- To fill missing pieces of draft-ietf-mip6-nemo-v4traversal-00.txt
- v4traversal draft describes a mechanism to carry IPv4 address/prefix information to enable IPv4 access behind a IPv6 mobile router as a part of its specification
- draft-shima-nemo-v4prefix discusses the same mechanism, a little more in detail, which can be supplemental to the draft

Missing descriptions

- v4traversal draft needs some more text on operation of the IPv4 support mechanism
 - IPv4 MNP operation
 - Multiple IPv4 address/MNPs registration
 - Proxy ARP operation
 - Home agent discovery operation

IPv4 MNP operation

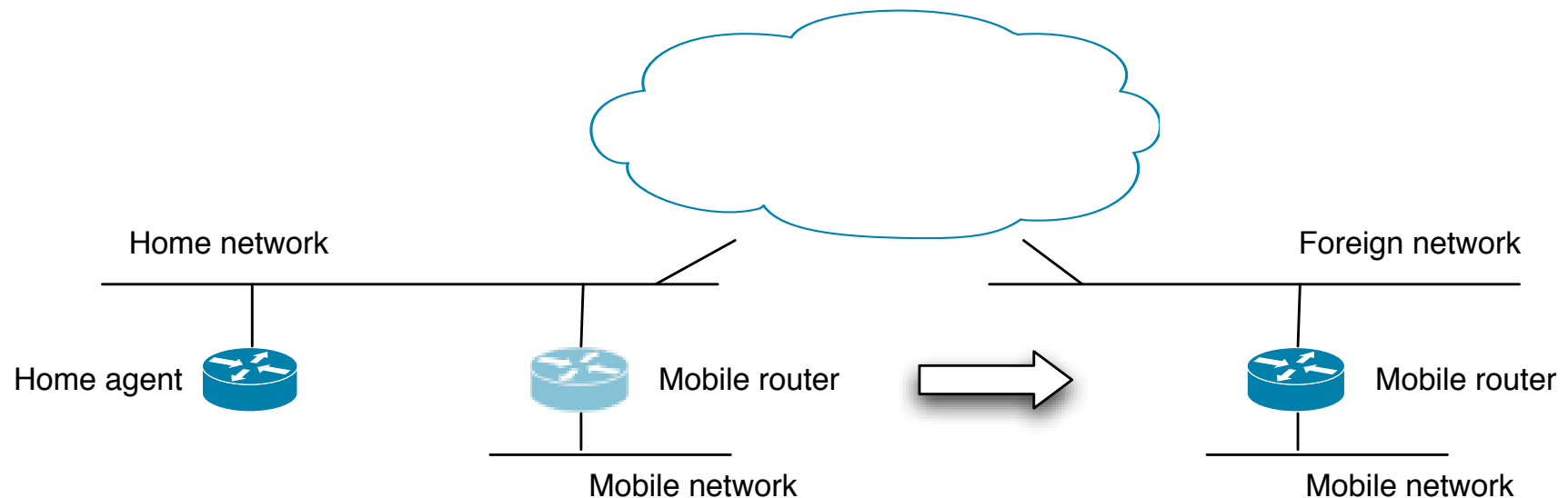
- The draft should mention which IPv4 MNP is passed to a home agent.
 - A mobile router includes IPv4 home address option(s), if it has IPv4 network(s) on its ingress interface
- The draft should mention the limitation when IPv4 packets are forwarded
 - A mobile router will forward IPv4 packets came from its ingress interface to its home agent
 - A home agent will forward IPv4 packets, which prefix is one of registered IPv4 prefixes of a mobile router it is serving, to the mobile router

Multiple IPv4 address/MNP registration

- The text should be clearer about the operation when a mobile router registered both an IPv4 home address and an IPv4 MNP
- A mobile router may have an IPv4 home address which does not belong to the IPv4 address block on its ingress interface
- A mobile router may have multiple MNPs

Multiple IPv4 address/MNPs registration

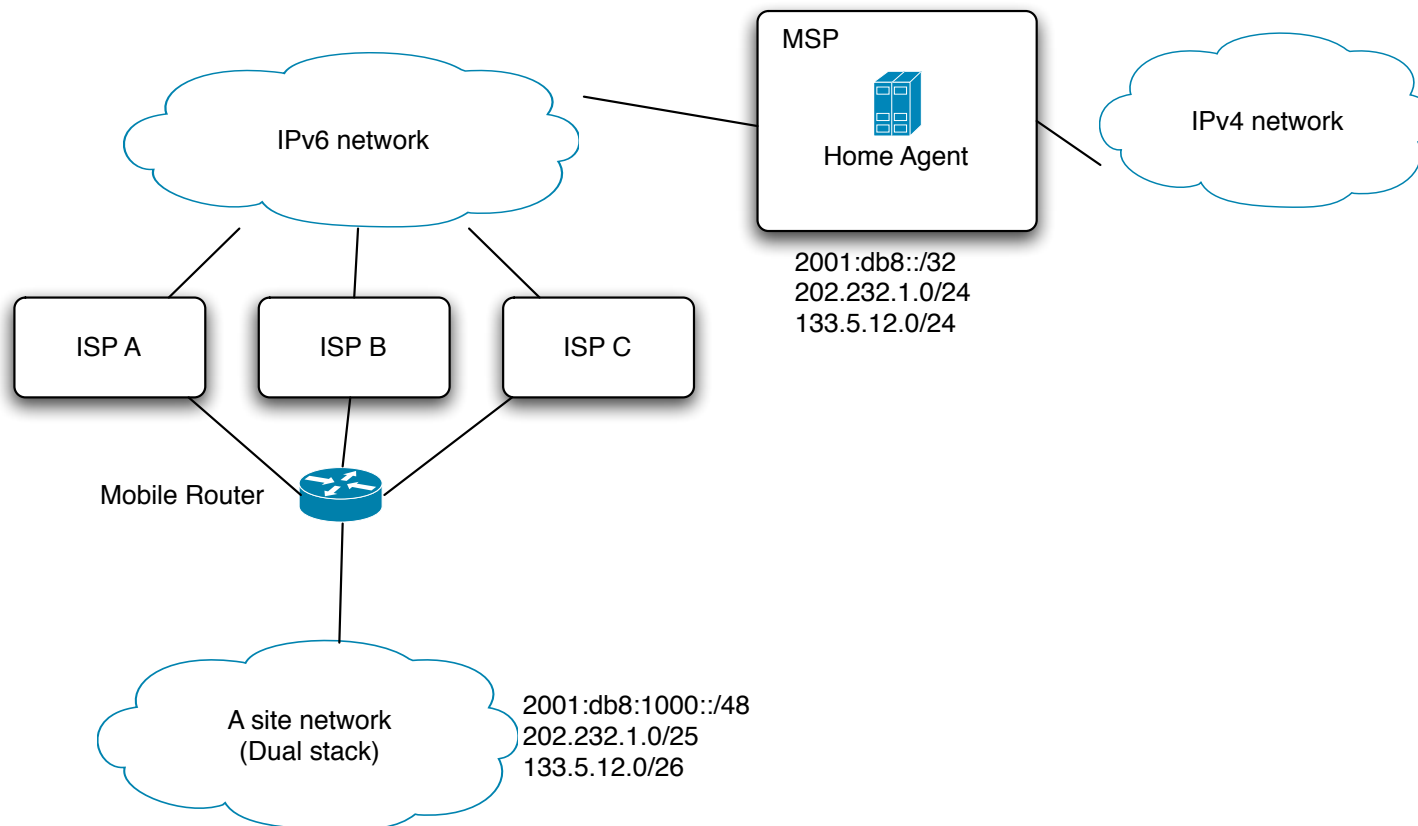
A mobile router may have an IPv4 home address which is not a part of its MNP



- MR need to register both IPv4 home addr and MNP

Multiple IPv4 address/MNPs registration

A mobile router may have multiple IPv4 MNPs



Proxy operation

- The draft should mention proxy operation for IPv4 home address
- An IPv4 home address of a mobile host/router may share its IPv6 home network
- A home agent need to intercept IPv4 packets using proxy ARP mechanism and forward to a mobile host/router

Home agent discovery operation

- The draft need to specify a method for a mobile node to know which home agent supports this extension
- A mobile node can know if a home agent supports this extension by checking received binding ack has IPv4 address ack option or not

Next step

- It should be helpful if the presented missing discussions/procedures are included in the v4traversal draft
- Rewrite the relevant texts, discribed in draft-shima-nemo-v4prefix, to fit to v4traversal draft and merge