

Enhanced Mobility Anchors

Teleconference on Nov 26 2014 at 7am Central time
Teleconference on Jan 30 2015 at 7am Central time

Presentations

- ◆ Enhanced Anchor for Moving Networks by Alex Petrescu
- ◆ AAA Architecture for DMM by Jong-Hyouk Lee
- ◆ Moving IP address by H Anthony Chan
- ◆ Seil Jeon to be arranged

Enhanced mobility anchoring work item in dmm chapter

- ◆ Enhanced mobility anchoring: define protocol solutions for a gateway and mobility anchor assignment and mid-session mobility anchor switching that go beyond what has been specified, for example, in RFC 6097, 6463, and 5142. Traffic steering associated with the anchor switch is also in-scope if deemed appropriate.

Anchoring Function (AF) in RFC7429

- ◆ allocation to a mobile node of an IP address, i.e., Home Address (HoA), or prefix, i.e., Home Network Prefix (HNP) topologically anchored by the advertising node. That is, the anchor node is able to advertise a connected route into the routing infrastructure for the allocated IP prefixes. This function is a control plane function.

Other functions of anchor in different proposals (not for all solutions)

- ◆ Each function does not necessarily present in all the solutions:
- ◆ (1) packets to/from the MN traverse through.
- ◆ (2) indirection, e.g., tunneling
- ◆ (3) information, e.g., binding HoA and CoA
- ◆ (4) sends route update, e.g., using BGP

Anchor Selection and Switching

- ◆ When an IP prefix or address is topologically anchored to a node (data plane node), the anchor function will advertise connected route for it. Then an IP packet with this IP address as its destination address will be forwarded along a path that traverses through this IP anchoring node.
- ◆ When a session or flow is anchored to a node (data plane node), the packets of the flow will traverse at least one such session anchoring node..

IP anchoring in network of attachment

Net1

anchor session IP1

session IP1 → addr AR2

anchor addr IP1

Net2

anchor session IP1

session IP1 → MN

anchor addr IP2

MN(IP2): session IP2

IP anchoring not in network of attachment

Net1

anchor session IP1

session IP1 → addr AR2

anchor addr IP1

Net2

anchor session IP1

session IP1 → MN

anchor addr IP2

MN(IP2): session IP1

Keeping IP anchoring in mid-session

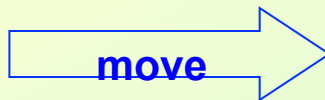
Net1

anchor session IP1

session IP1 → addr AR2

anchor addr IP1

MN(IP1): session IP1



Net2

anchor session IP1

session IP1 → MN

anchor addr IP2



MN(IP1,2): session IP1

Changing IP anchoring in mid-session (with IP addr change)

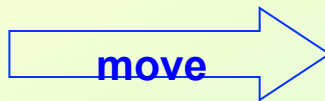
Net1

anchor session IP1

session IP1 → addr AR2

anchor addr IP1

MN(IP1): session IP1



Net2

anchor session IP1

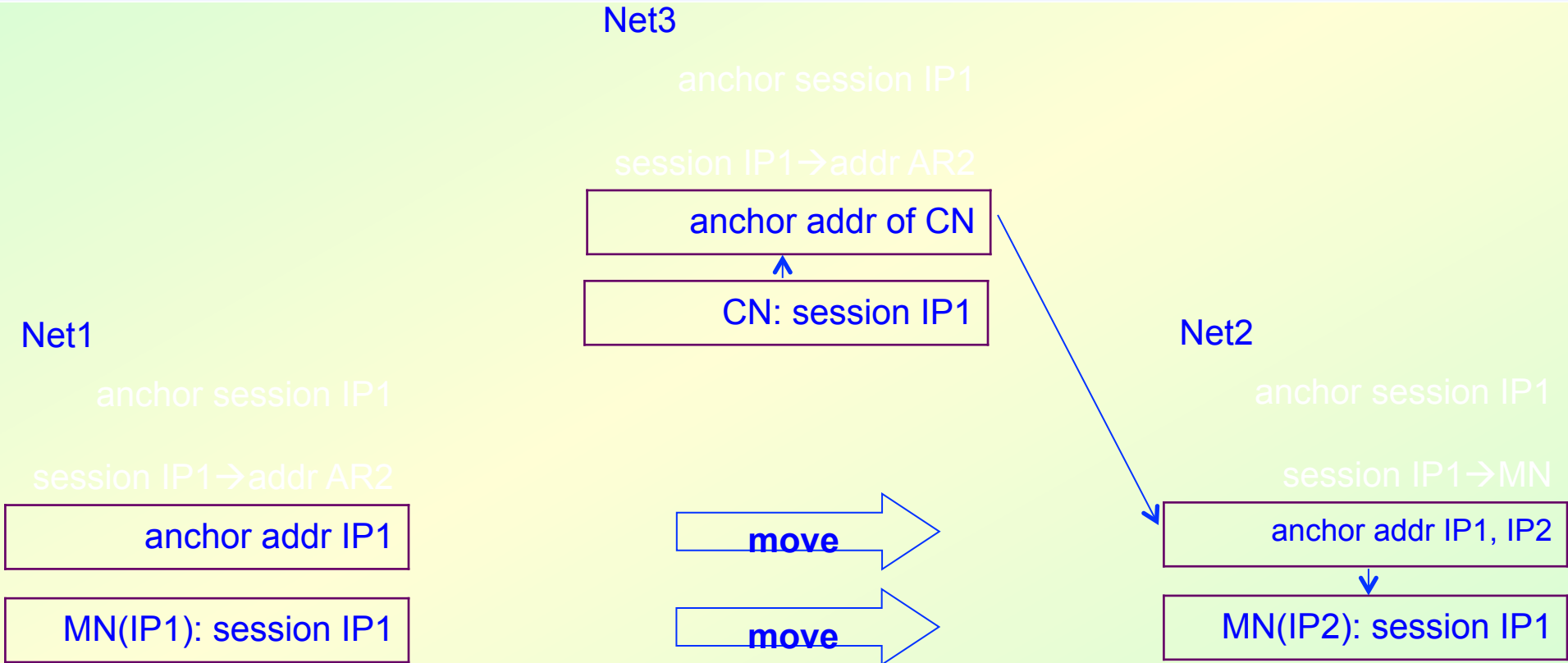
session IP1 → MN

anchor addr IP2

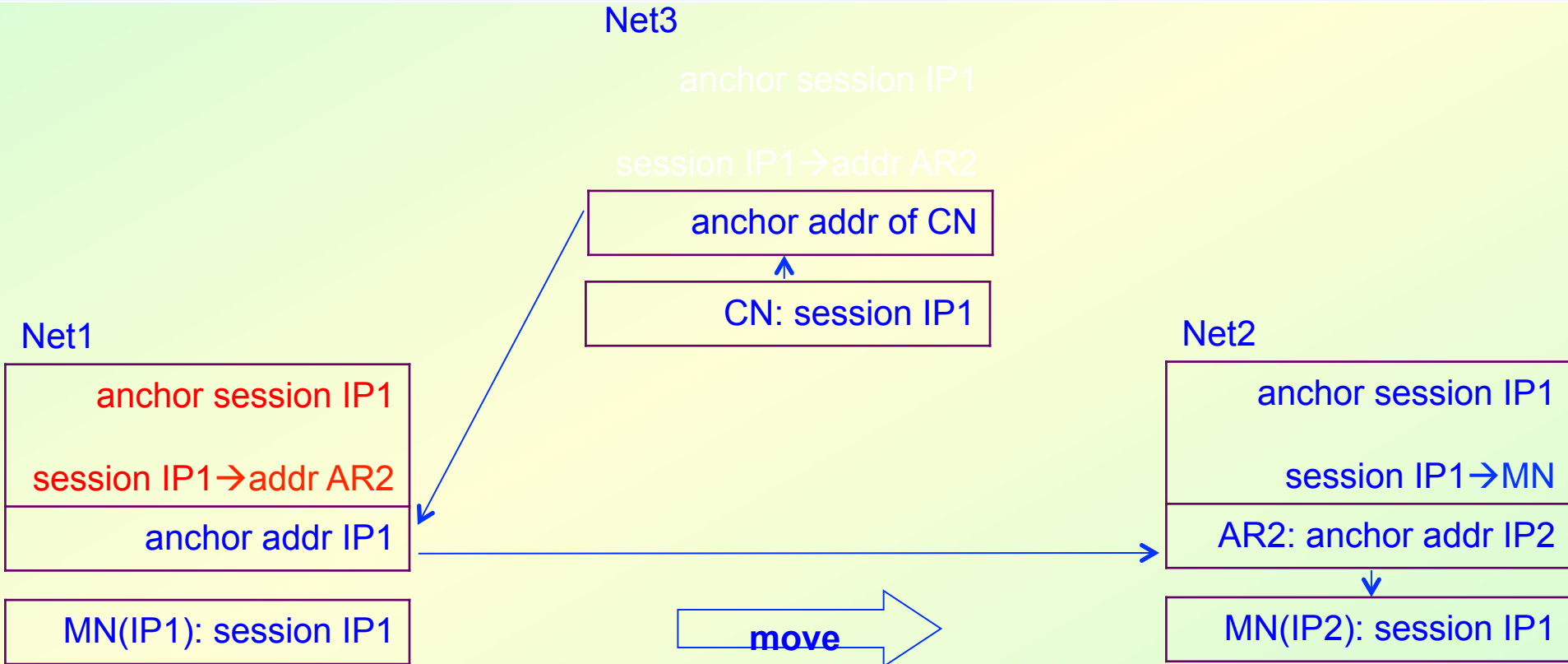


MN(IP2): session IP2

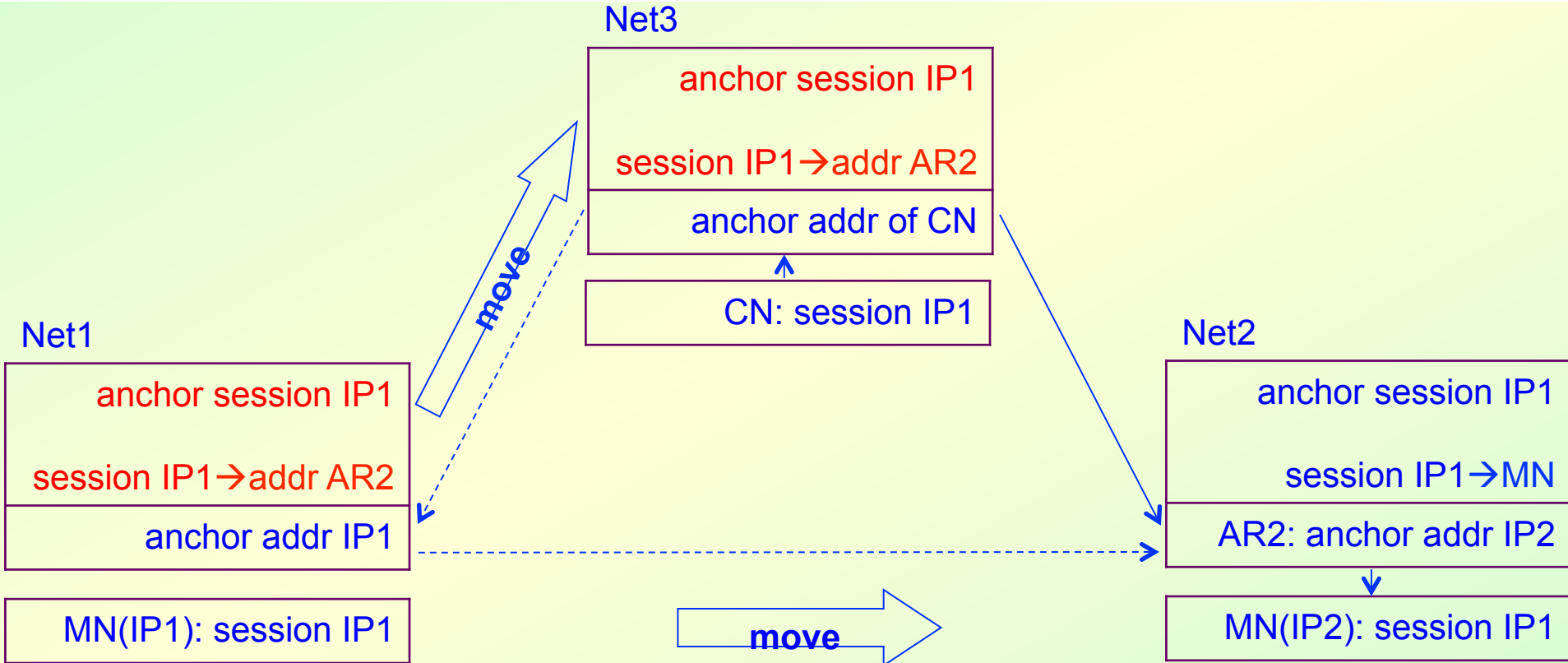
Moving IP anchoring in mid-session (without IP addr change)



Anchoring a session



Moving session anchoring in mid-session



Comments and suggestions are
welcome

Thank you