

Buffer Management for MIP

(draft-mkhalil-mobileip-buffer-00.txt)

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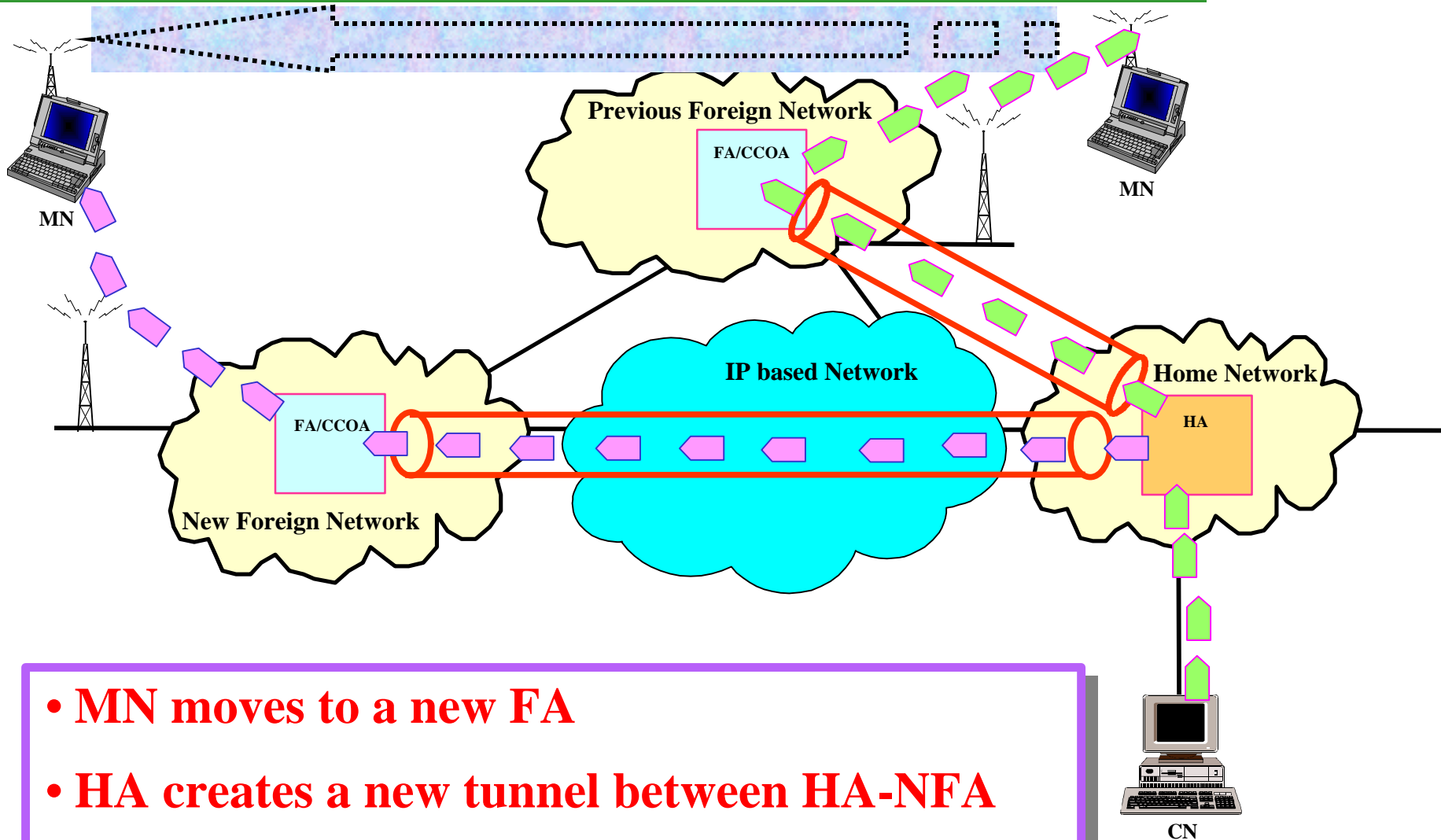
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Problem - Packet Loss During Handoff

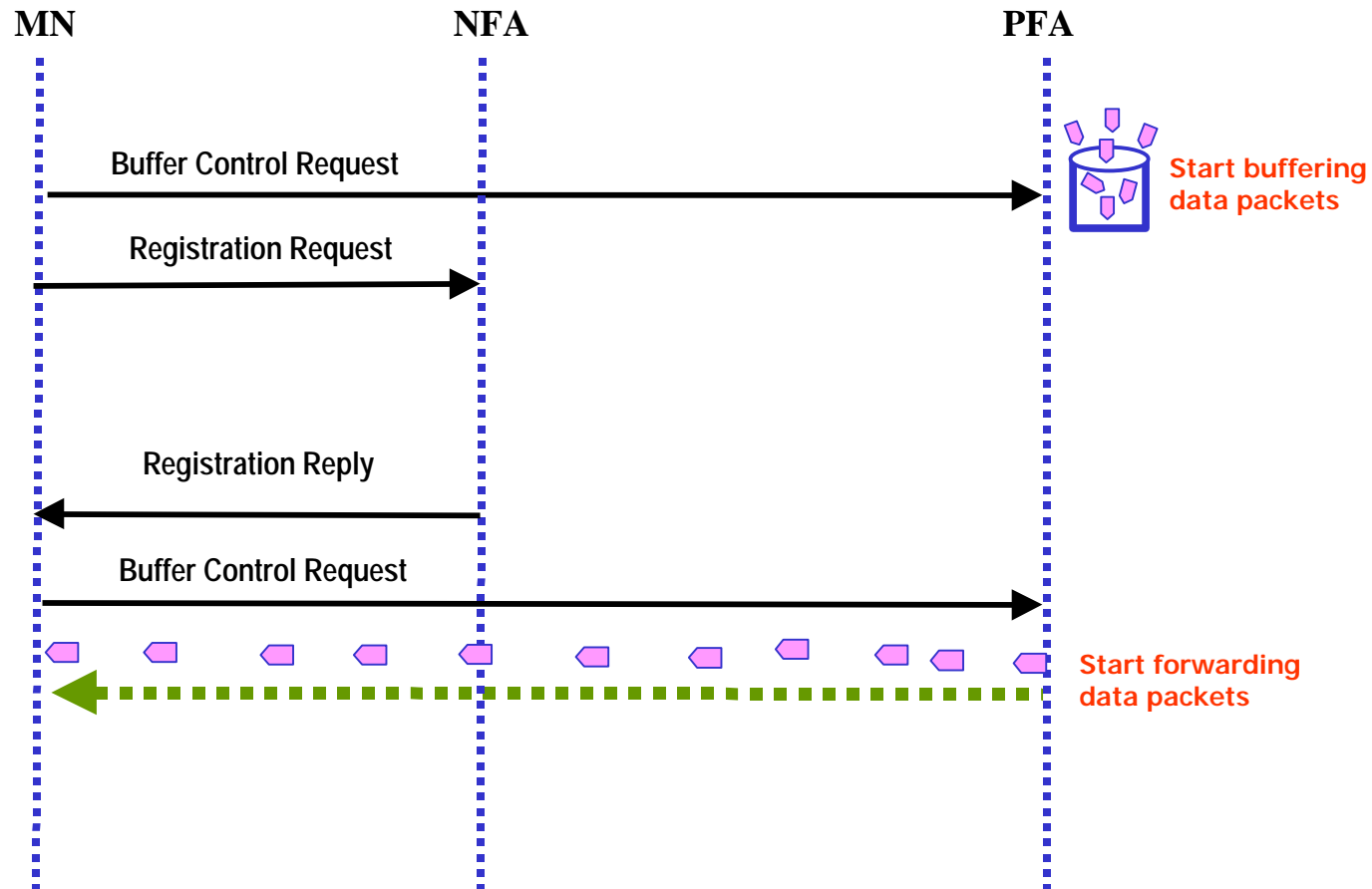


- MN moves to a new FA
- HA creates a new tunnel between HA-NFA
- Packets in transit to the previous FA are lost

Solution: Buffer and Forward Data

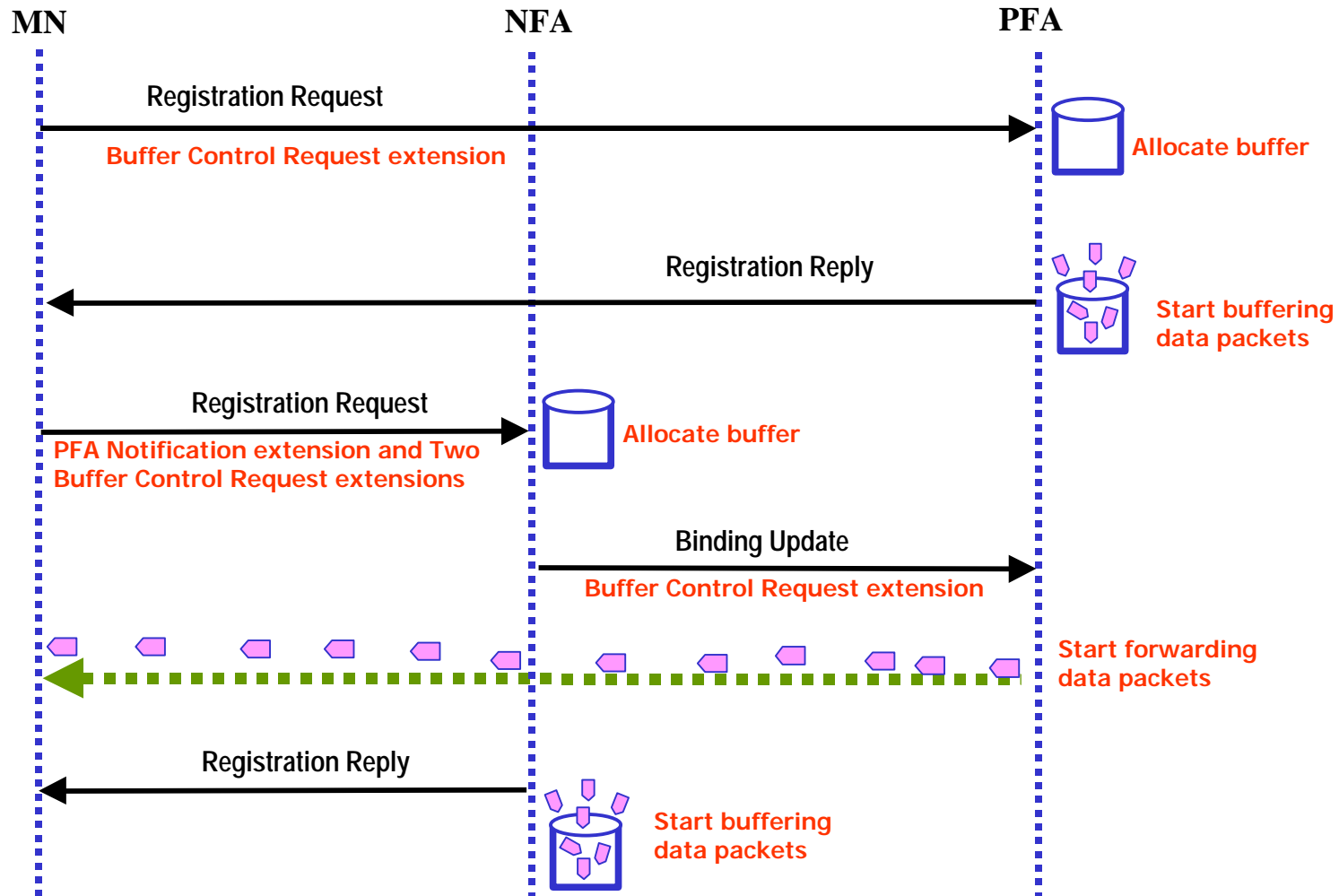
- Minimizes window of data loss
 - » Previous FA buffers the packets and forwards to the MN
- Fewer retransmission for the upper layer protocols
 - » Fewer, if any, packets lost

Mobile Assisted Handoff



- MN requests the PFA to buffer its data during handoff
- Data packets are forwarded to the MN as soon as the NFA is authenticated

PFAN Extension Handoff



- Buffer is allocated during Registration Request
- Zero (or near zero) packet loss

New Messages

- Buffer Control Request
 - » Mandatory for MN and FA
 - » Can be sent as independent message or as an extension to Registration Request and Binding Update messages
- Buffer Control Response
 - » Optional for MN and FA

Only one new mandatory message is introduced

Buffer Mechanisms

- Packet Filtering
 - » Packets can be filtered based on IP address and IP ID field
- Buffer Specifications
 - » Lease time, size, length etc. can be requested by the MN

More options for user