Behavior specified in current draft

If packet received from new address:
  send subsequent packets to new address
  ("latch" on peer address change)
  limit data sent to new address until validation
  use PING-PONG frames to validate new address

Assumes only one address available at any time
Using multiple addresses

In practice, multiple addresses available:
  eg, cell and wifi
may have preferred network (in this case, wifi)

Migration happens with multiple addresses:
  when mobile device connects to wifi
    want to migrate existing connections from cell to wifi
    but only if can reach peer via wifi
  wifi quality degrades ("parking lot problem")
    want to migrate existing connections from wifi to cell
    but migrate back if wifi becomes better
Using multiple addresses

Migration needs ability to probe alternate network
alternate network is the one with no data
peer should not latch on receiving probe

Principle 1: Probing and Latching are separable events.
Using multiple addresses

Endpoint should control use of its addresses by peer
mobile client should control server sending to wifi or cell

However, peer may know about performance to addresses
happens when peer is sender
sender measures bandwidth
(either end can measure RTT with PING frames)

Principle 2: Interface use is a local policy decision.
When possible, support peer's ability to choose.
Strawman: Migrating with multiple addresses

When mobile client connects to wifi sends probe packet over wifi, continues data over cell server sends ack of probe to source address of probe when ack received, client sends all data over wifi server receives packet over wifi, latches to wifi

Wifi quality degrades ("parking lot problem") client moves all data to cell sends probe packet over wifi, continues data over cell server sends ack of probe to source address of probe when ack received, client sends all data over wifi server receives packet over wifi, latches to wifi
Strawman: Migrating with multiple addresses

Peers must continue accepting packets from/to old address but not cause latching back. Packet number of latching packet must be greater than last latching packet.

Need to define a probe packet so peer can distinguish between probe and other packets. Probe consumes packet number... ... but a probe loss must not affect data transmission.
Strawman: Migrating with multiple addresses

What happens if no response to probe packet?
  resend probe after timeout (maintain separate timer)
  mark path as dead after $\text{MAX\_PROBES}$

Does this direction seem reasonable?
  Do the principles seem reasonable?
  Does the strawman proposal seem reasonable?