IPv6 Neighbor Discovery Routing Proxy

draft-levy-abegnoli-6man-stateless-nd-proxy

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ND Not on Link Prefix: what if the host insists on looking up?

• Say the router announces a prefix with L bit cleared
• In theory the host should pass packets to router even if destination in same /64
  Unless it has another reason to believe the prefix is on link
• But if the host does not comply:
  Security issues: via the router maybe it is desired, e.g., screening
  Reachability issues if L2 isolation is enforced

=> Router needs to attract traffic
Proxy operation

- Hosts may be isolated at L2, routers can do normal ND
  - Routers answer self to all NUDs and NS lookups from hosts

NA response flags:
- S flag should be on (response to a solicitation)
- O flag should be on (to update sender's cache, in case the MAC has changed)
- R flag should be on if and only if the target is the router address, off otherwise.

- DAD-proxy, e.g., as specified in [RFC6957]

- Routers normally create an NDE upon data traffic
So:

• Note this is not RFC 4389 (which is a “translator” 1 in 1 out)
• More like the old ARP (proxy RFC 1027)
  • Which is not the Wi-Fi expectation though
    • Which is more like RFC 8929
• Whao, are we clear about what ND proxy means?
• Do we want to standardize the stateless routing proxy operation?