# IP over DSL, Cable, and Private VLANs

draft-nordmark-intarea-ippl-03

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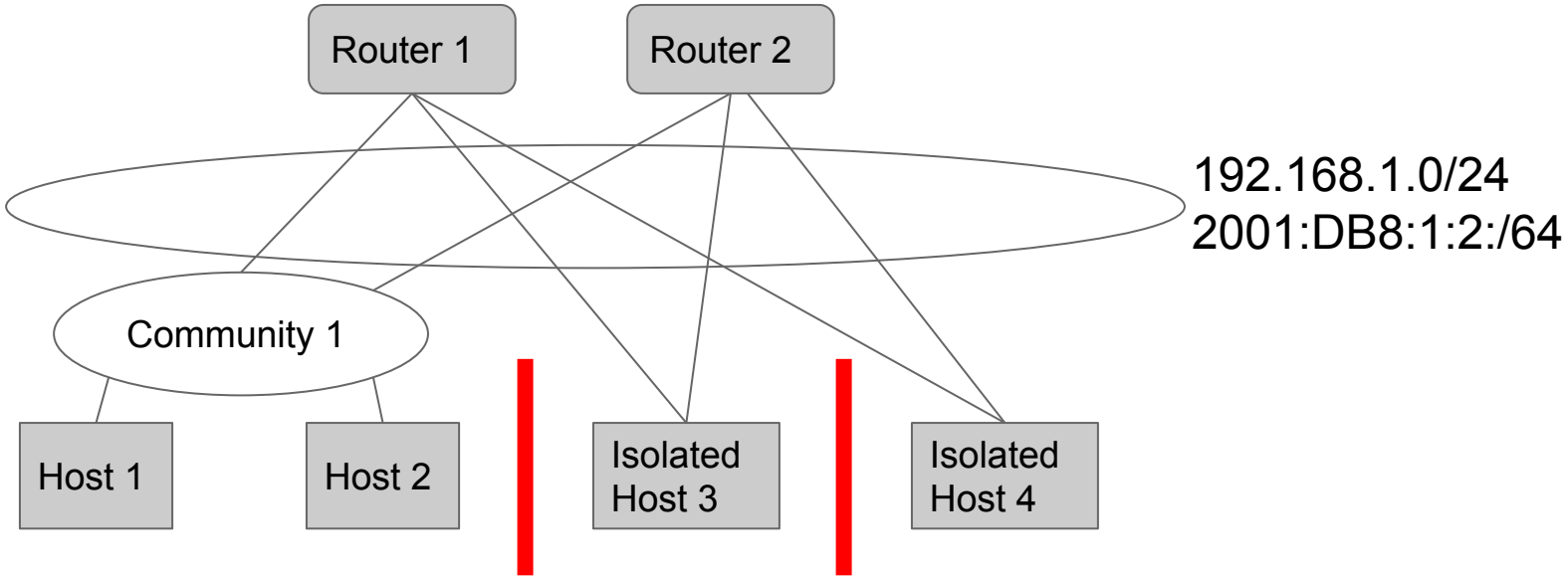
# Issues raised since last IETF

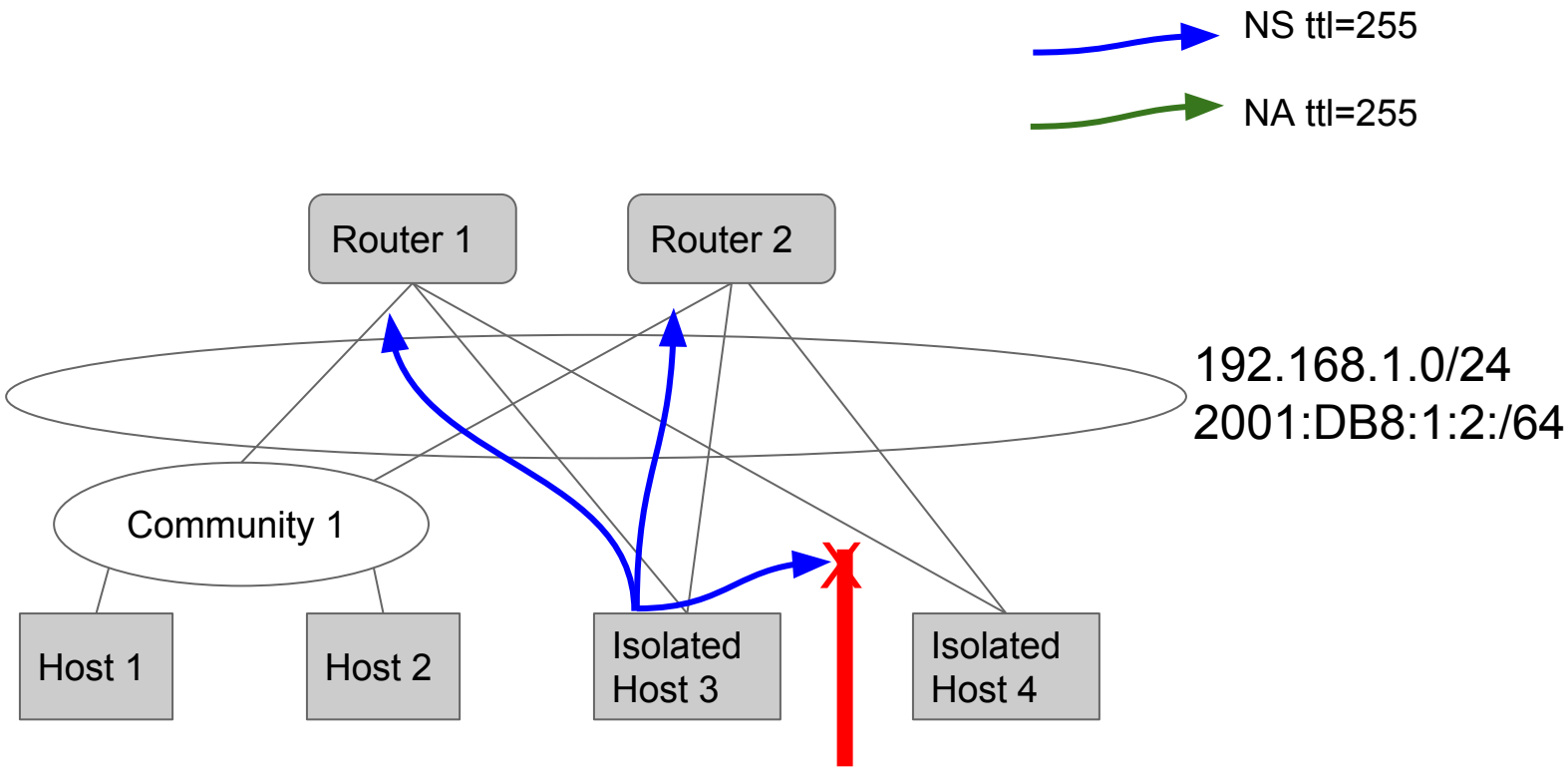
- Reference to Proxy ND [RFC4389]?
  - RFC4389 not needed with L=0
  - Added some text pointing out that RFC4389 does not work with the topologies in IPPL, in particular multiple routers on promiscuous ports
- MAC learning timers and ARP/ND timers?
  - Not clear how to fit in the document. Suggestions?
- DHCP and redirect needs clarification
  - Need configuration. To be applied in -04

# Backup

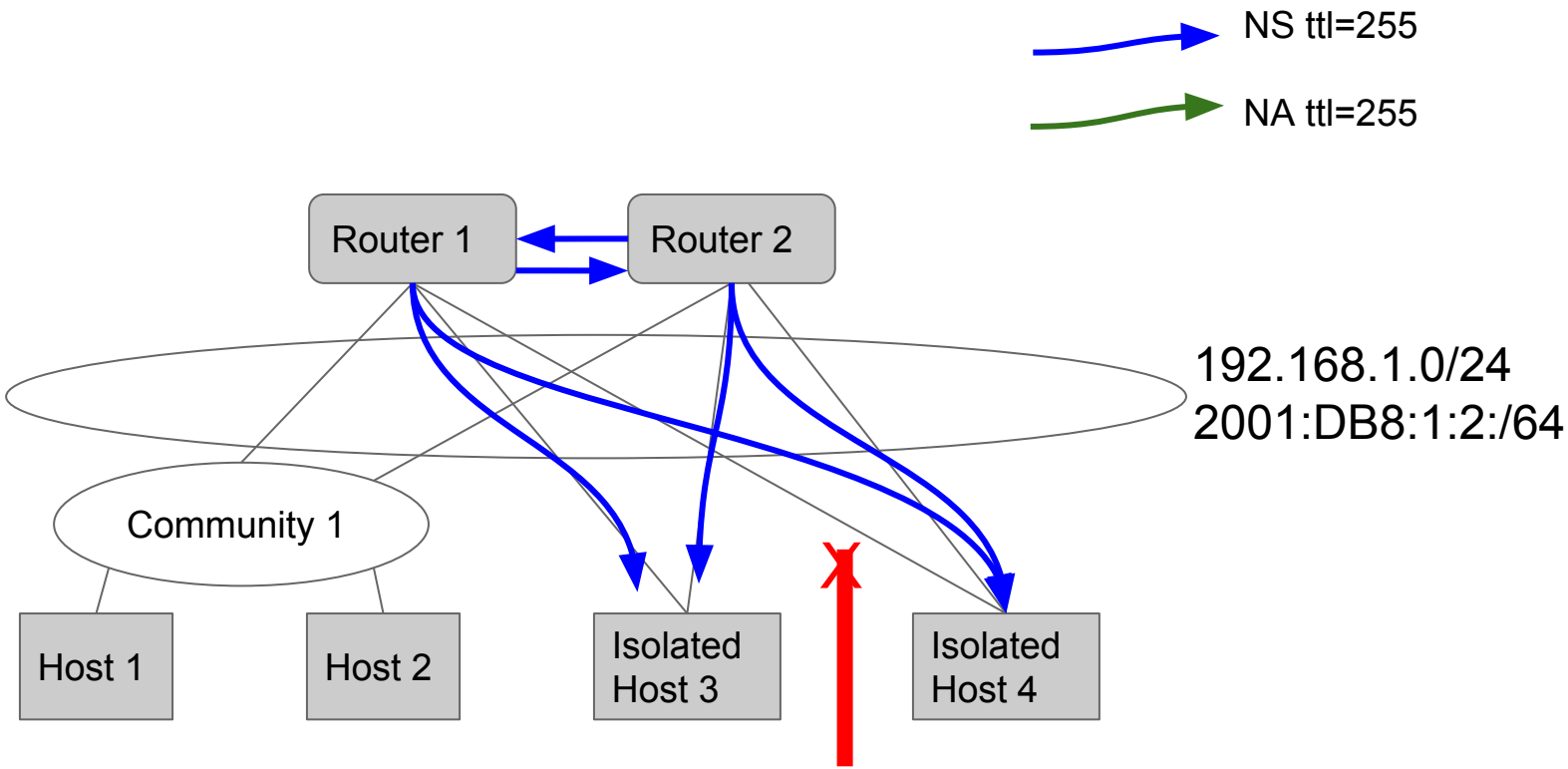
# Topology Example



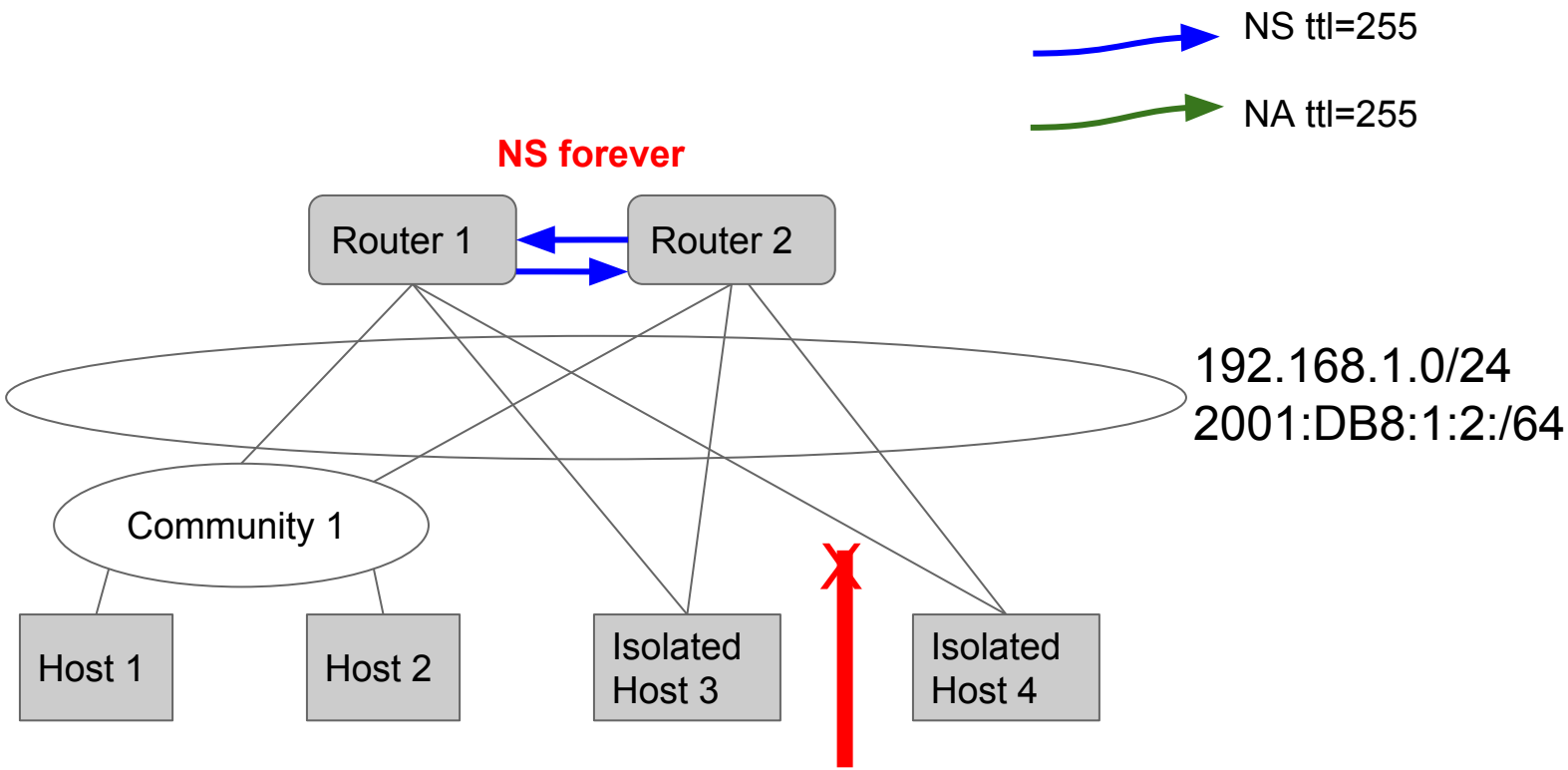
# TTL 255 loop if used RFC 4389



# TTL 255 loop if used RFC 4389



# TTL 255 loop if used RFC 4389



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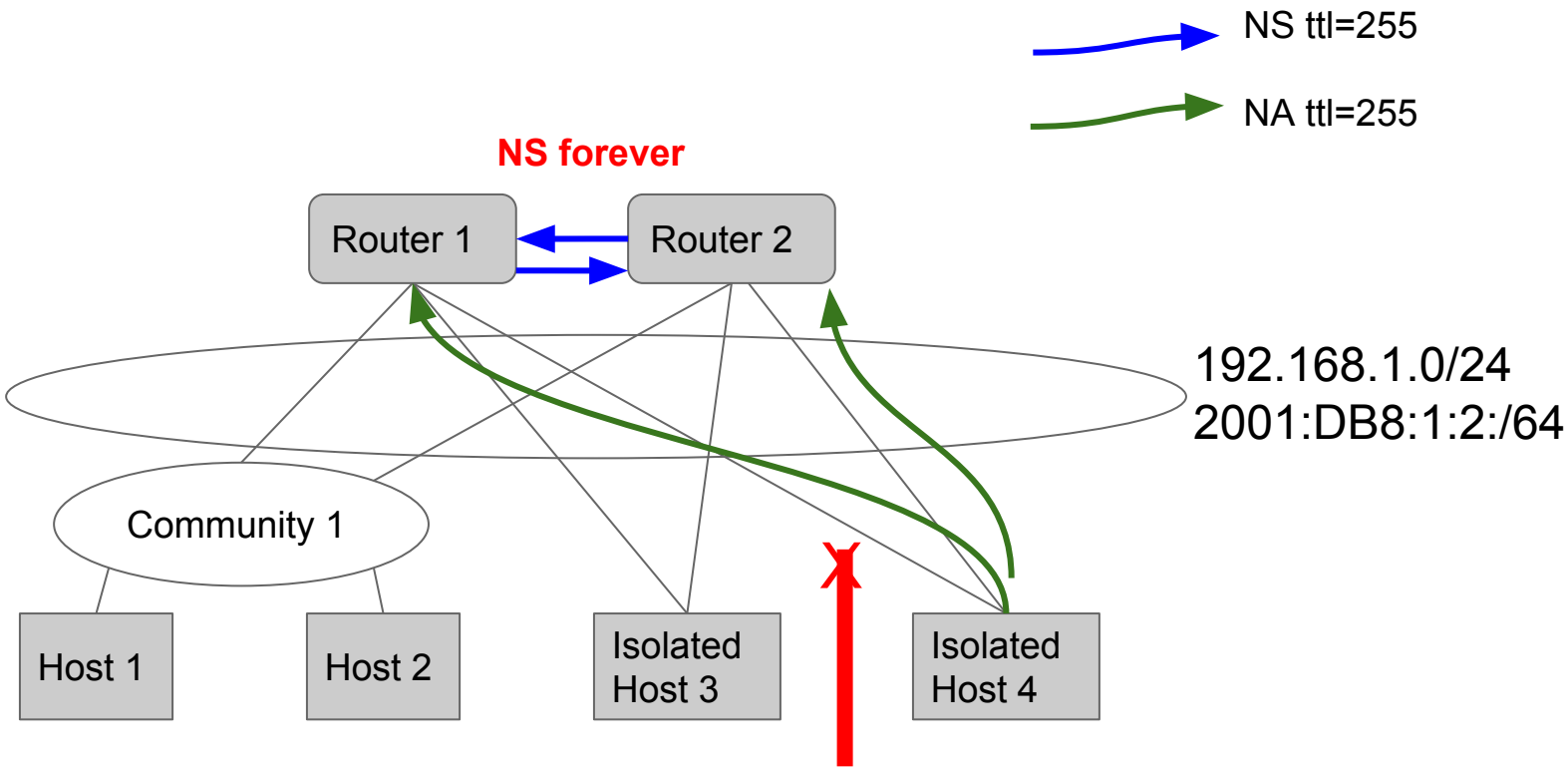

# Intentionally Partially Partitioned?

- Looks to IPv4/6 as a link; has subnet prefix
- Doesn’t forward packets at L2 uniformly
  - Typically hosts can talk to routers but not H-2-H
- Several examples
  - Split horizon for DSL (TR-101)
  - Cable labs (DOCSIS-MULPI)
  - Private VLANs (RFC 5517)
- Private VLANs is superset
  - Promiscuous, community and isolated ports
  - Allows multiple promisc i.e. multiple routers

# Protocol issues

- ARP
  - Proxy-ARP and ACD (RFC 5227) requires care
  - ARP request from one router answered by other rtr?
- IPv6/ND
  - Proxy-DAD (RFC6957) works even with dual routers
  - RA with L=0 works for global addresses
  - Forward link-locals with dual routers??
- Multicast from isolated or community ports?
  - Forward down to receivers without duplicates?