

IP over DSL, Cable, and Private VLANs

draft-nordmark-intarea-ippl-02

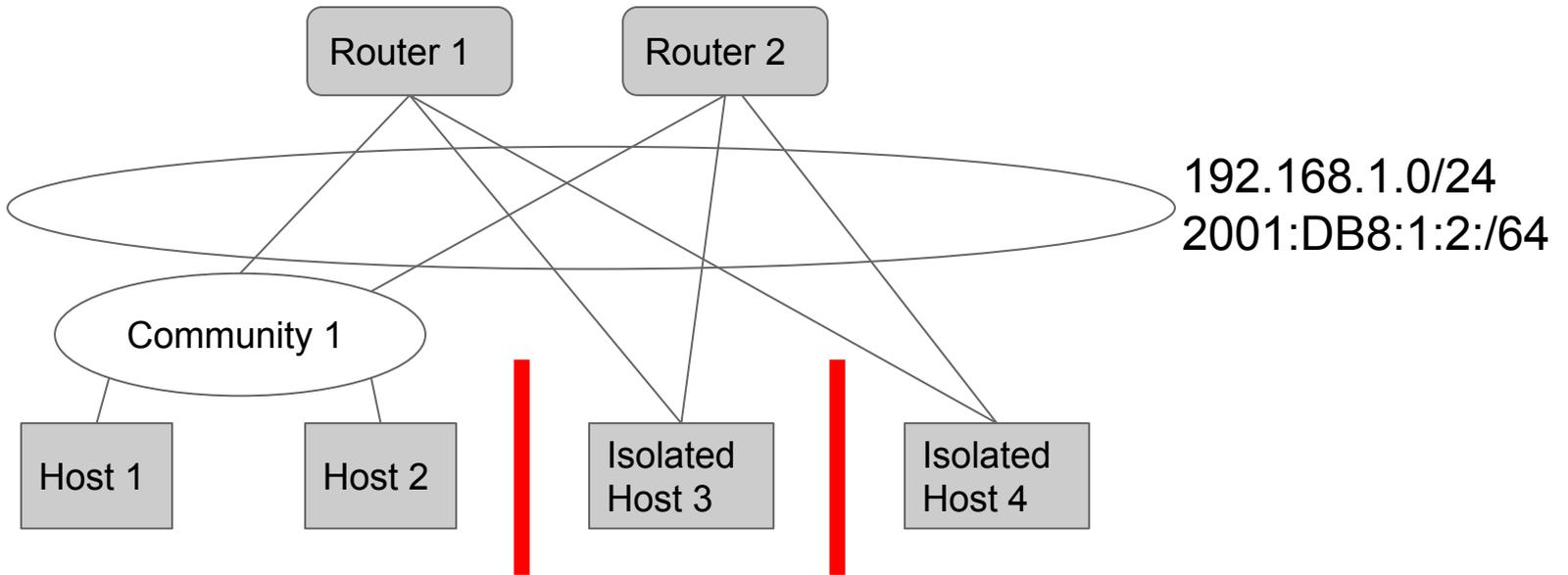
Erik Nordmark

Adopt as WG document?

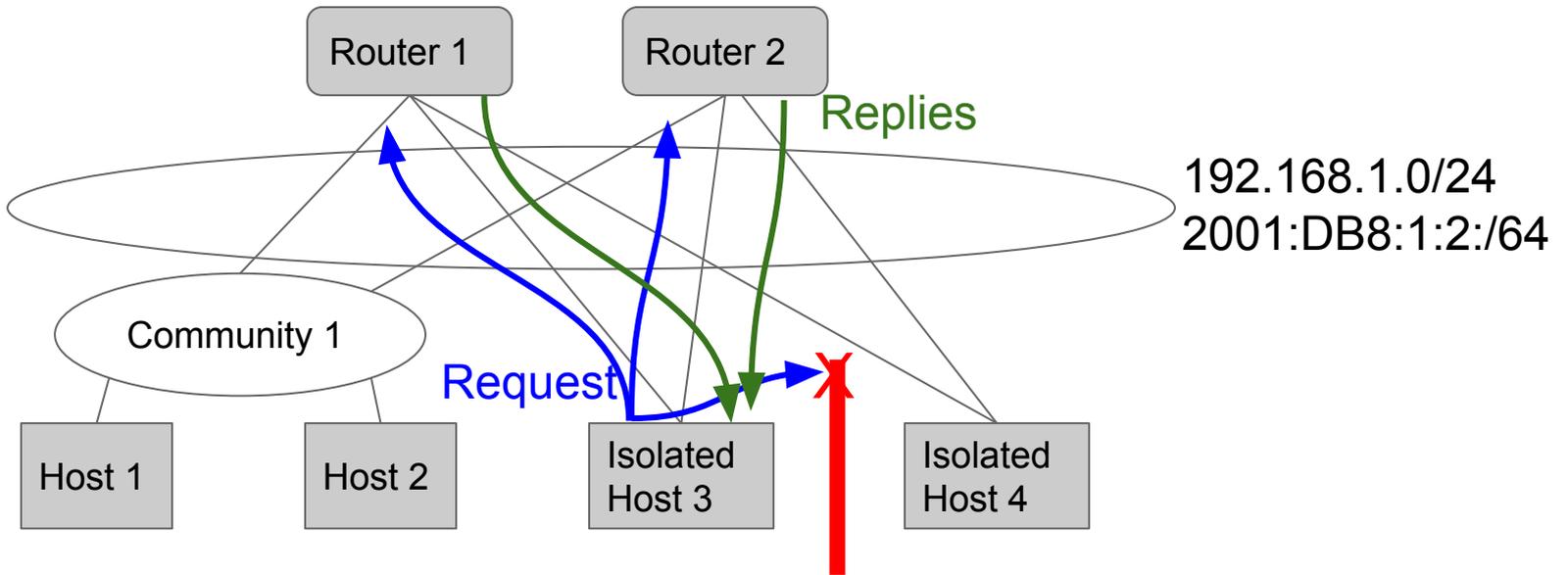
Why should we care?

- Key issue around dual routers (VRRP, HSRP, or neither)
- Increased dependence on Internet means dual routers more likely over time
- Applies to IPv4 and IPv6

Topology Example

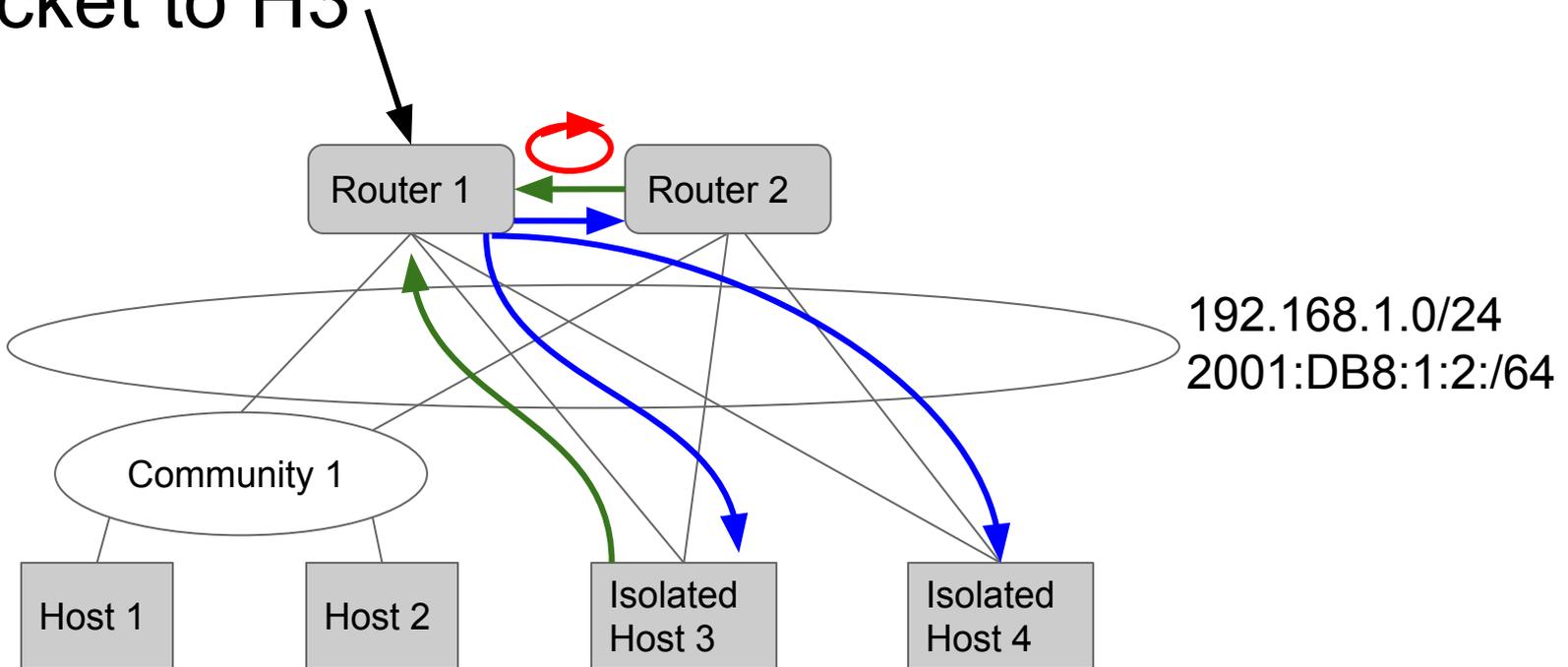


Proxy ARP/ND



Proxy ARP/ND - forwarding loop?

Packet to H3



Backup

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?

Q: Should this be an intarea WG document?