OSPF Cut-Thru Advertisements

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Goals

- Decrease Set-Up (Addr Resolution) Time
- Facilitate RtoR NHRP
- Understand NBMA Overlay From IP's View
  - All Routers Must Participate

Basic Idea

- Routers (NHS) Advertise Their NBMA Subnet Layer Address
- Advertisement Associates:
  - LIS (Subnet) With NHS's NBMA Addr
  - Area Border Router With NBMA Addr
  - AS Boundary Router With NBMA Addr
- LSA Distributed Within Opaque LSA
- LSA Scope Is Area-Local

Calculating NHS Reachability

- When Running SPF Rtr Determines LIS Cut-Thru Reachability
  - Target LIS Is Local
  - Target LIS Is Non-Local But Directly Reachable (Within Area)
  - Target LIS Is Behind ABR (ABR Is Directly Reachable)
  - Target LIS Is Behind ASBR (ASBR Is Directly Reachable)
- May Always Use HBH Requests

NHS Reachability (Cont’d)

- Even Though NHS Is Serving Multiple LIS Only Single Connection Should Be Used To NHS
- Assumption: Any NHS Serving A LIS Will Have (Or Can Obtain) NBMA Addrs For Its Local Hosts

Modes Of Operation

- Keep Connection Open To ABRs And ASBRs (HBH For Everything Else)
- Cache A Small Number Of Connections To NHS
- Small Topologies May Keep Connection Up To All NHS
- If NHRP Connection Set-Up Fails Drop Back To HBH (Although Chances Of Connecting To Host May Be Slim Too)

Example