LISP L2 and L3 EID mobility using a unified control plane

draft-portoles-lisp-eid-mobility-01

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Scope of the Draft

Implications and methods for using a common control plane to concurrently support:

- Layer 3 overlays w/eid-mobility
  - EID-prefix mobility across sites
- Layer 2 overlays w/eid-mobility
  - Unicast and multi-destination
  - Non-IP & IP intra-subnet
  - LISP assisted ARP/ND resolution

L3 overlays

- w/o EID-prefix-mobility ⎓ RFC 6830
- EID-prefix mobility:
  - And EID prefix moves out of the site with its covering EID-prefix
  - Cross-site traffic is L3 forwarded
    - ETRs register specific EID-prefixes for their locally attached EIDs
    - Cross site intra-subnet traffic is sent to the ITR's router MAC (selective proxy reply for remote hosts)
    - Layer 3/Routing lookup at the iTR
    - TTL decrements per L3 forwarding rules
- IP traffic only: Intra and Inter subnet

L2 overlays

- Register MAC addresses as EIDs in the mapping system (EID-AFI = 6) within the scope of an Instance-ID (IID)
- L2 and L3 separation:
  - Dedicate IIDs for L2 purposes (separate from L3 IIDs)
  - IID-scoped map-cache with MAC EIDs and IP RLOCs (separate from L3 Map Cache)
- Handle Non-IP and IP-Intra-subnet traffic

L2 Overlays - scope

- Definition of Methods for:
  - BUM traffic handling
  - ARP/ND Resolution
  - XTR resiliency: L2 sites multi-homed to the L2 overlay (not started)

Next steps

- The authors would like to propose adoption of this document by the LISP WG