Agenda

Why ? – Set it in context
How ? - Technical bit
Summary of uses
Considerations ? – for LINX
What next ?
Why?

Talked about Multihoming at LINX 102
Need to build the business case
Feedback was mixed
However noted that we put people on the spot
Assumption that everyone had the same understanding
Maybe needed time to understand and think about impact
What is EVPN Multihoming

- A standards based equivalent to Multi-Chassis Link Aggregation
MultiChassis LAG

- Synchronization is kept at egress – thought logical synch
- Complex, and therefore more bug prone than necessary
- Who has never had a synchronized active-standby firewall go wrong?
- Looks like LAG to CE
- Remote PEs not aware of special configuration
EVPN = Layer 2 Control Plane

- Multi-homing is now signaled as a topology
  - Type 4 EVPN Route – signaling a Ethernet Segment Identifier (ESI)
  - In effect membership of a multi-homing end-point
  - BGP, so propagated to all PEs.
- MAC reachability information is then associated with the ESI, not the advertising PE
  - Type 2 MAC routers refer to ESI as “next hop”
- So FIB/RIB of all PEs are aware of multi-homed topology
- Mechanisms to avoid looping of BGP traffic
Pre EVPN

This is where Synchronisation Occurs

Member Router

LINX Switch

VPLS

LINX Switch

LINX Switch

Synch Cable or logical equivalent
EVPN

Member Router

LINX Switch

LINX Switch

LINX Switch

LinX Switch

EVPN BGP

This is where Synchronisation Occurs

This is where Synchronisation Occurs
Member View

› It just looks like vanilla LACP
› Can connect to any LINX PE, as long as can get a cross-connect
  • As long as supports same speed
  • As long as the same LAN
› Protected from single router failures or maintenances
› Technology also supports Private VLAN services
› If concerned about capacity, can set minimum-links.
Deployment Challenges

All the typical product development and testing activities
- Potentially both on Juniper and IP Infusion LANs
- And lots of effort testing

Process and automation challenges to keep all ports in same state
- Think of one half in production, one half in Quarantine
- And lots of effort testing

Do we offer active-standby and active-active
- Both are separate test scenarios

If there is only 1 switch of given speed within campus, not very useful
- HW of deploying multiple switches
Summary of uses for Multihoming

Instant redirection in the event of a port failure
Simplifies managing ports
Allows traffic balancing across ports making them more efficient
Increase network resilience
Useful during maintenance on the exchange
Things we need to consider

Demand and size of ports
LAN
Use cases and configurations
Cost implications and fees
Timing
Opportunity cost
What happens next?

Running more of these sessions via webcasts
Talking to individual members
Collating information
Report back
Timing dependencies

Jo@linx.net if you would like to participate in the feedback process