



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

MLAG

MC-LAG

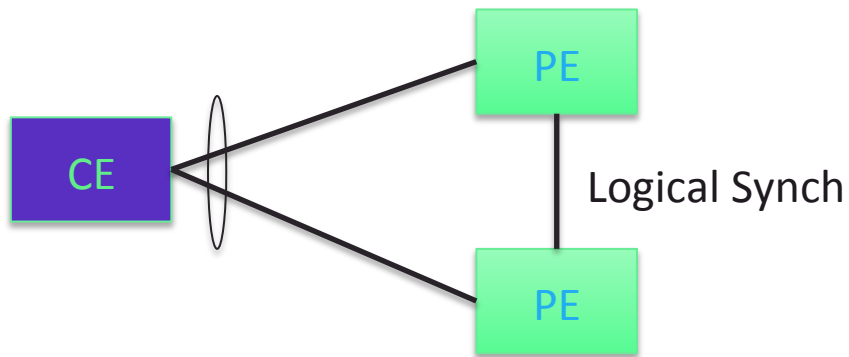
VPC

vLAG

Multichassis Etherchannel

mLACP

MultiChassis LAG



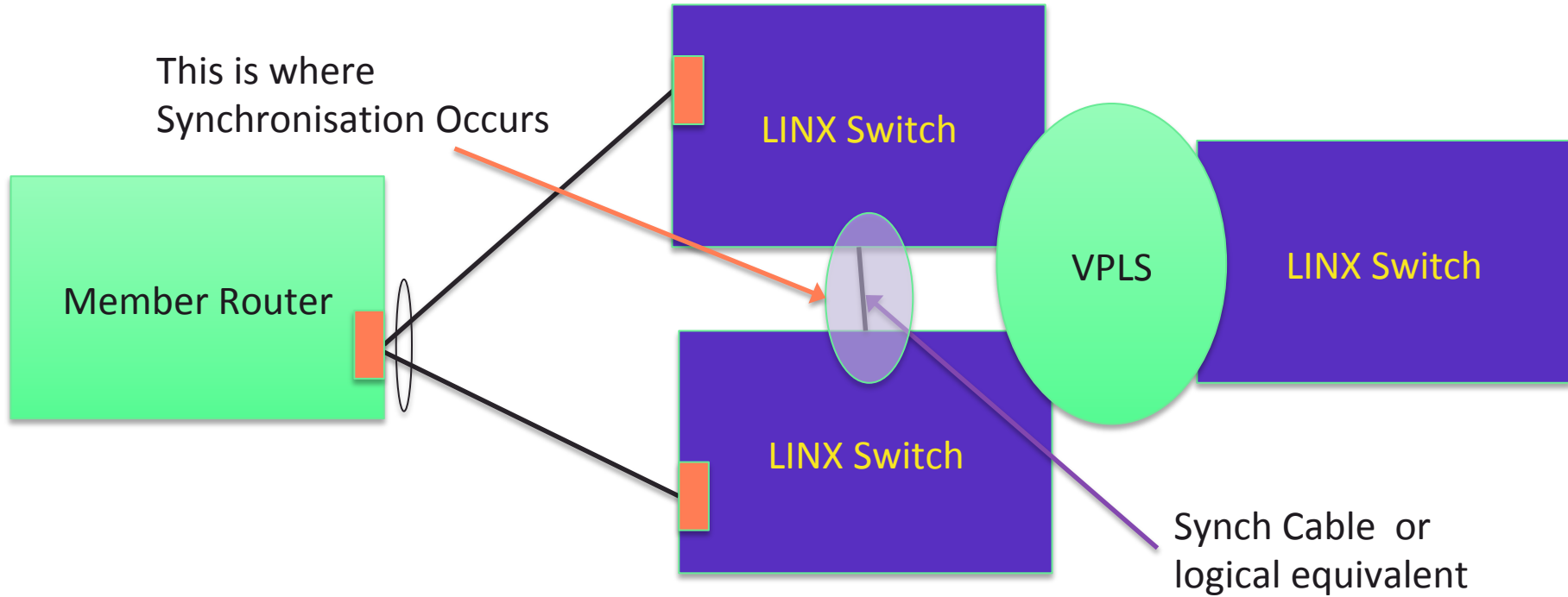
- > Synchronisation is kept at egress – thought logical synth
- > Complex, and therefore more bug prone than necessary
- > Who has never had a synchronized active-standby firewall go wrong?
- > Looks like LAG to CE
- > Remote PEs not aware of special configuration



EVPN = Layer 2 Control Plane

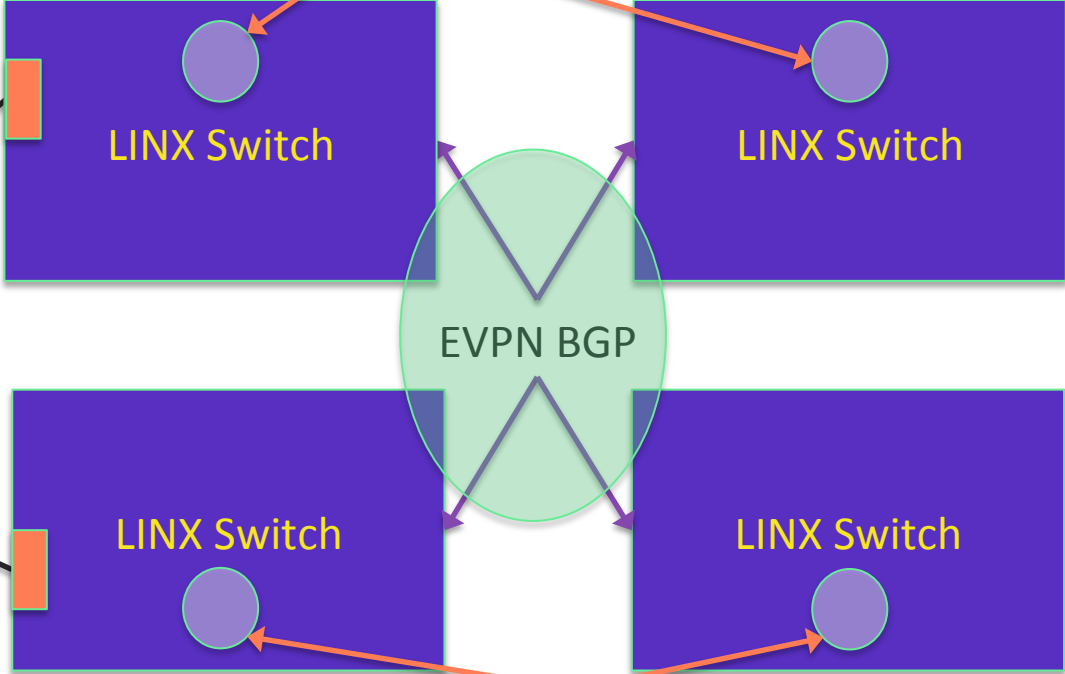
- › Multi-homing is now signaled as a topology
 - Type 4 EVPN Route – signaling a Ethernet Segment Identifier (ESI)
 - In effect membership of a multi-homing end-point
 - BGP, so propagated to all PEs.
- › MAC reachability information is then associated with the ESI, not the advertising PE
 - Type 2 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



EVPN

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