Node redundancy provisioning for VPLS Inter-domain

L2VPN IETF81

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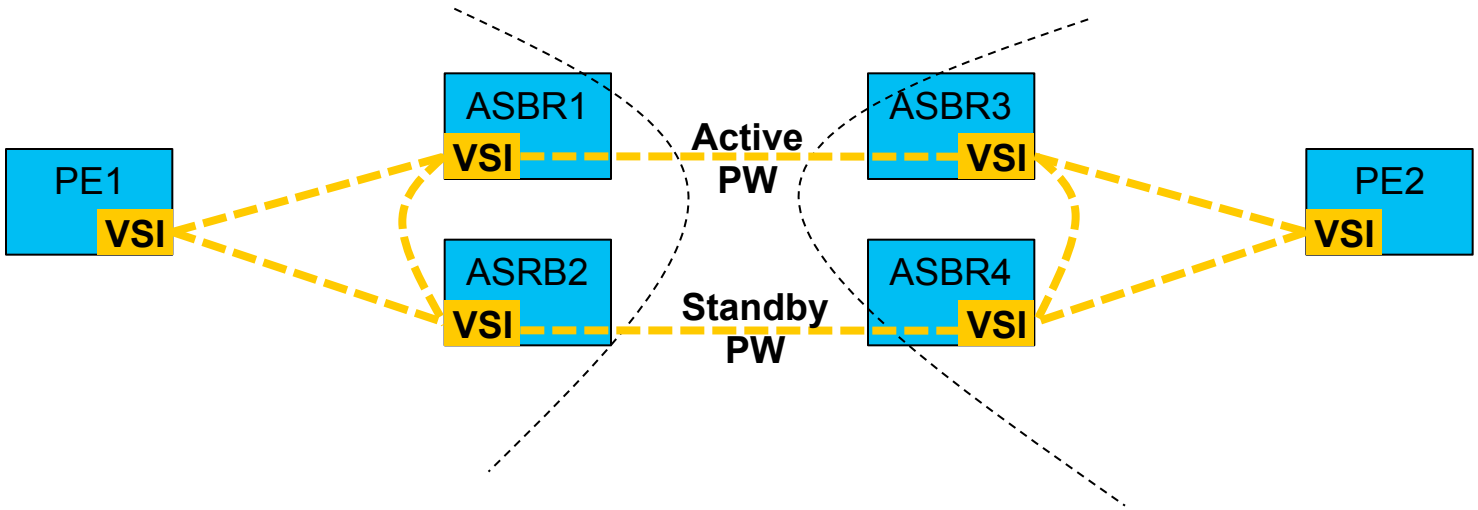
Motivation

- Current: Inter-AS VPLS redundancy could be provided by MC-LAG:
  - VSI-to-VSI connections at the ASBR;
  - The interconnected link between the two providers should be Ethernet link.
- Why Inter-AS VPLS redundancy should be provided by PW redundancy?
  - The interconnected link is POS (Packet over Sonet/SDH) link.
  - Control bandwidth, QoS, MAC address and Broadcast/Multicast traffic.

Introduction

- Informational draft
- Draft includes:
  - Recommended deployment scenario of inter-domain VPLS redundancy
  - Specific MAC withdraw procedure
  - Load balancing

Deployment scenario



- From the operator's point of view, one operator will not highly rely on the other operator's technical choice for inter-domain VPLS node redundancy.
- Why ICCP, instead of STP on ASBRs to avoid loop?
  - Fast convergence
  - Easy to control active/standby PW, so as to deploy load balance.

Deployment Recommendation

- Recommended deployment scenario
  - ICCP deployment option: ICCP is deployed on VPLS edge nodes (on ASBR in the figure) in both domain;
  - PW redundancy mode: independent only.

- Before deploying, the operator MUST negotiate to configure same PW priority at two PW end-points.
  - To ensure the same active/standby negotiated state at two PW end-points.

MAC Withdraw procedure

- That means PE SHOULD not advertise MAC Address Withdraw message from one domain to the other.
  - If not, the MAC address withdraw message with empty list originated from one domain would lead to a VPLS in another domain, to flush all MAC addresses which is not necessary, and bring potential network instability.

Load Balancing

- Load balancing among VPLS instance:
  - Configure different PW priority values for different VPLS instance;
  - The active PW of different VPLS will be running on different PEs, to provide load balancing between the two PEs in one domain.

Next steps

- Need comments from work group

Thank you