Bench Marking of PBB-EVPN
draft-kishjac-bmwg-pbbevpn-00

By

Kishore Tiruveedhula(kishoret@juniper.net)
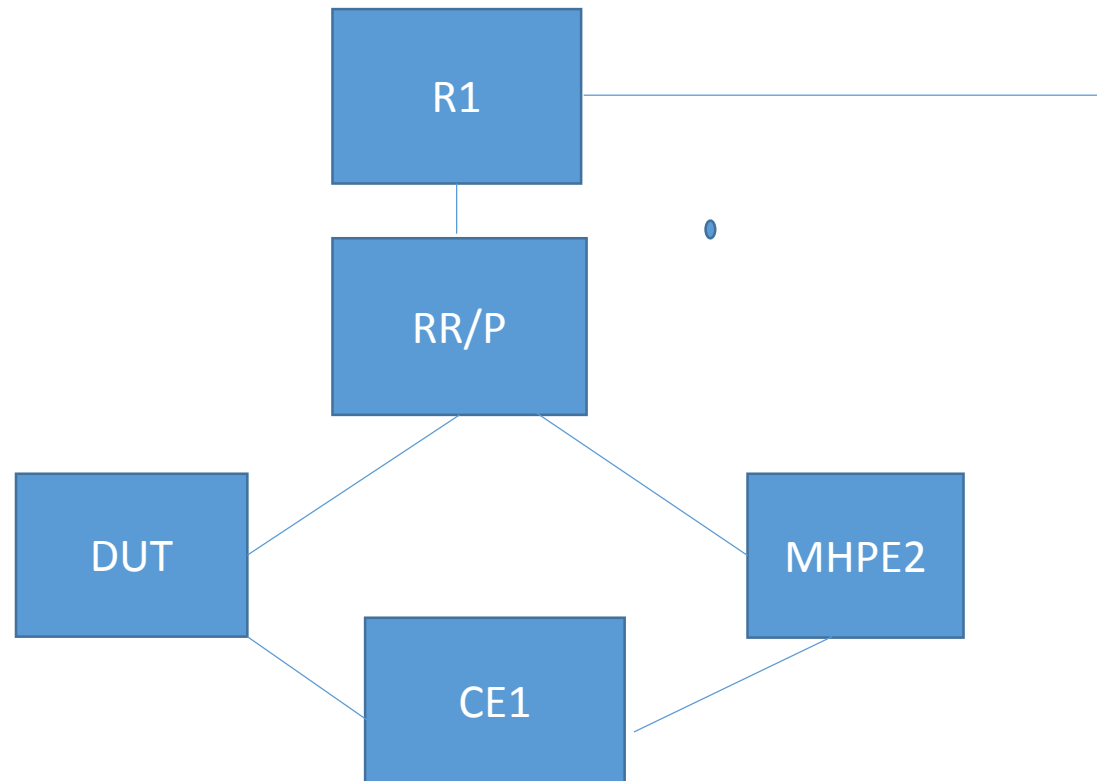
Sudhin Jacob(sjacob@juniper.net)

Agenda

- Defines the methodologies for benchmarking performance of PBB-EVPN.

What is PBB-EVPN

- PBB-EVPN is defined in RFC 7623.
- The dual home PE's simultaneously forward traffic compared to VPLS.
- Has load balancing capability.

Topology

**draft-kishjac-bmwg-pbbevpn-00, IETF 96
Berlin July2016**

Benchmarking Parameters of EVPN

- Mac learning
- Mac Flush
- Mac ageing
- HA
- Reliability
- Scale
- Convergence
- Soak

Measurement – Mac learning

- Measure time taken to learn local mac.
- Measure the time taken to learn mac routes from remote peer.

Measurement – Mac Ageing

- Measure the time taken to age out the mac once traffic stop locally.
- Measure the time taken to age out mac learned from remote peer once the traffic stops at remote end.

Measurement – Mac flush

- Measure the time taken to flush the local mac entries during local link failure.

- Measure the time taken to flush remote mac entries in DUT during remote PE-CE link failure.

Measurement HA– Routing Engine Failover

- Measure the traffic loss during the HA mode routing engine failover, ideally there should be 0 packet loss.

Measurement Reliability

- Measure the DF election is taking place properly and there should not any loss more than 3 sec, when one the MH PE is rebooted and it is back online and advertises its type 4 route to its peer.

Measurement- Scale

- 4k PBB-EVPN with out traffic clear bgp and check all routes are re learned. Type 2,3, and 4.

Measurement Convergence and Scale convergence

- Measuring the 100,000 mac from local and remote in data plane learning, measuring the convergence (flood to core time period measured as t').

- Measuring the scale of 4K PBB-EVPN instances with mac scale of 1,000,000. Learning of all 1,000,000 mac , after that simulate core failure or bgp flap. measure the time taken to learn 500,000 from remote peer by DUT measure the time period of flood in core towards DUT from remote peer.

Measurement SOAK

- Measuring the scale of 4K PBB-EVPN instances with mac scale of 1,000,000. Run this for 24 hr. The DUT should not have any cores or memory leak.

Next Steps

- Draft Must be reviewed.
- Requesting the chair for adoption.

Thank you