Bench Marking of EVPN/PBB-EVPN

draft-kishjac-bmwg-evpntest-06.txt

By

Kishore Tiruveedhula(kishoret@juniper.net)

Sudhin Jacob(sjacob@juniper.net)

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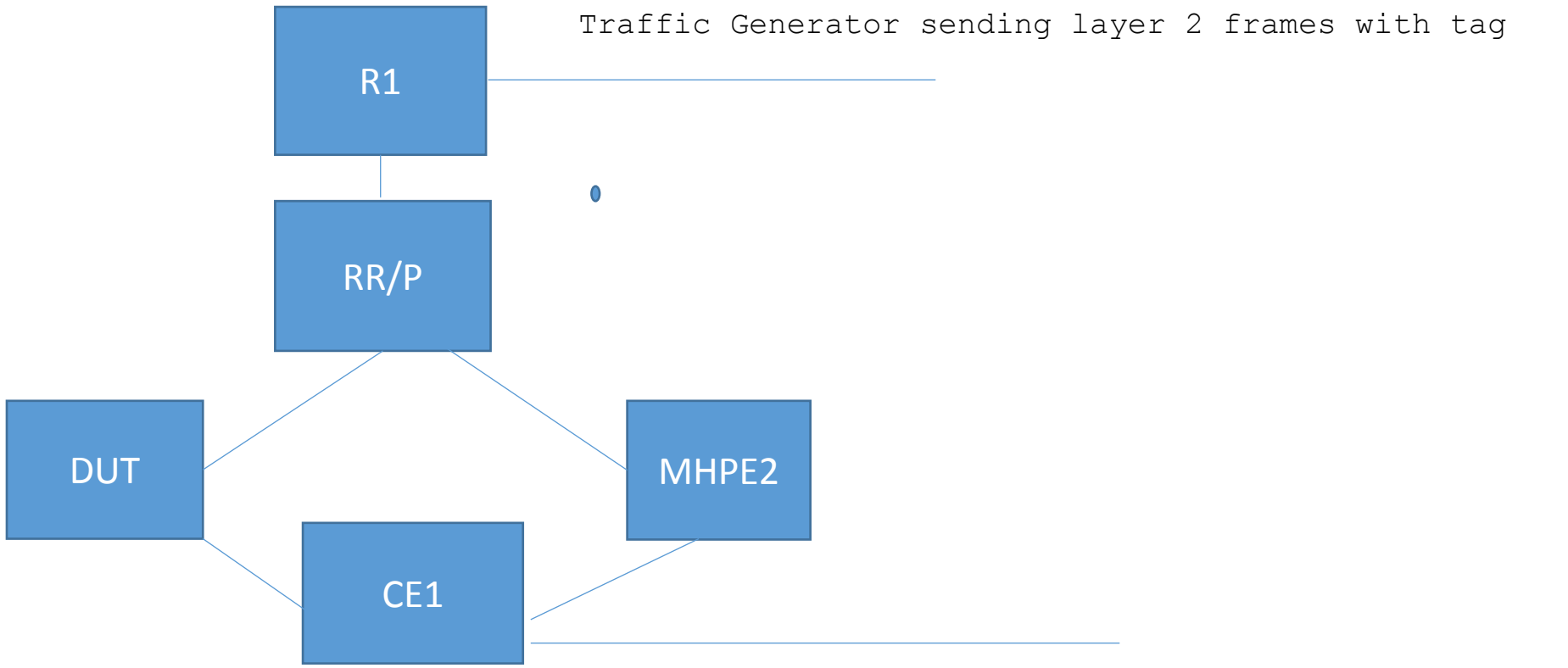
What is EVPN

- EVPN is defined in RFC 7432.
- The dual home PE’s simultaneously forward traffic compared to VPLS.
- Has load balancing capability.

Comments from IETF-98

- Type 5 route Benchmarking must be added.

Topology


Traffic Generator sending layer 2 frames with tag
R1
RR/P
DUT
MHPE2
CE1
Traffic generator sending layer 2 frames with tag

Benchmarking Parameters of EVPN

- Mac learning
- Mac Flush
- Mac ageing
- HA
- ARP/ND Scaling
- Type 5 route scale.
- Scale
- Convergence
- Soak

Measurement – Mac learning

- Measure time taken to learn local mac.
- Measure the time taken to advertise to remote peer.
- Measure the time taken to learn mac routes from remote peer.
- Measure the time taken to learn both local and remote in bi directional traffic flow.

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.

ARP/ND Scaling

- This is to test the maximum number of mac+ip learned.
- Sending “X” arp messages to the DUT where default gateway configured from RT. It must learn “X” mac and ip addresses of the sources which send “X” mac+ip routes to remote peer.

Type 5 Route Scaling

- This test is conducted to scale the type 5 route.
- Configure X IRB sub interface is configured, which is not extended to others.
- Check the DUT X type 5 routes are advertised to remote peer.

Measurement HA– Routing Engine Failover

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

Measurement- Scale

- N EVI with mac scale of X macs. Learning of all X mac , measure the time taken to learn this x/2 mac locally and x/2 remotely.

Measurement Convergence

- Measuring the scale of N EVI with mac scale of X. Learning of all X mac , after that simulate core failure or bgp flap. measure the time taken to learn X from remote peer by DUT measure the time period of flood in core towards DUT from remote peer.

Measurement SOAK

- Measuring the scale of N EVI with mac scale of X. Run this for 24 hr. The DUT should not have any cores or memory leak.

Next Steps

- Request for adoption

Thank you