Bench Marking of EVPN/PBB-EVPN
draft-kishjac-bmwg-evpntest-06.txt

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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.
Topological diagram showing:

- Traffic generator sending layer 2 frames with tag

Diagram includes nodes labeled R1, RR/P, DUT, MHPE2, CE1.
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