Based on draft-ietf-bess-evpn-overlay, this spec captures the EVPN specifics for GENEVE

Presented in IETF 100, primarily focused on:
- Signaling GENEVE encapsulation type in draft-ietf-idr-tunnel-encaps extended community or tunnel-encapsulation attribute
- Communicating GENEVE tunnel option types (to the ingress NVE) in a new BGP Tunnel Encapsulation Attribute sub-TLV

New in revision 02:
- NEW Ethernet Option TLV
- CLARIFIES GENEVE Tunnel Option Types
Ethernet Option TLV
Signaled by the egress NVE based on its capabilities

**Fields**
- Option Class Ethernet is a new class (requested to IANA)
- Type set to EVPN Option (requested to IANA)
- B == BUM traffic indication
- L == Leaf traffic indication
- Source-ID == encodes an **optional** source Ethernet Segment identifier that can be used for:
  - Multi-homing Split-horizon as in RFC7432
  - E-Tree as in RFC8317

**Two possible lengths (4-bytes or 8-bytes)**
- If no source-ID is needed, length is 4-bytes
- Else length is 8-bytes
The B and the L bits
Why and when are they used

B-bit avoids transient packet duplication
When Ingress Replication is used PE3 needs to set B==1
PE1 and PE2 identify the packets as multicast and only the DF will forward.

L-bit avoids BUM leaf-to-leaf leaking in EVPN E-Tree
When PE2 receives BUM from a leaf-ac, it needs to set L==1
PE1 identifies the packets as leaf-originated and will filter appropriately.
EVPN-GENEVE and Multi-Homing Split-Horizon

- **Split-Horizon in EVPN-GENEVE:**
  - [EVPN-OVERLAY] defines LOCAL-BIAS for multi-homing split-horizon
  - LOCAL-BIAS is mandatory for GENEVE too.
  - Source-ID based split-horizon is OPTIONAL

- **When should I use source-ID:**
  - Consistency with MPLS split-horizon procedures, e.g. the BD has a mix of GENEVE and MPLS PEs.
Conclusions and next steps

• Document defines extensions to close the gap between MPLS encaps and GENEVE

• NEXT STEPs
  – Clarify the use of the Ethernet Option TLV further

• Please provide feedback / comments