What’s this Auto-EVPN thing again?

• RIFT builds the underlay.

• Auto-EVPN builds the overlay.

• Brings back the original L2 simplicity of “just plugging it in”.


What’s new in -01?

• Auto-EVPN thrift model (normative).

• Variable derivation procedures.

• Some scale considerations.

• Auto-EVPN Analytics and associated thrift model (normative).
Normative Thrift Model (common_evpn.thrift)

• Includes all necessary variables.
  • Loopback IP
  • Cluster ID
  • Route Target
  • VLANs
  • Etc.

• Relies on normative main specification model.
  • -00 already defined the required LIE and TIE model changes
Variable Derivation Procedures

• For example:

```rust
pub(crate) fn auto_evpn_sids2rrs(mut v: Vec<UnsignedSystemID>) -> Vec<UnsignedSystemID> {
    v.par_sort_unstable();
    let r = if v.len() > 2 {
        let mut s = v.split_off(v.len() / 2);
        s.reverse();
        interleave(v.into_iter(), s.into_iter()).collect()
    } else {
        v
    };
    r
}
```
Scale Considerations

• Defaults
  • 1 Fabric
  • 1 EVI
  • 7 VLANs

• Current Maximum
  • 3 Fabrics
  • 3 EVIs
  • 15 VLANs

• Will scale higher, but collision-free derivation details MUST be defined.
Auto-EVPN Analytics

• Provides an overview of the EVPN fabric from the ToF nodes.

• Auto-EVPN leaf nodes advertise status via Key-Value TIEs to the ToF.

• Defined via normative Thrift model (auto_evpn_kv.thrift).
Auto-EVPN Analytics Key Types

• Global Key Type
  • Auto-EVPN Role (i.e. Leaf)
  • Number of Established BGP Peers
  • Number of Total BGP Peers

• MAC-VRF Key Type (per-MAC-VRF)
  • Active CE Interfaces (up/up)
  • Total CE Interfaces
  • Active IRB Interfaces (up/up)
  • Total IRB Interfaces
  • Number of Local EVPN Type-2 MAC Routes
  • Number of Local EVPN Type-2 MAC/IP Routes
  • Number of Configured VLANs
  • MAC-VRF Name
  • MAC-VRF Description
What’s Next?

• Co-Authorship and comments are welcome.

• Next revision will have Type-5’s defined.

• Asking for adoption:
  • RIFT Auto-EVPN: draft-head-rift-auto-evpn-01
  • RIFT Key/Value Registry: draft-head-rift-kv-registry-01
Questions?