

RIFT Auto-EVPN

draft-head-rift-auto-evpn-01

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IETF111

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:

```
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?