**Administrivia**

- Status: 3 new RFC published, 2 RFC missref, 4 IESG review
  - MartinV: Inter-Subnet-Forwarding requires Bum-procedures, igmp-mld proxy.
- 6 documents in Shepherds review
  - From BESS-Service-Chaining review: document far from being published;
  - Proposal is to park document
  - MartinV: problems date back. No requirement to proceed, may stay in WGLC until work resumed by someone
  - AlSa: none of main authors are present; StLi: contacted many times via email; MaVi: editors changed regularly.
- 6 documents ready for WGLC
- 2 new WG documents: waiting for authors to publish as WG draft, remain as individual
- Many documents ready for WG adopt: authors must advise if documents not ready for adopt
- WG Milestones: late on Yang model milestones, NSH close, VPLS-multhoming should be OK.
- IPSec sidebar (chairs) occurred in June.
  - Be present in IDR for comments on

**SRv6 BGP based overlay (Gaurav Dawra - LinkedIn)**

- Presented before (ietf98) + EVPN services in IDR + BESS at ietf104
- Document matured, no significant changes to document, multiple customer deployments globally
- BGP packing issue addressed; +Jorge, +Ali
- BGP Packing
  - Issue: with sub-optimal packing
  - Introduced flexibility of adv Func & Arg , Sub-sub-TLV
  - Part of SID shifted into Label field
- Implementation status: many globally, multi-vendors, multiple platforms/forwarding planes
  - (draft iexists in Spring re: deployments)
- ASajassi: most concerns addressed, draft in good shape. Ready to progress in WG.
- StLi (individual): why not use Tunnel-Encaps to singal doing SRv6
  - Trying to remain consistant with SR signaling
Would like to see Tunnel-Encaps to specify SRv6
Packing: don’t like that there are 2 ways to do same thing. Consider single one?
KetanT: by definition: SID flexible for Fct/Arg, **should** fit in label field. But don’t want to remove that option.
ASajassi: having both packing methods, second one introduces very little overhead.

- **Poll:** read & ready?

### Unequal-LB (Ali Sajassi - Cisco)

- Short update on draft
- Unequal access links to multi-homing PEs: weighted DF election
- Section 4.4 added to optimise Weighted DF election in HRW: reference that draft
- **Good ???, pending implementation**
  - StLik: roadmap of implementation? Timing? (implementation policy)
  - ALSa: Cisco will collect & report back to mailing list.
- **JeffT:** Bandwidth extended community is non-transitive so cannot be used for eBGP
  - Ali AI to follow-up
  - Draft for BandW extcomm not moving forward
- **Jeff Haas:** JNPR’s implementation is transitive
  - Use what is appropriate for your solution, but be aware there may be interop issues

### Extended mobility for EVPN-IRB (Ali Sajassi - Cisco)

- Has been implemented
- RFC7432 assumes 1-1 mapping for Host-MAC binding
- Draft describes situations where this may not be the case
  - Mobility procedures for adv. Evpn-irb

**Second slide**
- Updates since last presentation
  - (from comments) race-condition captured in draft & remoedy
- Ready for WGLC

**LSP Ping (Parag Jain – Cisco)**
• Presented ietf Prague 2015, Montreal 2018
• Rev-00 published
• Last major revision in rev-5, sub-tlvs changed & re-arranged but no significant changes since then
• Stable for over 1yr.
• JRabadan/Nok
  ◦ TLVs: E-Tag id before Etherseg identifier vs 7432 other way around ?
  ◦ PJain: just for alignment purposes- even though based on draft, currently based on word-alignment
  ◦ PJain: can follow 7432 order since no-implementations
  ◦ JRabadan: missing mcast
• LABu: Any implementations?

EVPN control plane for Geneve (Sami Boutros – VMWare)
• First presented ietf99 / 2017
• GNV Adopted by NVO as generic encapsulation
  ◦ Geneve tunnel-encap provided
• New Ethernet option TLV adding BUM and Leaf bits
• Sue Hares to chairs: how does this relate to last conversation re: tunnel encap?
  ◦ BESS or IDR; Tunnel-Encap draft is closed, being finished
  ◦ Geneve & BIER: must be careful on basic functionality.
  ◦ Comment to this draft specifically: Geneve Underlay/Overlay can be numbered 1,2,3 ?
• ASajassi: Tunnel-Encap draft is being published, don’t want to add more to it or ensure in-sync.
  ◦ Here: define RFC5512 ExtComm
  ◦ Everything else comes from EVPN routes but not using Tunnel-Encap here.
  ◦ Ali: Geneve is dataplane encapsulation, BGP is control plane- only 2.
• Ali / Sami: Compliant with 5512, and this is also compliant with Tunnel-Encap draft
  ◦ Geneve just another IANA type for what’s already defined

Fast DF Recovery (Patrice Brisette – Cisco)
• Quick update (presented a while ago)
• RFC7432 recovery for link or node: 3s peering timer -> Recovery approx.
3s.
  • 2 options being proposed here
  • Handshake: message to PEs (new RT-12 and RT-13)
    ◦ Looking to optimise for 2-PE
  • NTP-Sync: advertise carving time;
  • Seeking WG LC

**MVPN Source Discovery Interop (Jeffrey Zhang – Juniper)**
  • In WG LC but considering adding RFC8364 PIM Flooding Mech and Source Discovery (PFM-SD) section
    ◦ Uses PFM to flood \((s,g)\) and join\((s,g)\)
  • Applicability/interop with MVPN: trigger MVPN SA routes also from PFM-SD (in addition to MSDP & PIM register)
  • Seeking WG comments on PFM-SD: option#1: rename & include PFM-SD or option#2: new draft to cover PFM-SD.

  • Acee Lindem/Cisco: how widely deployed is PFM-SD?
    ◦ StigVenaas/Cisco: exist implementations but not sure how many deployments
  • Rishabh Parekh/Cisco: using same extcomm to carry SA as well as originator IP?
  • Not a problem even if using same extcomm: MSPD does carry RP address, other is address of FirstHop router
  • Kesavan Thiru/Cisco: opinion = decouple into a new draft (option#2)
    ◦ Could learn SA today, tomorrow could be new mechanism to learn Mcast source.
  • StigVenaas/Cisco: can envision use-cases where one site using PFM-SD and other using ?? and useful to have BGP bridge those.
    ◦ One draft or not, useful that it be same route to announce how source is discovered.
  • StLitk: Understand Implementations but not many deployments; Opinion is #2 decouple so we can finish SA interopation, and tbh if there are few/little deployments maybe wait for interested customer for this.

**MCast EVPN Signaled L3VPN (Jeffrey Zhang – Juniper)**

  • L3VPNs:
    ◦ Uni RFC2547/4364
Mcast: RFC6513, RFC6514

- L3VPNs using EVPN Safi (RT-5) evpn-prefix-advertisement
- How to do Multicast in EVPN SAFI is outside of scope of that draft

Option#1: Optimised Inter-Subnet Multicast: SupplementalBD stretched across DCIs
Option#2: RFC6514 procedures
- ASajassi/Cisco: Captured also in EVPN-MVPN interop draft, there is some overlap.
  - Pure L3 vs. L2/L3 mixed
- JRabadan/Nokia: nice draft b/c clarifies solutions MCast for EVPN.
  - Option#1 and #2 specified somewhere else, Option#3 is the only new thing
Option#3: adapt RFC6514 procedures, using EVPN SAFI (instead of
- Cross-reference of 6514 vs. EVPN route types: only missing one is MVPN Type 5 Source Active -> no equivalent in EVPN.

Seeking comments. Intro = scenarios/options. Not seeking adoption yet, will perfect & iterate.

NH encoding discussion – Open discussion

- Continued from mailing alias: RFC5549 IPV4 over IPV6 encoding does not follow NH encoding of RFC4364 IPV4
- RD is NLRI property (uniqueness) not a NH property
- IPv6 in NH: Addr and LinkLocal: which one to use?
Do all implementations use NH length to parse NH?

Stephane/Orange presenting summary table
- Jeff Haas/Juniper: this comes up with every new implementation.
  - Justification in 2868 not being followed.
- #1 item causing issues with new implementations.

Fix stt in specification? JHaas: how to progress knowing this is an issue?
- Cant change behaviour existing documents
- After survey complete – survey useful to do.

Being done in IDR? SHares/ : IDR can do the survey, first step to see if there’s something to do
JeffTanstu/Arrcus: really good information to know.