Status Update

- Draft version 6 was submitted on 9-30-19
- WGLC successfully done
  - Got reviews and feedback from lot of folks
- Draft Implementation now available
  - Opensource implementation also on its way
WGLC Comments

- Support for mechanism to mark the node
  - Not capable of acting as a Transit node
  - Cannot participate in SPF
  - Draft version 6 now makes SPF Status TLV applicable to BGP-LS Node NLRI to support these markings.

- Draft Nits
  - Next revision will take care of all the nits
Implementation update

- At least one BGP implementation is available
- Another open source BGP implementation with FRR in progress
- At least three operators have signed up to test and evaluate bgp-spfd extensions
Implementation update (Cont’d)

- YANG Model for the BGP SPF SAFI defined
  - Fairly straightforward model
  - Model can be extended for BGP-LS SAFI
- Want to start working on the model draft, protocol implementation draft and experience draft as soon as possible
Implementation 1 - Arrcus

- Implemented by Pushpasis Sarkar
- Almost all sections of the draft have been implemented
- Challenge in generating remote router-id when servers don’t run bgp-spf or in controller assisted peering model
  - Automated by receiving the information from LLDP, L3DL
  - BFD can be leveraged for bidirectional link verification
  - Can be statically configured
Implementation 1

- Interop with other IGP and route tie-breaking handled using protocol preference (bgp-spf has higher preference)
Test Details

- Standard CLOS using Leaf/Spine topology
- 10K v4 and v6 routes
- 32 way ECMP (320K Paths)
- Dual Stack tested
- BGP peering between Leaf/Spine
Implementation 2 - FRR

- Implemented by Santosh Pallagatti
- AFI/SAFI support for BGP done
- Packet encode/decode support for inbound and outbound update generation is done
- SPF computation WIP
- Route download to RIB WIP
Thank you