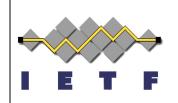# BGP-Based SPF IETF Interim – Oct 1st, 2018
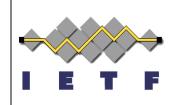
Keyur Patel, Arrcus
Acee Lindem, Cisco
Shawn Zandi, Linkedin
Wim Henderickx, Nokia
Derek Yeung, Arrcus
Abhay Roy, Arrcus
Venu Venugopal, Cisco

I E T F

Status Update

- Draft was updated on 09-27-18 prior to interim based on comments from early Opsdir and RtgDir review

- Draft is in fairly stable state

    - Based on reviews and feedback from lot of folks
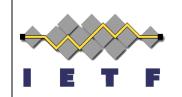
- Implementations?

Review Feedback

- Opsdir Review (Fred Baker)
  - Review Result: Ready
  - Section 5.4: Given the fact that SPF algorithms are based on the assumption that all routers in the routing domain calculate the precisely the same SPF tree and install the same set of routes
- RtgDir Review (Dan Frost)
  - Summary: Minor concerns

Review Feedback (cont'd)

- Concerned that BGP is not designed for general purpose Database Distribution. Suggested to ADs to look at more strategic long term solution

- Peering models are little too brief. Add more text to the sections or move it to an alternate document

- Usage of sequence numbers (particularly the implication of sequence number reset) mentioned in section 4.4 and 5.1 may need some examples for more clarity

Review Feedback (cont'd)

- Comment on BGP Timers. Considering usual timers (min-route-advertisement as an example) are not used by SPF SAFI, need to explicitly call out any deviations and augmentations to timers and or any BGP parameters

- Suggested adding a manageability considerations sections for the benefit of the operators to give them a better idea of 1) any deviations and augmentations of BGP parameters and timers and 2) explain possible implications

Version 2 Changes

- BGP Peering models section updated
  - Text added to suggest using BFD for link liveness
- BGP SPF SAFI section updated
  - Removed support for VPN SAFI as it is not used in RFC 7752 and the VPN SAFI is applicable to overlay
- Node NLRI section updated for SPF algorithm types
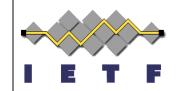- Added text for relevance of MRAI timer

Version 2 Changes (Cont'd)

- Rearranged the text for BGP Decision process for better readability

- Next_hop manipulation section augmented to cover MP_REACH_ATTRIBUTE nexthop

- IANA section simplified and the new attribute values will be assigned from existing "BGP-LS Node Descriptor, Link Descriptor, Prefix Descriptor, and Attribute TLVs"

- Finally fixed all the reported Editorial Nits
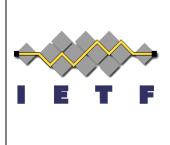
Version -03 Changes

- Clarified simple peering models – deferred sparse peering to LSVR applicability draft
- Added discussion of convergence when BGP speaker loses sequence number state
- Added Manageability section
  - RFC 8405 SPF Back-off configuration
  - RFC 8405 SPF Back-off state
  - SPF Log with triggering NLRI, scheduling time, start time, and end time. Also, SPF type if applicable

Explicit Withdrawal?

- Explicit advertisement of NLRI withdrawal is required
  - Similar to MaxAge LSA in OSPF
- Improves convergence for NLRI withdrawal since change is recognized immediately with more recent NLRI indicating withdrawal
- Could also be useful in the case of expedited removal of stale NLRI
- Still considering whether this is necessary and whether it should be in base specification or separate draft

Thank you