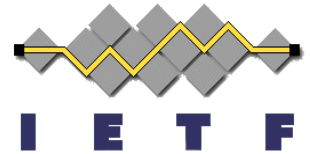
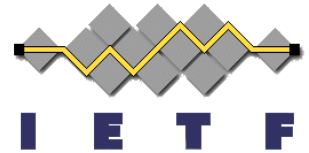


LSVR BGP SPF IETF-117 Online July 2022

Keyur Patel, Arccus
Acee Lindem, Cisco
Wim Henderickx, Nokia
Derek Yeung, Arccus
Abhay Roy, Arccus
Venu Venugopal, Cisco
Shawn Zandi, LinkedIn





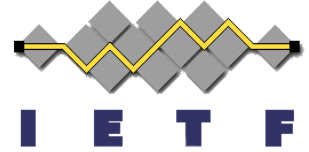
Status Update

- Draft version 26 was submitted on 6-19-22
- WGLC successfully done
 - Received reviews and feedback from lot of folks
- Multiple implementations now available
 - Opensource implementation also available in FRR
- Early review of routing directorate done
 - Issues were addressed, Status needs to be cleared

Status Update

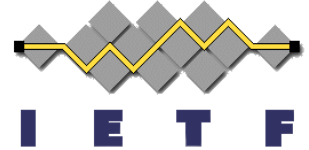
- Early OPSDIR review done
- Alvaro did the detailed AD Review
- YANG model draft submitted. 01 version posted
 - Fairly straightforward model
 - Feedback requested

AD Review Feedback



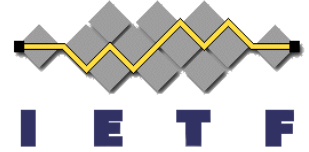
- Deep and insightful review with feedback from Alvaro
 - Many thanks!!
- Removed comparisons to IGPs and base BGP
- Added text for Error Handling
 - Added text for Semantic validation of NLRI and BGP LS attribute
 - Added text for Syntactic validation of NLRI and BGP LS attribute
- Added optional BGP-SPF synchronization requirement
- Added text for SPF computation section
- SPF Status TLV Clarifications
- Added text to Security section

AD Review Feedback – Error Handling



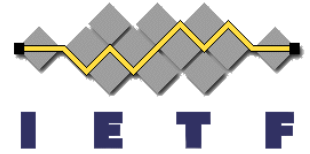
- Semantic & Syntactic validation for TLVS
 - Reference to the TLVs defined in the IGP (ISIS & OSPF) RFCs added
- Clarified Error handling for TLVs in LS Attribute and NLRIs
- Clarified Error handling for ordering violation of TLVs in LS Attribute and NLRIs
- Added text to explicitly call out mandatory TLVs for SPF Safi

AD Review Feedback – Error Handling



- Any errors in the mandatory attribute TLVs results in the attribute discard
- Malformed LS Attribute results in an attribute-discard behavior
 - Added text to forward NLRIs without LS Attribute to signal attribute-discard behavior within a domain

AD Review Feedback – SPF Computation Section



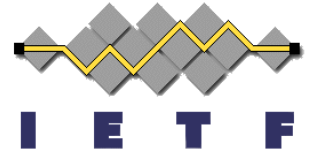
- Added text to explain the relationship of ECMP and unnumbered next-hops
- Added text to explain Prefix suppression in limited routing table capacity
- Added text to clarify status TLV's transit bit handling

AD Review Feedback – BGP-LS-SPF Neighbor Synchronization



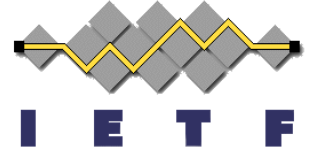
- OSPF requires LSDB synchronization prior to advertising an adjacency as a link in a Router-LSA
- For IS-IS, it is not required but optional.
- Added OPTIONAL requirement the BGP-LS-SPF End-Of-RIB be received before advertising a link.
 - If supported, it is configurable.

AD Review Feedback – SPF Status Clarifications

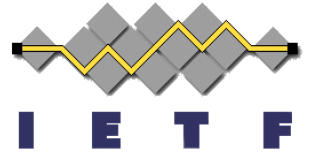


- Clarified usage of SPF Status TLVs in failure convergence scenarios.
- Precisely specified usage for each BGP-LS-SPF NLRI
- Added IANA registries for BGP-LS-SPF NLRI SPF Status

AD Review Feedback – Security section



- Constrained the use of SPF SAFI to domains within a single administrative control



Thank you