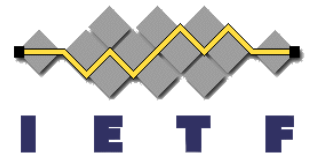


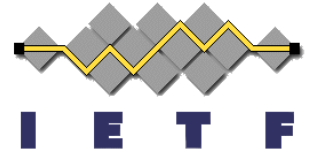
# LSVR BGP SPF IETF-112 Online November, 2021

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



# Status Update - Version 15

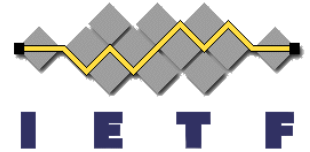
## Updates



- Nits: Consistency in usage of BGP SPF speakers as a terminology
- Provided clarification text on BGP SPF update packing of NLRIs
  - Higher chances of packing single NLRI per BGP-LS attribute
- Added text that ensures only one status TLV is advertised within a given update
  - Status TLV is common for Link attribute, Node attribute and a prefix attribute
  - Beefed up associated Error handling text

# Status Update - Version 15

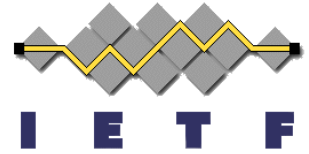
## Updates (cont'd)



- Provided clarification text in SPF algorithm section for handling of ECMP next-hops:
  - Next-hops bound to number of ECMP configured
  - Numbered link's next-hop preferred over an unnumbered link's next-hop
  - Highest address on numbered link and highest remote identifier on an unnumbered link is preferred

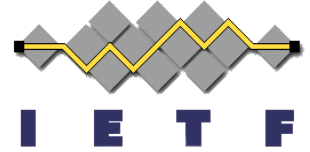
# Status Update - Version 15

## Updates (cont'd)

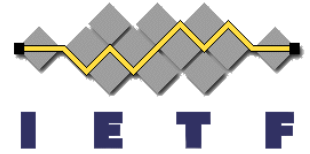


- Provided clarification text in SPF algorithm section for link matching criteria:
  - For numbered links, link descriptors must share a IPv4 or IPv6 subnet
  - For unnumbered links, current link's local identifier **MUST** match remote node link's remote identifier **AND** current link's remote identifier **MUST** match remote node link's local identifier
- Added Error handling text of IPv4 Prefix-length TLV
  - Any error in length value of IPv4 Prefix-length TLV in Link NLRI BGP-LS attribute **MUST** result in
    - Dropping of the TLV
    - Ensuring that the corresponding Node NLRI is not advertised further
    - Ensuring that the corresponding Link NLRI is considered as Malformed and **MUST** be handled as "Treat-as-Withdraw"
- Fixed Minor Nits

# Status Update – Version 13 Updates

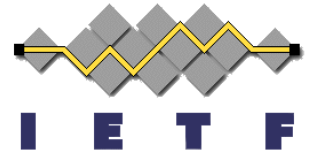


- Draft version 13 was submitted on 7-01-21
- Incorporated AD comments
  - Beefed up Error handling
  - Security section
  - Clarified the interaction and relation to BGP-LS and its TLVs
  - Clarified text all over the draft
  - SPF section augmented
  - Minor Nits



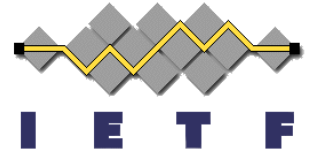
# Status Update - Summary

- Most of the text changes has minimal impact on implementation
  - Error handling an exception
- IANA section updated with implementation based TLV values



# Status Update - Summary

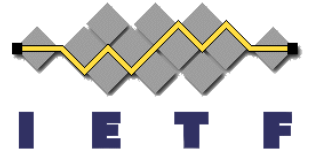
- WGLC successfully done
  - Received reviews and feedback from lot of folks
  - Request chairs to complete the last call.
- Early review of routing directorate done
  - Issues were addressed, Status needs to be cleared
- Addressed comments received from the Routing AD
- Multiple implementations now available
  - Opensource implementation also available in FRR



# Status Update - Summary

- YANG model draft work in progress
  - Fairly straightforward model
  - Model can be extended for BGP-LS SAFI





Thank you