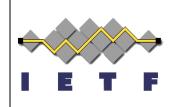
# BGP Tunnel Encapsulation Attribute IETF 99, Prague

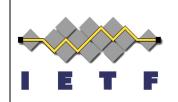
Eric Rosen Juniper Keyur Patel, Arrcus Gunter Van de Velde, Nokia





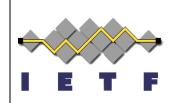
#### **Motivation**

- IDR WG draft
- Went thru WGLC
  - Lots of discussion happened on the mailing list
- Goal is to provide the draft update and clarifications on the received comments/suggestions with a hope to close the WGLC



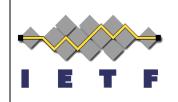
# Implementation Status

- Multiple implementations exist
- Cisco and Juniper have implementations in support of draft-previdi-idr-segment-routingte-policy, with real deployments planned
- Work on implementation reports is in progress
  - All vendors are encouraged to fill in the implementation report



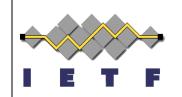
#### **RFC5566 Implications**

- Draft obsoletes RFC5512, which is a normative dependency of RFC5566
  - RFC5566 is primarily about the use of IPsec tunnels
- Clearly a need to update RFC5566
- Should be done as a separate effort
  - Outside the scope of the current draft



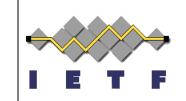
# **Other Suggestions**

- Need for some Sub-TLVs to have a 2-Octet length field
  - Good Idea and has been incorporated
- Sub-TLV for IPv4 DS field has been defined but not for IPv6 DS
  - Don't read too much into this
  - Draft does not intend to define every sub-TLV that might ever be useful
  - New sub-TLVs can always be defined in new drafts; this is expected



# Other Suggestions (Cont'd)

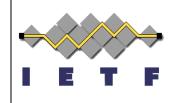
- Barebones Tunnel TLV
  - "barebones": tunnel type and endpoint specified, but no other encapsulation information is signaled
  - Rev 5:
    - "don't use barebones tunnel TLV, use Encapsulation Extended community instead
    - Provides backwards compatibility with applications that already use Encapsulation EC
  - Rev 6 loosens rule, allowing both barebones
    TLV and Encaps EC to be present. Encaps EC still needed for backwards compatibility



# Other Suggestions (Cont'd)

- Suggestion to carry only single Tunnel TLV in Tunnel Encapsulation attribute
  - But ability to specify choice of tunnels is important feature!
  - Simplest and most straightforward way to signal a choice of tunnels is with multiple Tunnel TLVs in the attribute





- Used to specify Destination Mac Header field of inner Ethernet header
- Suggestion to follow proposal similar to https://tools.ietf.org/html/draft-yong-l3vpnnvgre-vxlan-encap-00
  - Draft expired for 4+ years
  - Current encapsulation TLV in accordance with RFC7637
- Preference is to leave it as is unless wg consensus is otherwise.

# **Next Steps**



- Close on the implementation reports
  - Consider closing the wglc/reissue the call
- Get the draft towards standardization