

BGP Flowspec

Redirect Load Balancing Group Community

`draft-wu-idr-flowspec-redirect-group-01`

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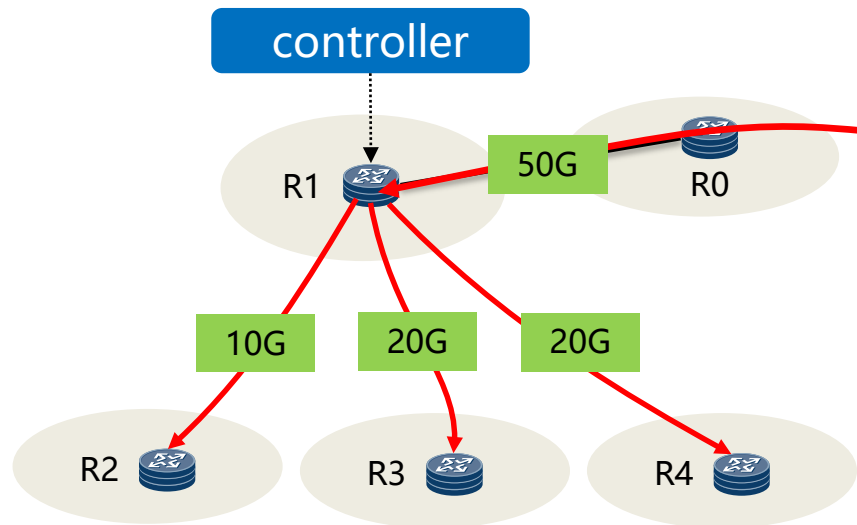
Yokohama

Overview

- Recapitulation on motivation and problem statement.
 - Defines a new BGP Community Container Attribute
- Updates since IETF 113
 - Re-phrasing on Atoms (Sub-tlvs)
 - Inter-action with other redirect actions
 - Adding sections about validation procedure
 - Thinking compatibility with flowspec-v2

Motivation & Problem Statement

- BGP Flow Specification allows flow routes that carry traffic policies to steer traffic.
- In some scenarios, we need to steer traffic to a load balancing group, either ECMP or UCMP.



- For the 50G traffic to R1 from R0, we may want to steer traffic to R2, R3 and R4 in a 1:2:2 ratio
- The ratio could be changing according to network running status
- Routers may be deployed in IP, MPLS or SRv6 networks
- Current set of mechanisms can hardly support neither ECMP of SRv6 tunnels nor UCMP of either types.

Redirect Load Balancing Group Community

- New Type of BGP Wide Community
- Extension to "BGP Community Container Attribute" [draft-ietf-idr-wide-bgp-communities]
- General formats comply with "BGP Community Container Attribute"
- New Community Value: **Redirect Load Balancing Group (TBD)**, require IANA reregistration
- **MUST** contain only 1 Parameter TLV(subtype 3)
- Parameter TLV contains a list of atoms, each represents a redirection action
- Each redirection action complies with wide community atom format(1 byte type, 2 bytes len)

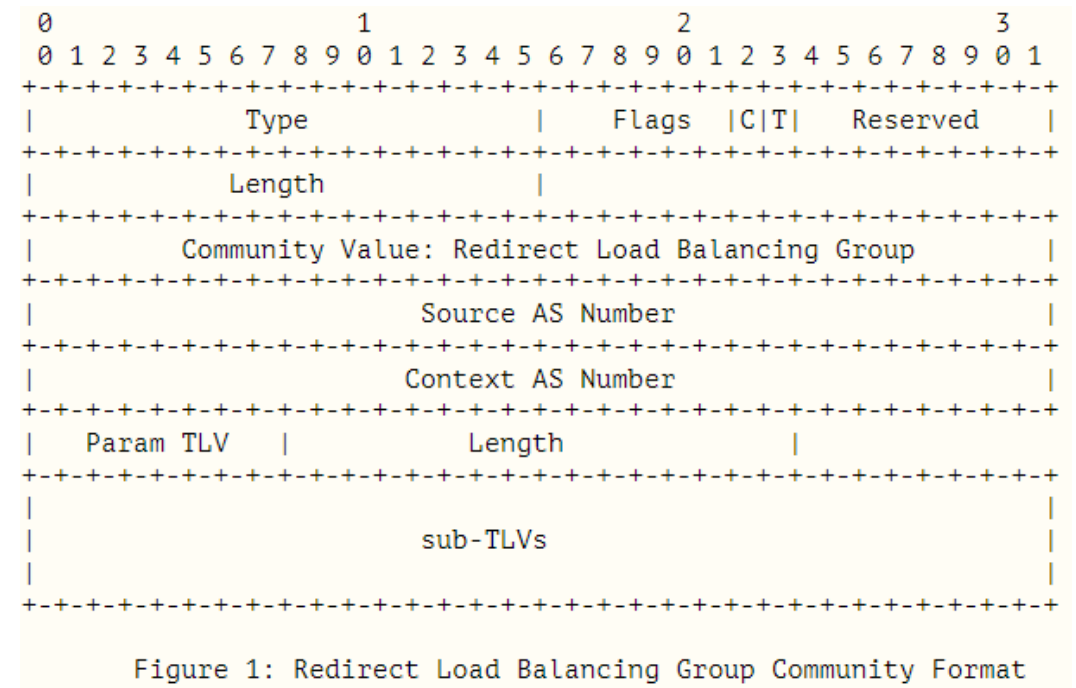


Figure 1: Redirect Load Balancing Group Community Format

Updates since IETF 113

- Re-phrasing on Atoms(Sub-tlvs)
 - Using “Path-tlv” for a redirection action instead of “Atom”
- Inter-action with other redirect actions
 - Configuration Control
 - Extended Community actions MAY take precedence by default
- Adding validation procedure
 - Each Path-tlv SHOULD be validated separately
 - Redirect Group is considered verified only after all path-tlvs are verified
- Thinking compatibility with flowspec-v2
 - Mainly designed for flowspec-v1 scenario
 - Not conflict with FS-v2-actions wide-community

Next step

- Welcome more comments and discussion

Thank you!