BGP Flow Specification – V
Draft-hares-idr-flowspec-v2-00.txt

Susan Hares
July 2016
Flow Spec (RFC5575) Review

RFC 5575 summary

- **NLRI**
  - For SAFI 133: IPv4 (AFI=1), IPv6 (AFI=2), L2VPN AFI=25)
  - For SAFI 134: IPv4 (AFI=1), IPv6 (AFI=2), L2VPN (AFI=25)

- **Validation**
  - Originator of flow spec = originator of best-match unicast route for destination embedded in NLRI,
  - No more specific unicast routes, when compared with Flow destination prefix, that have been received from different neighbor AS

Problems with RFC5575

- No user-based ordering for filters or actions
- Security could be
  - Added to by BGPSEC or ROA
  - Could be lessened within a single AS [draft-ietf-idr-flowspec-oid]
Flow Specification Policy

- ECA = Event – Condition - Action
  - Flow-specification event = “packet reception”,
  - Condition – match filters in NLRI
  - Action – in Extended communities

FS Policy Rule List

FS Rule

Match Filters in BGP NLRI SAFI 133, 1334

Actions in BGP Extended Communities

Modify

Forward
New filter match with order

```
+-------------------------------+
| length (2 octets)            |
+-------------------------------+
| sub-TLVs (variable)          |
| +----------------------------+
|   | order (2 octets)           |
| +----------------------------+
|   | type (2 octets)            |
| +----------------------------+
|   | length (2 octets)          |
| +----------------------------+
|   | value (variable)           |
|   | [multiples of 2 octets]    |
+-------------------------------+
```

Figure 16 - NRLI revision
New Action atom for BGP Wide Communities

+-----------------------------------------------+
| order (2 octets) |  
+-----------------------------------------------+
| Action type (2 octets) |  
+-----------------------------------------------+
| Action length (2 octets) |  
+-----------------------------------------------+
| Action Values (variable) | (multiples of 2 octets) |  
+-----------------------------------------------+

Wide Community Atom

figure 17
BGP-FS Atom added to

Wide Communities container (type 1) or
BGP Flow Specification container (type 2) (see below)

BGP-FS Container type 2

+------------------------------------------------+
| Source AS Number  (4 octets) |
+------------------------------------------------+
| list of atoms (variable) |
+------------------------------------------------+
Action Request

- Review comments
  - Need for Version 2 of BGP-FS
  - Input on solution