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

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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
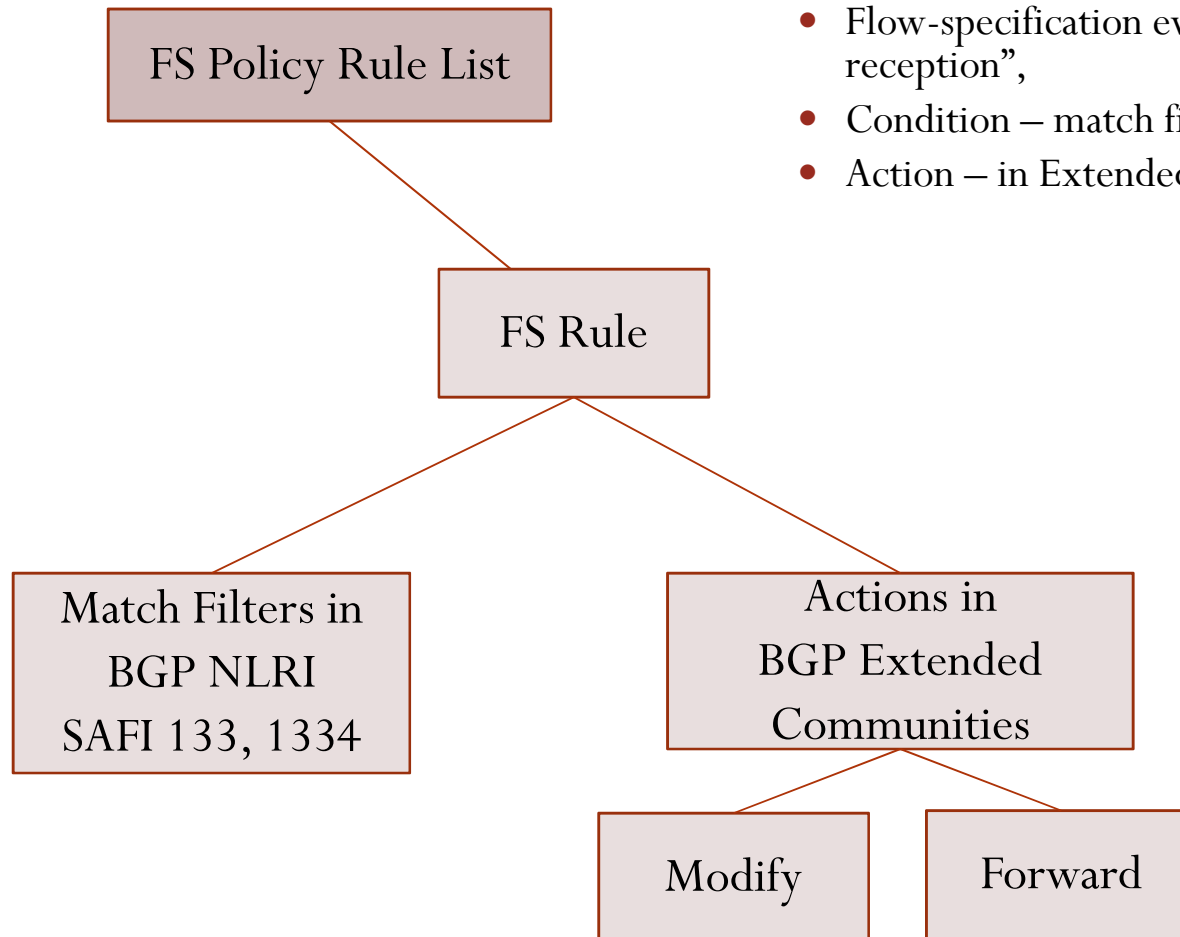
Problems with RFC5575

- 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      Actions in
BGP NLRI              BGP Extended
SAFI 133, 1334       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

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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