

# BGP FlowSpec Outbound Route Filter

draft-liang-idr-flowspec-orf-00

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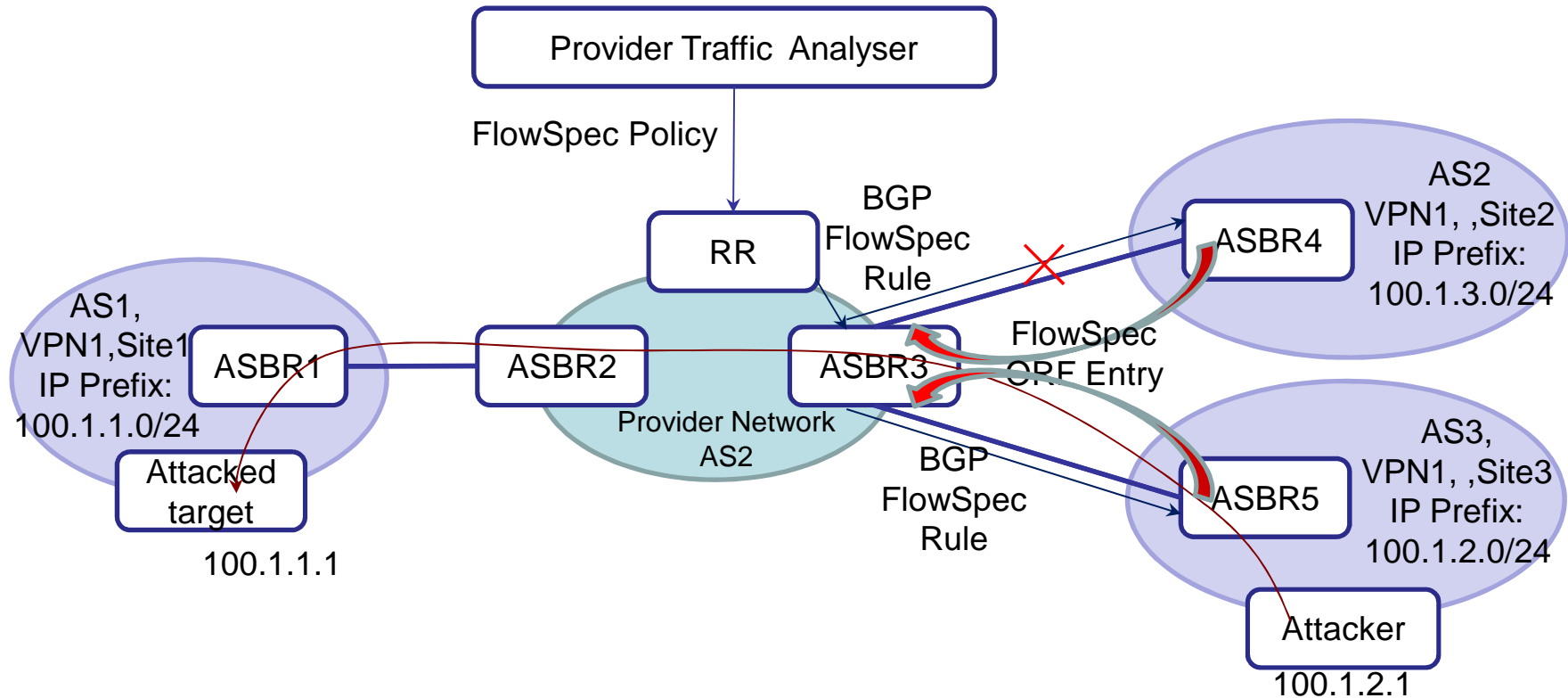
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# Motivation

- Network Security Policies
  - ASBR filters traffic from adjacent AS – reducing Traffic
- FlowSpec Specific Capability Negotiation
  - Select from all Types of ORFs to just the one's selected

# Scenario



VPN1,Site1 only has an internal subnet(IP prefix:100.1.1.0/24).  
VPN1,Site2 only has an internal subnet(IP prefix:100.1.3.0/24).  
VPN1,Site3 only has an internal subnet(IP prefix:100.1.2.0/24).

Attacker with IP address as 100.1.2.1 in the network of VPN1,Site3,  
who is attacking the host 100.1.1.1 in the network of VPN1,Site1.  
And the traffic analyzer has detected this attacking traffic .

# Protocol Extensions(1)

```

+-----+
|Sequence (32 bits) |
+-----+
|Filter Number (8 bits) |
+-----+
|RD Number (8 bits) |
+-----+
|RD Equal Flag (1 bits) |
+-----+
|Reserved (15 bits) |
+-----+
|Action Matching (32 bits) |
+-----+
|RD 1 (64 bits) |
+-----+
|..... |
+-----+
|RD n (64 bits) |
+-----+
|Filters (variable, RFC5575)|
+-----+

```

FlowSpec-ORF

"Type specific part" Encoding

- **RD Number:** the number of the RD items.  
SAFI=133, RD Number=0;
- SAFI=134, RD > 1
  
- **RD Equal Flag:** matching mode for RD.
  
- **RD:** An 8-byte Route Distinguisher (RD), present when SAFI=134.
  
- **Action Matching:** each bit corresponds to a particular FlowSpec action [RFC5575].
- If set, match the action;
- If unset, not match the action.

# Protocol Extensions(2)

The filters in FlowSpec-ORF are aligned with the filters defined in [RFC5575], etc. except the following four types:

Filter Type	RFC/Draft
Type 1: Destination Prefix IPv4 or IPv6	RFC5575, Idraft-ietf-idr-flow-spce-v6
Type 2: Source Prefix IPv4 or IPv6	RFC5575, Idraft-ietf-idr-flow-spce-v6
Type 14: Destination MAC Prefix	Idraft-hao-idr-flowspec-evpn
Type 15: Source MAC Prefix	Idraft-hao-idr-flowspec-evpn

Type(8 bits)	
MaxLen (8 bits)	
MinLen (8 bits)	
Length (8 bits)	
Prefix (32/48/128 bits)	

These four types are encoded as shown in the left figure . MaxLen, MinLen, Length, Prefix are the same as defined in [RFC5292].

# Next Step

- Describe the regulation how flowspec-orf entries filter the flowspec rule more clearly.
- Solicit more discussion on the mailing list

**Thank You!**