

BGP FlowSpec Redirect VPN RD

draft-yong-idr-flowspec-redirect-vpn-rd

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About this draft

- Define a new redirect VPN extended community for FlowSpec redirect VPN
 - Redirect VPN RD Extended Community
- The new community identifies the unique VPN instance within a router
 - Avoid local configuration, operation simplicity

Why this proposal?

- Multiple VPNs on a router may import from the same RT
- Use of RT for flowspec redirect VPN results extra local configuration
- RFC5575 states:

The redirect extended community allows the traffic to be redirected to a VRF routing instance that lists the specified route-target in its import policy. **If several local instances match this criteria, the choice between them is a local matter** (for example, the instance with the lowest Route Distinguisher value can be elected).

Require local config. for the selected VPN instance

Example (DDoS traffic redirect)

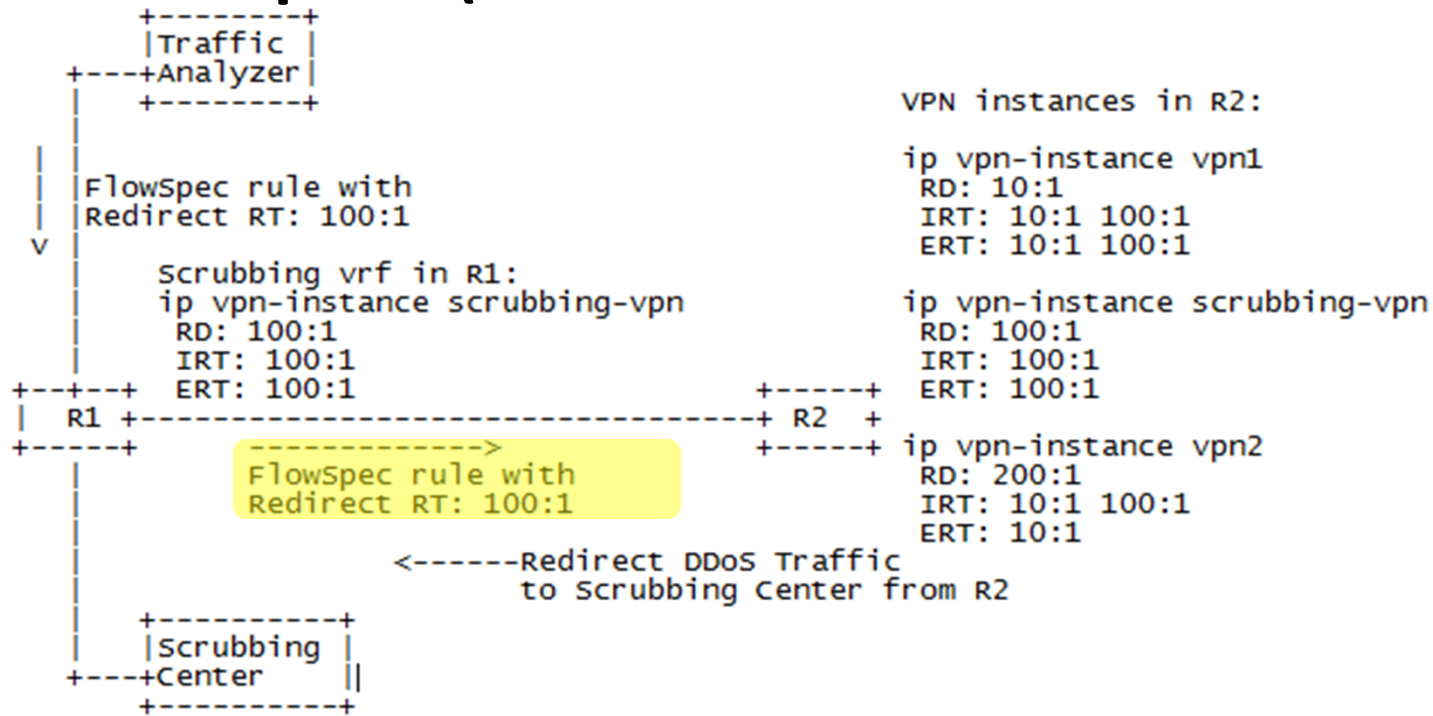


Figure 1 Redirect DDoS Traffic to Scrubbing Center Using Redirect VPN RT

- To work properly, need to configure R2 so that the FlowSpec redirect VPN (R100:1) points to scrubbing-vpn, not others. (many such R2s in networks)
- Alternative is to have a unique RT value for the scrubbing-vpn in networks

[This draft is to solve this issue](#)

Redirect VPN RD Extended Community

Type	Sub-Type	Extended Community	Encoding
0x80	TBD	AS-2byte RD	2-octet AS, 4-octet Value
0x81	TBD	IPv4 RD	4-octet IPv4 Address, 2-octet value
0x82	TBD	AS-4byte RD	4-octet AS, 2-octet Value

Figure 2: VPN RD Extended Communities

- Upon receiving this community, a router selects the VPN instance indicated by the RD value as the redirect VPN
 - Unique, (local configuration is not necessary)

Example again

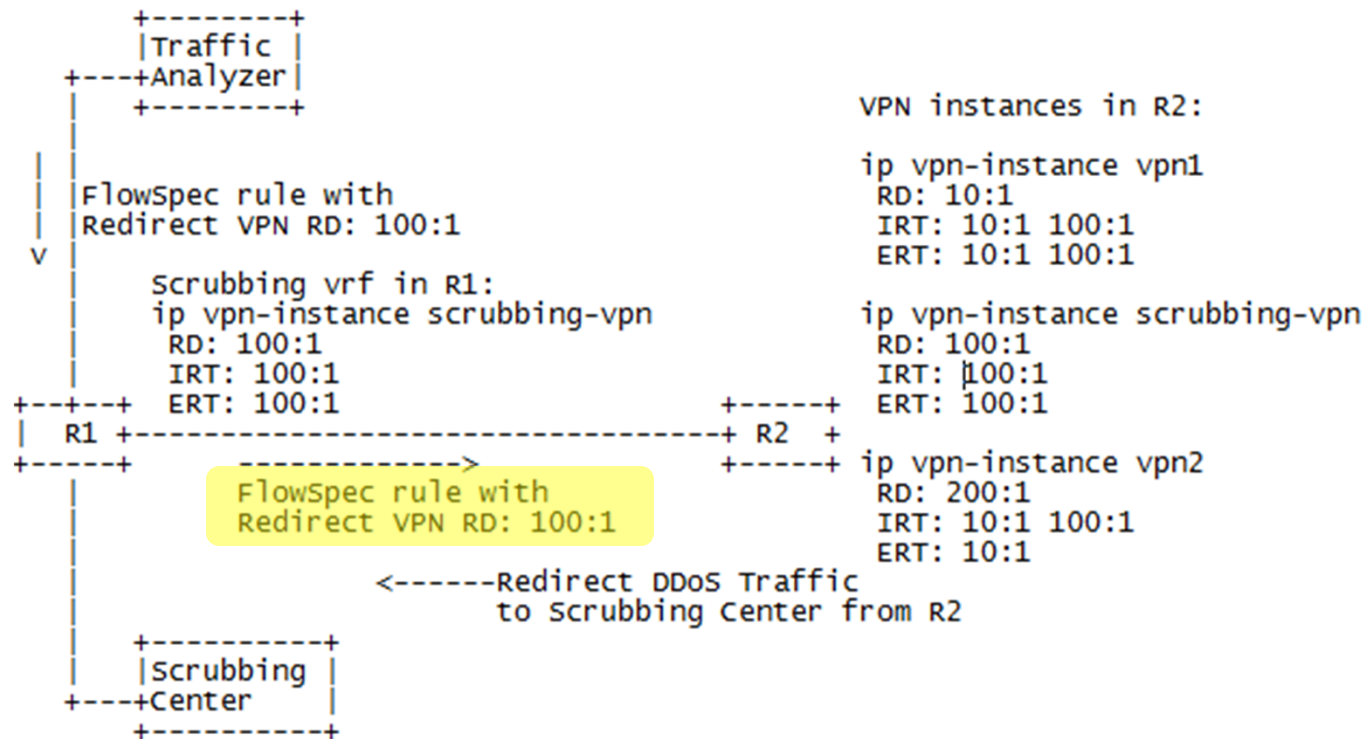


Figure 3: Redirect DDoS Traffic to Scrubbing Center Using Redirect VPN RD

- Single VPN instance is selected on a router when use of redirect VPN RD

Next steps

- Welcome comment/feedback on this proposal
- Address backward compatibility