Dissemination of Flow Specification Rules for NVO3

draft-hao-idr-flowspec-nvo3-00
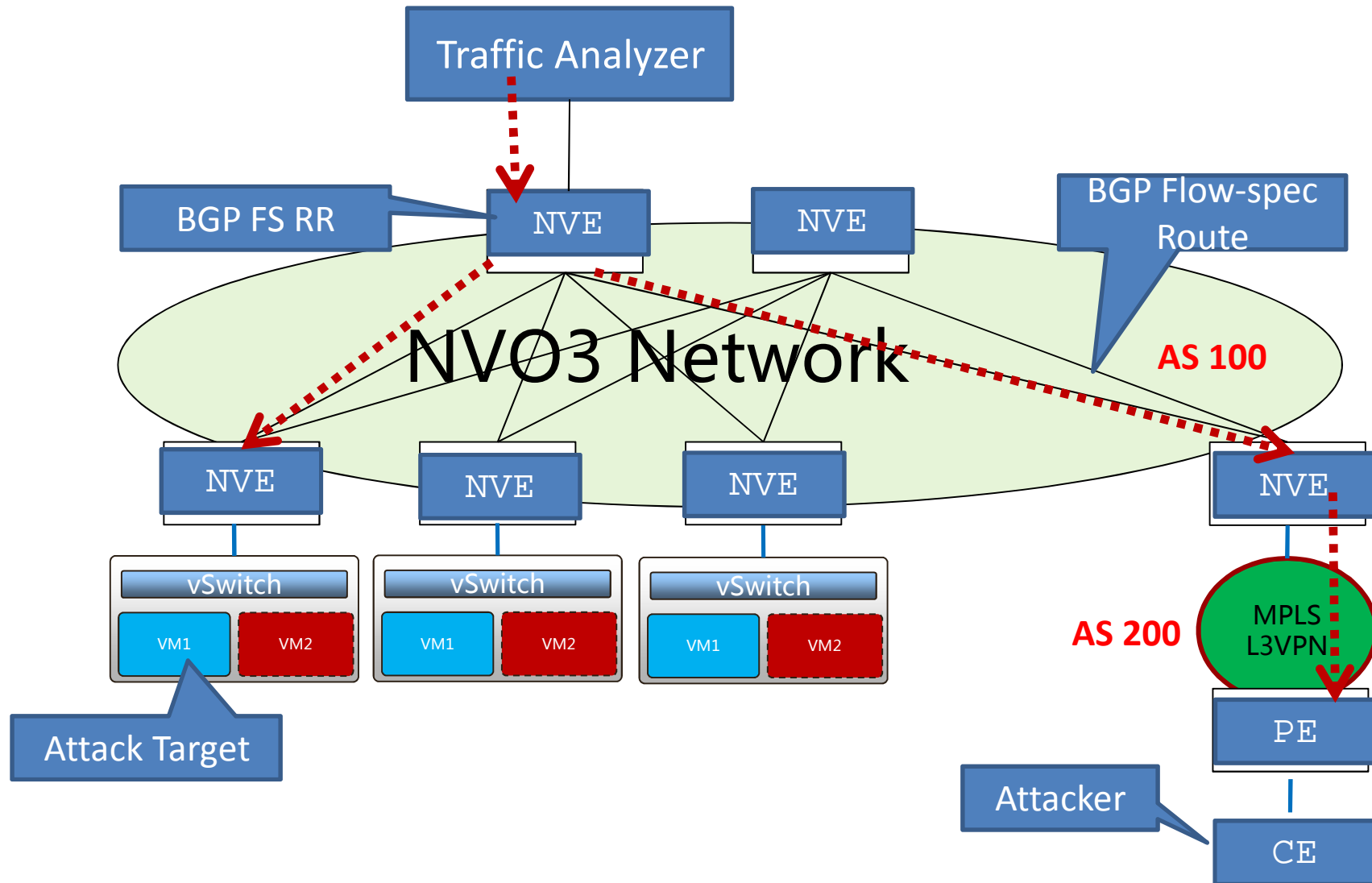
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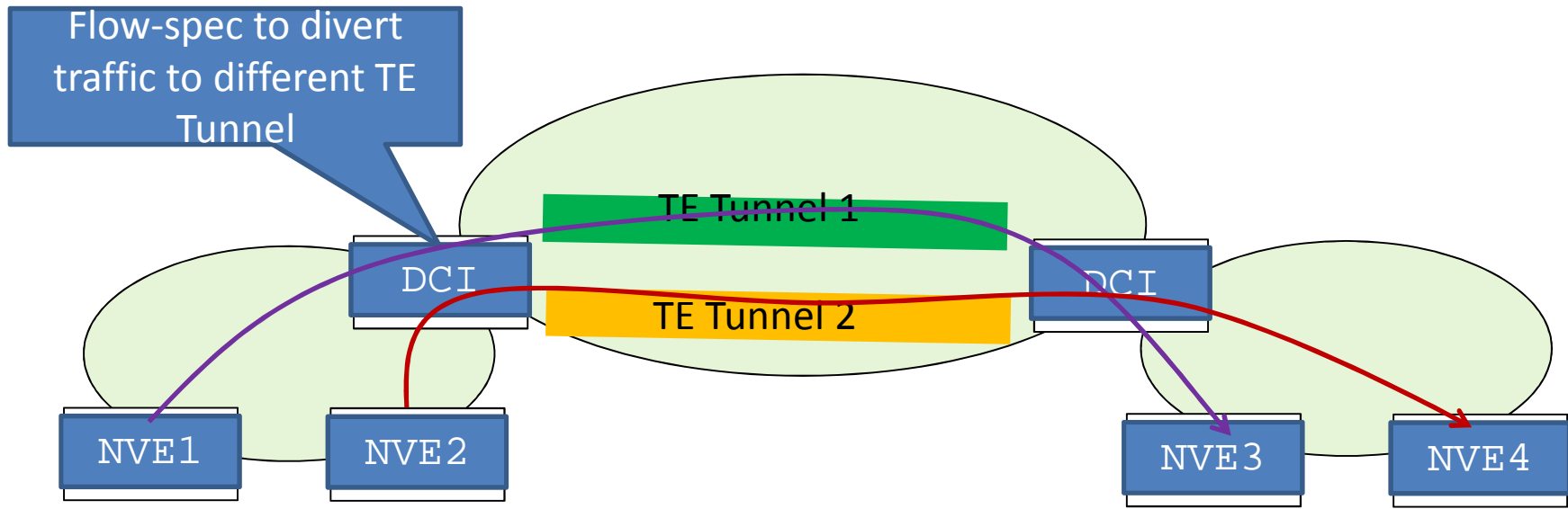
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Scenario 1: DDOS mitigation

Scenario 2: Traffic steering

Flow-spec to divert traffic to different TE Tunnel

TE Tunnel 1

DCI

TE Tunnel 2

DCI

NVE1

NVE2

NVE3

NVE4

Divert traffic to different Tunnel relying on BGP flow-spec on DCI device.

BGP Flow-spec for NVO3 Requirements Summary

① The match part should include inner L2/L3 header information and NVO3 header.
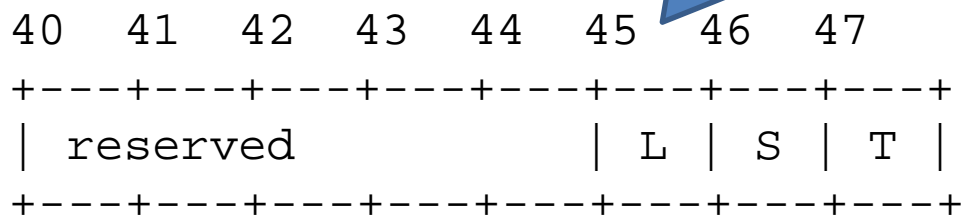② The Traffic Filtering Actions supports redirect to TE tunnel or NVO3 tunnel.

Flow-spec extension

Add new Component Types for NVO3 header:

```
Type TBD1 – VN ID
Type TBD2 – NVO3 Proto Type
```

Layer Flag in traffic action

```
40   41   42   43   44   45   46   47
+---+---+---+---+---+---+---+---+
| reserved              | L | S | T |
+---+---+---+---+---+---+---+---+
```

Layer Flag(Bit 45): When this bit is set, the corresponding filtering rules will be applied on the NVO3 inner layer. If not set, the corresponding filtering rules will be applied on the NVO3 outer layer.

Next Step

- Seek some comments and feedbacks

Flow-spec traffic action

```
+--------+-------------------+---------------------------+
|  type  | extended community |      RFC or Draft        |
+--------+-------------------+---------------------------+
| 0x8006 | traffic-rate      | RFC5575                   |
| 0x8007 | traffic-action    | RFC5575                   |
| 0x8008 | redirect          | RFC5575                   |
| 0x8009 | traffic-marking   | RFC5575                   |
| TBD    | redirect to Tunnel | This draft               |
+--------+-------------------+---------------------------+
```

➢Besides 'redirect to IP' and 'redirect to VRF', 'redirect to Tunnel' is proposed.
➢The set of tunnels can be specified in the BGP Path Attribute.