

BGP Dissemination of FlowSpec for Transport Aware Mobility

draft-dmc-idr-flowspec-tn-aware-mobility-01

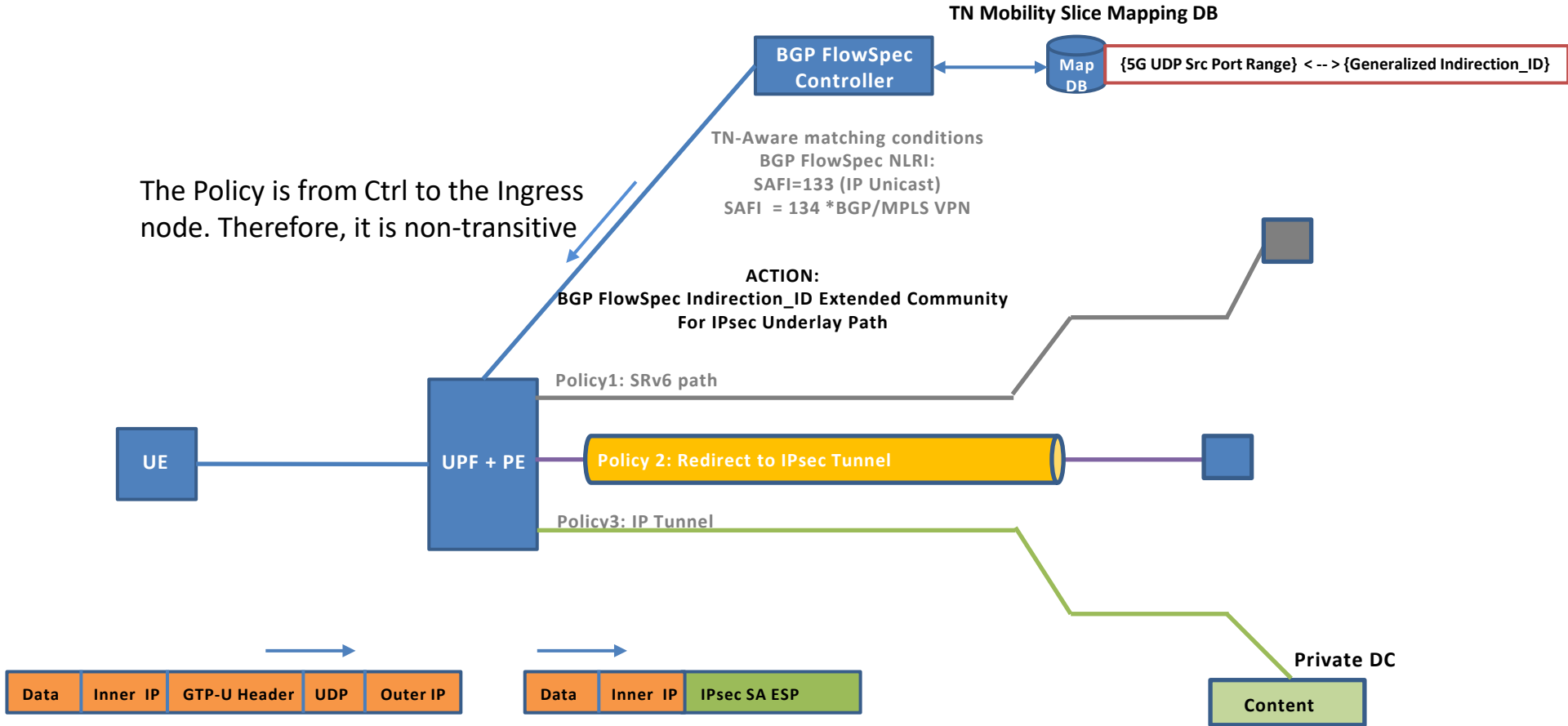
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Background

- IP tunnel:
 - draft-ietf-idr-flowspec-path-redirect-11
- SRv6 path:
 - draft-ietf0-idr-srv6-flowspec-path-redirect-05
- Add IPsec Tunnel
 - Needed by draft-mcd-rtgwg-extension-tn-aware-mobility-02

BGP FlowSpec Traffic Redirect to IPsec tunnels (SD-WAN)



SR-TE Based Data Network

Matching Example

- To filter out flows with source UDP port number between [i, j], the following encoding can be used in the NLRI (SAFI=133 or SAFI 134):

```
<Type = 6, [numeric_op1, i][numeric_op2, j]> /* UDP port range
<Type = 2, [numeric_op3, Src-Prefix]>       /* source prefix
<Type = 1, [numeric_op4, Dest-prefix]>     /* Destination prefix
```

- Numeric_Op1 is:

```
0  1  2  3  4  5  6  7
+---+---+---+---+---+---+---+---+
| e | a | len | 0 |lt |gt |eq |
| 0 | 1 | 00  | 0 | 0 | 1 | 0 |
+---+---+---+---+---+---+---+---+
```

- Numeric_Op2 is:

```
0  1  2  3  4  5  6  7
+---+---+---+---+---+---+---+---+
| e | a | len | 0 |lt |gt |eq |
| 1 | 1 | 00  | 0 | 1 | 0 | 0 |
+---+---+---+---+---+---+---+---+
```

Extension: redirect to IPsec Tunnel

FlowSpec Redirect to Indirection-ID Extended Community (Non-Transitive):

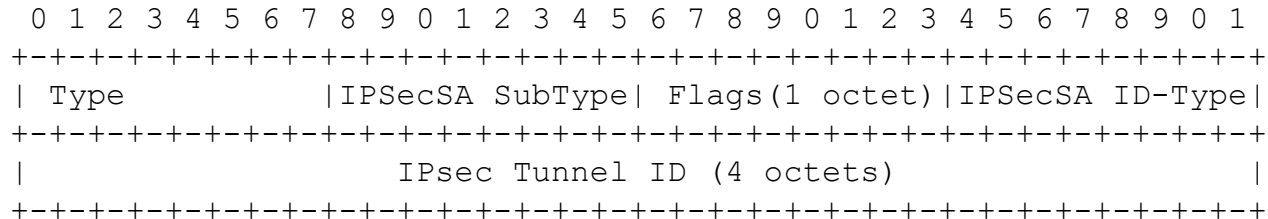


Figure 3: Redirect to Ind-ID Ext Community for IPsec Tunnel

Where
Type = (to be assigned by IANA): Non-Transitive FlowSpec Redirect to Indirection-ID Extended Community.

Sub-Type: IPsec SA: its value (To be assigned by IANA):
indicate the ID carried is IPsec SA ID (pre-established).

Flags: Same as that defined in [Flowspec-path-redirect].

IPsec SA ID-Type: needed for IPsec IPv4 tunnel (to be assigned by IANA)
Inner Encap type = IPsec+GRE
Inner Encap type = IPsec+Vxlan

Next Steps

- **Need your feedback!**