Export of BGP VPN Information in IPFIX

draft-liu-opsawg-ipfix-bgp-vpn

Yao Liu	ZTE（Presenter）
Liman Zhao	ZTE
Yisong Liu	China Mobile

BESS IETF#125 Mar, 2026

Background and Motivation

➢ IPFIX: IP Flow Information Export protocol, serves as a means for transmitting Traffic Flow information over the network from an exporter to a collector.

- Information Element(IE): a description of an attribute that may appear in an IPFIX Record

➢When monitoring traffic flows on the ingress PE in a network with BGP VPN deployed, we want to know:

- Which egress PE is the flow forwarded to ?

➢Existing IPFIX IEs are not enough

- IE bgpNextHopIPv4Address(18) and bgpNextHopIPv6Address(63) define the IPv4/IPv6 address of the next (adjacent) BGP hop.
- When there're many types of BGP route used in the network(e.g., BGP VPN is used together with BGP-LU, it is not clear which type of the BGP route the next BGP hop carried in IE 18/IE 63 belongs to.

➢This document proposes new IEs to carry the egress PE information in IPFIX.

New IEs for Egress PE Info in BGP VPN

The generic IEs to obtain egress PE info

- IE TBA1: bgpVpnNextHopIPv4Address

The 32-bit IPv4 address which is used as the next hop address of the BGP VPN route

- IE TBA2: bgpVpnNextHopIPv6Address

The 128-bit IPv6 address which is used as the next hop address of the BGP VPN route

Limitation: In the multi-as backbones, if inter-AS option A or option B with BGP next-hop changed are used, the address of the egress PE can't be obtained.

For SRv6 VPN, another choice is to export the locator information of the SRv6 service SID

- IE TBA3: srv6ServiceSid

The SRv6 Service SID received via the SRv6-based BGP service route [RFC9252]

- IE TBA4: srv6ServiceSidLocatorLength

The length of the SRv6 Locator of the SRv6 service SID specified as the number of significant bits.

Next Steps

- Welcome feedback, comments and collaboration!
- Are these IEs defined properly?
- Anything else that needs to be taken into consideration?

Thank You !