

L3VPN Address Prefix Based Outbound Route Filter for BGP-4

draft-xu-bess-l3vpn-prefix-orf-02

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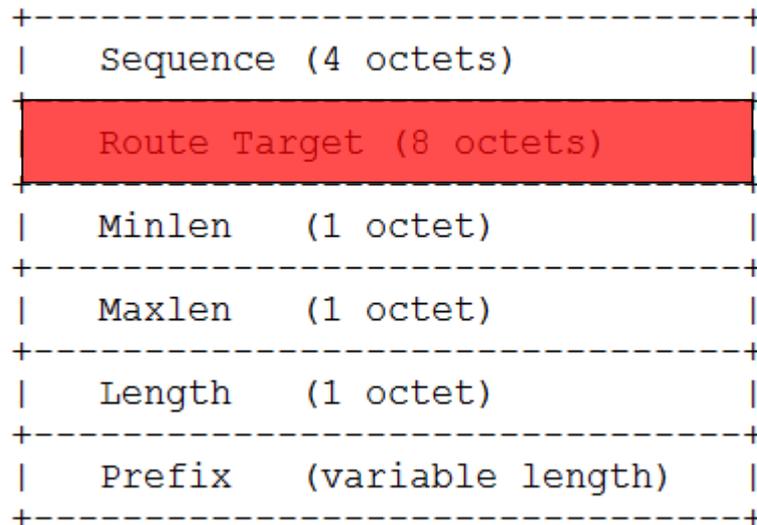
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Motivation

- The Address Prefix ORF defined in [[RFC5292](#)] is used to perform address-prefix-based route filtering. However, the Address Prefix ORF is not much suitable for L3VPN [[RFC4364](#)] route filtering since there is no Route-Target (RT) field contained in the Address Prefix ORF entry.
- This document builds on [[RFC5292](#)] and defines a new ORF-type for BGP, referred to as "L3VPN Address Prefix Outbound Route Filter (L3VPN Address Prefix ORF)", that can be used to perform L3VPN address prefix-based route filtering.
 - The L3VPN Address Prefix ORF supports prefix-length- or range-based matching, wild-card-based address prefix matching, as well as the exact address prefix matching for L3VPN address families.
- The L3VPN Address Prefix ORF is applicable to reduce the RIB size of PE routers in the Virtual Subnet [[I-D.ietf-bess-virtual-subnet](#)] context.

L3VPN Address Prefix ORF Encoding

- A L3VPN Address Prefix ORF entry includes a Route Target field in addition to those fields which have been contained in the Address Prefix ORF [[RFC5292](#)].
 - The Prefix field doesn't include the Route Distinguisher (RD) part of a L3VPN address prefix. For example, in the case of a VPNv4 address prefix, only the IPv4 address prefix part of that VPNv4 address prefix is contained in the Prefix field.



Type Specific Part of L3VPN Address Prefix ORF Entry Encoding

L3VPN Address Prefix ORF Matching

- When performing route matching search on those L3VPN routes which are associated with the Route Target as specified in the received L3VPN Address Prefix ORF entries, the Address-Prefix-ORF-specific matching rules as defined in [[RFC5292](#)] are almost preserved except that the RD SHOULD be ignored.

Next Steps

- WG adoption?