

# **L3VPN Address Prefix Based Outbound Route Filter for BGP-4**

**draft-xu-bess-l3vpn-prefix-orf-01**

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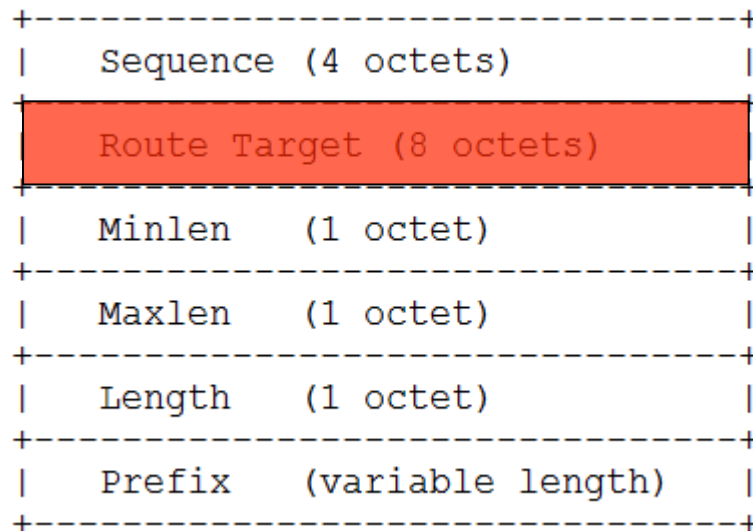
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# Motivation

- 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-l3vpn-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?