



# MPLS-VPN-MIB

draft-nadeau-mpls-vpn-mib-00.txt

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# Requirements

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- **Based on RFC2547 and RFC2547bis, support BGP/MPLS VPN *only***
- **Support operation based on IP backbone or layer-2 (e.g., FR/ATM) backbone**
- **Support Enterprise VPN, Carrier's Carrier VPN, and Inter-Provider Backbone VPN**
- **Support the configuration of BGP/MPLS VPNs. It can be used for service creation, or building the configuration tools for autoprovisioning**
- **Support maintenance and troubleshooting of BGP/MPLS VPN**



## Requirements (cont.'d)

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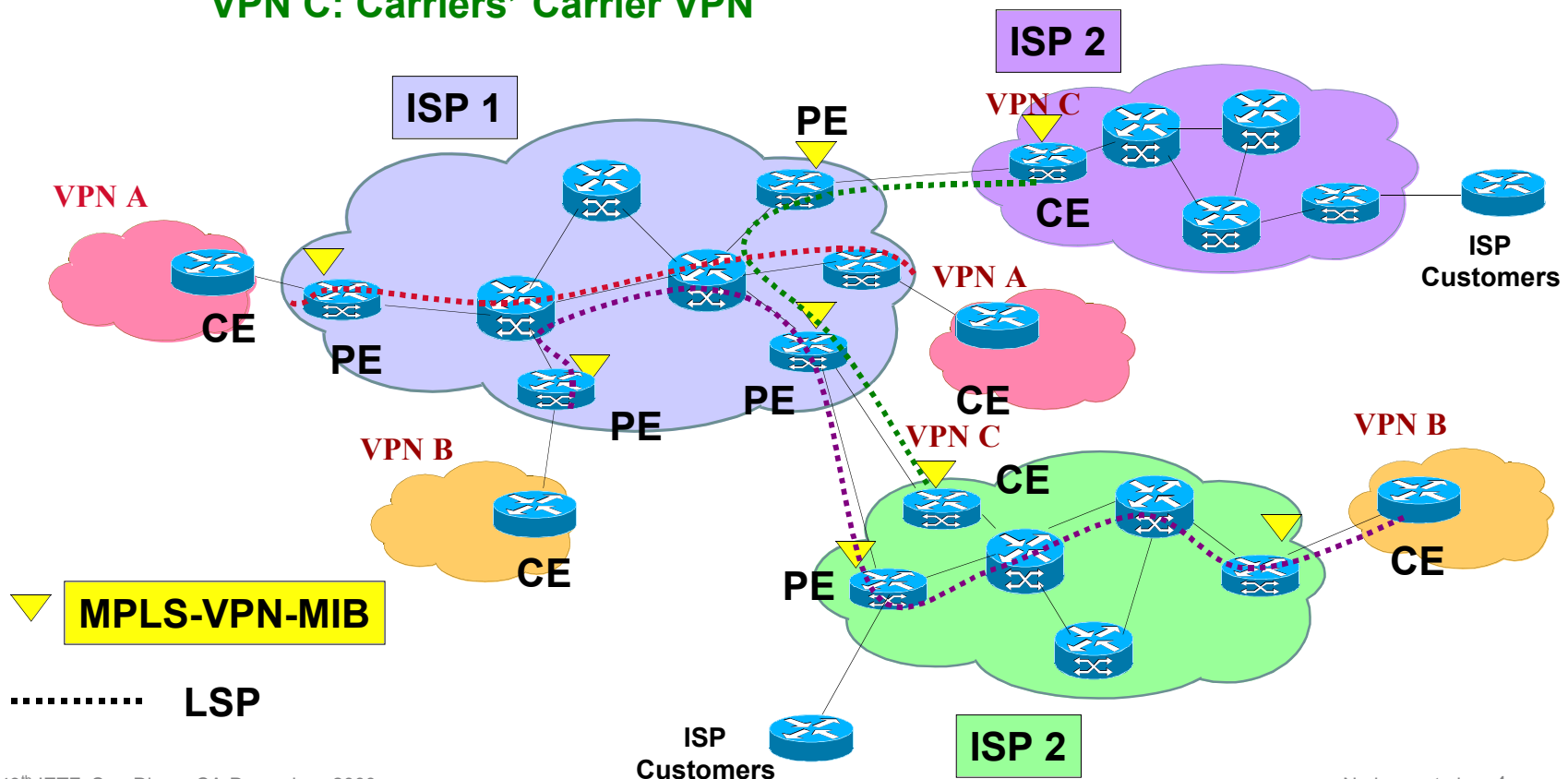
- **Support Provider Edge (PE) routers, which can be configured to maintain one or more VPN Routing and Forwarding Tables (VRFs)**
- **Support BGP/MPLS VPNs which are configured on a particular physical interface or sub-interface if the interface can be divided (e.g., FR/ATM) of the PE router**
- **Support a configuration where each interface belongs to a particular VPN on the PE router and can be configured to import or export the information from the same VPN or different VPNs**
- **Provide reachability information of MPLS VPN, which is distributed through MP-BGP**

# Applicability of MPLS-VPN-MIB in MPLS VPN Environment

VPN A: Enterprise VPN

VPN B: Inter-Provider Backbone VPN

VPN C: Carriers' Carrier VPN





# Tables

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- **mplsVpnInterfaceConfTable**
- **mplsVpnVrfConfTable**
- **mplsVpnVrfBgpNbrTable**
- **mplsVpnVrfSecTable**
- **mplsVpnVrfPerfTable**



## **mplsVpnInterfaceConfTable**

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- **Entries in this table are created for every interface capable of supporting BGP/MPLS VPN**
- **Each entry in this table is meant to correspond to an entry in the Interfaces Table**



## mplsVpnVrfConfTable

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- **An entry in this table is created for every VRF capable of supporting BGP/MPLS VPN**
- **The indexing provides an ordering of VRFs per VPN interface**



## **mplsVpnVrfBgpNbrTable**

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- **An entry in this table is created by an LSR for every VRF capable of supporting BGP/MPLS VPN and its corresponding BGP neighbors**
- **Has to be in a separate table to facilitate multiple BGP neighbors**





## **mplsVpnVrfSecTable**

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- **Each entry in this table is used to indicate security-related information for each VRF entry**
- **Currently only a single variable; more objects to be added (feedback welcome)**



## **mplsVpnVrfPerfTable**

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- **This table specifies per MPLS/BGP VPN VRF Table performance information**
- **Currently only a few entries; more objects in progress (input welcome)**



## Current Work

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- **Need to make modifications from comments received on PPVPN WG mailing list**
- **Welcome input/comments (especially based on additional deployment experience)**



# Conclusions

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- **Supports monitoring and configuring BGP/MPLS VPNs**
- **Based on real-world network experience**
- **Ask that this work be adopted by PPVPN WG as a work item**