



# VR MIB

<draft-elwin-ppvnpn-vr-mib-00.txt>

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# VR Management Model

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- Single SNMP agent to manage multiple VRs in a PE
  - SNMP contexts to identify different VRs
    - SNMPv2 community strings OR SNMPv3 contexts
    - Existing standard MIBs do not need an additional index to denote a VR.
  - VRId to index VRs in some of the new tables
  - Tunnels for the VRs:
    - Could either be configured using **Tunnel MIB** OR
    - Could be setup using a tunnel signaling protocol
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# VR MIB Tables

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- VR Config Table
    - This table is used to create/destroy/update VRs
  - VR IF config Table
    - To attach an interface to a VR
  - VR Stats Table – all per-VR statistics
  - VR IVL Config Table
    - To create/destroy Internal Virtual Links (IVL)
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# VR Config Table

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- vrid – index
  - vrContextName
  - vrVpnId
  - vrParent
    - To denote the relationship of a dependent VR to the backbone VR
  - vrDefaultForwardAction (for VPN Internet Access)
    - If the route to a destination is not found in a VR, either drop the packet OR forward based on parent VR forwarding table
  - vrPrimaryCP, vrSecondaryCP
    - For VR processor-level-redundancy OR load-balancing
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# VR IF Config Table

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- This table is used to attach/detach an existing interface to/from a VR
  - The elements in this table include:
    - vrlfId – ifIndex (primary index to this table)
    - vrId – denotes the VR to which the interface gets attached to.
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# VR Stats Table

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- This table has all the per-VR statistics
  - The objects include:
    - vrId -- Index
    - vrStatRouteEntries
    - vrStatFibEntries
    - vrStatUpTime
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# VR IVL Table

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- This table is used to create/destroy internal virtual links (IVLs)
  - Each IVL creation generates two interfaces, called IVIs. The IVIs can then be attached to appropriate VRs.
  - Objects in this table include:
    - vrlvlIndex – primary index
    - vrlvlInterfaceA, vrlvlInterfaceB
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# VR Traps

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- Following are the traps:
    - vrUp, vrDown
    - vrMaxRoutesExceeded
    - vrMaxKbpsExceeded
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# Updates for next revision

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- Add default values to many of the parameters
  - Detach Tunnel MIB extensions from this MIB
  - Remove 'vrBackboneVr' from VR config table
  - Means to associate multiple VPNs to a VR, is to be considered.
  - Rename to *draft-ietf-ppvpn-vmib-00.txt*
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# Request to the WG

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- Invite more volunteers to help develop and refine this MIB
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# *QUESTIONS*

