Definitions of Managed Objects for 6rd
draft-cai-softwire-6rd-mib-01

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Abstract

• This draft definition of MIB for 6rd devices.
• 6rd is stateless tunnel technologies, therefore IP-MIB(RFC4293) and IP-FORWARD-MIB (RFC4292) are useful for device and traffic monitoring purpose.
• IP TUNNEL MIB(RFC4087) provides tunnel provisioning capability by SNMP.
6rd[rfc5969] Parameter

- parameter to provisioning 6rd devices

1. for CE
   - tunnel type
   - BR address
   - IPv4MaskLen
   - 6rdPrefixLen
   - 6rdPrefix
   - tunnel source

2. For BR
   - tunnel type= 6rd
   - IPv4MaskLen
   - 6rdPrefixLen
   - 6rdPrefix
   - tunnel source
existing IP Tunnel MIB[RFC4087] parameter

- `tunnelIfEncapsMethod` => 6rd
- `tunnelIfHopLimit`
- `tunnelIfSecurity`
- `tunnelIfTOS`
- `tunnelIfFlowLabel`
- `tunnelIfAddressType`
- `tunnelIfLocalInetAddress` => tunnel source
- `tunnelIfRemoteInetAddress` => BR address for CE?
- `tunnelIfEncapsLimit`

Need new definition for `IPv4MaskLen/6rdPrefixLen/6rdPrefix`
solution for 6rd MIB

- the draft describes 2 approach

1. sixRdMIB
   New MIB create like a L2TP MIB[RFC3371]
   sixRdMIB under the "transmission" subtree.

2. "tunnelIfXTable"
   extended tunnelIfTable of IP Tunnel MIB[RFC4087]
   with additional tunnel type [like 6rd and MAP-E]
sixRdMIB

- transmission
- IP Tunnel MIB
- L2TP MIB
- 6rd MIB
  - sixRdDevice
  - sixRdTable
  - sixRdEntry
  - sixRdPrefix
  - sixRdPrefixLen
  - sixRdIpv4MaskLen
  - sixRdBrIpv4AddressTable
  - sixRdBrIPv4AddressEntry
tunnelIfXTable

Transmission

IP Tunnel MIB

- tunnelIfEntry
- tunnelXIfEntry

- 6rd
- MAP-E or etc
security consideration

- This document does not introduce any new security concern in addition to what is discussed in Section 6 of [RFC4087].
appendix.

history of IP Tunnel MIB

• rfc2667 for only over IPv4 network
• rfc4087 for over IPv4 and IPv6 networks
Question

• Which is better approach for 6rd mib?
  – create new 6rd MIB
  – extended / obsolete IP Tunnel MIB