Definitions of Managed Objects for MAP-E

draft-fu-softwire-map-mib-03

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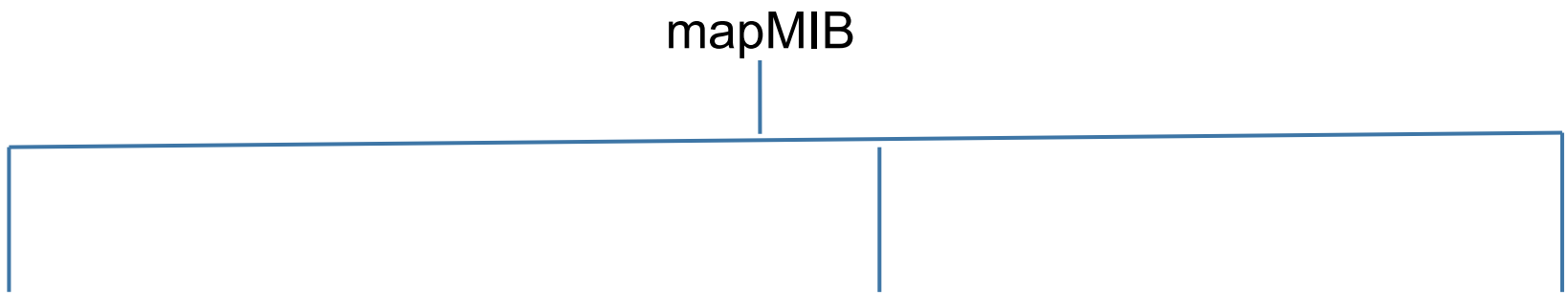
Background

- MAP-E derives stateless tunnels based on the mapping rules. We need to manage the mapping rules. But no current MIBs could support the data structure.
- This draft defines the MAP-E MIB, 02 version was presented at IETF85 in Atlanta
- Comments were received. We revised accordingly.

Open issue 1: mapTunnel object



mapRuleEntry :: =
SEQUENCE {
mapRuleID Integer32,
mapRuleIPv6Prefix InetAddressIPv6,
mapRuleIPv6PrefixLen
InetAddressPrefixLength,
mapRuleIPv4Prefix InetAddress,
mapRuleIPv4PrefixLen
InetAddressPrefixLength,
mapRuleStartPort InetPortNumber,
mapRuleEndPort InetPortNumber,
mapRuleEALen Integer32,
mapRuleStatus RowStatus,

mapTunnelEntry :: =
SEQUENCE {
mapTunnelCEAddress InetAddressIPv6,
mapTunnelStaticReceived Counter64,
mapTunnelStaticSent Counter64,
mapTunnelStatus RowStatus,
mapTunnelStorageType StorageType
}

Mark Townsley's comment in last meeting: whether there is per-CE state gathered and presented through SNMP

- mapTunnel subtree is intended for statistic:
  - ✓ Which CEs have connected to this BR (in a certain period)
  - ✓ What about the MAP-E traffic amount in the BR

- mapTunnel subtree:
  - ✓ It needs the BR to maintain a table of a collection of connected CEs' addresses.
  - ✓ But no per-CE state
  - ✓ Would NOT significantly impact the forwarding performance directly, but indeed need some additional BR's resources.

Two approaches for open issue 1

- As this 03 version did, defining two MODULE-COMPLIANCE
  - ✓ mapMIBBasicCompliance, only containing mapRule objects. This could be the default choice.
  - ✓ mapMIBFullCompliance, containing mapRule and also mapTunnel objects. Some ISPs really need the statistic information in the MAP-E MIB, could require vendors enabling this.
- Or just simply abandon the mapTunnel object?

Open issue 2:
Security check statics object

- Recently raised in the mailing list by Shishio Tsuchiya.
  - ✓ We may need new object for MAP-E security check statics because MAP-E checks consistency of IPv4/IPv6 src address.
  - ✓ Because most of vendors already supports security mechanism and they has static counter for inconsistency of packet. http://tools.ietf.org/html/draft-janog-softwire-report-01#section-2.2
- Add the security check statics object in MAP-E MIB?

Adopt as softwire WG item?

Thank you!

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Backup Slide

MAP-E packet consistency check

- In section 8.2 of MAP-04, “The BR MUST perform a validation of the consistency of the source IPv6 address and source port number for the packet using BMR. If the packets source port number is found to be outside the range allowed for this CE and the BMR, the BR MUST drop the packet and respond with an ICMPv6 "Destination Unreachable, Source address failed ingress/egress policy" (Type 1, Code 5).”