MPLS TP MIBs and Extensions

draft-vkst-mpls-tp-te-mib-00.txt

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What is supported

Functional Requirement	Support with existing MIBs	Support with TE MIB extensions
Static Unidirectional Tunnels	**Yes**	**Yes**
Dynamically Signaled Unidirectional Tunnels	**Yes**	**Yes**
Dynamically Signaled Co-routed bi-directional Tunnels	**Yes**	**Yes**
Dynamically Signaled Associated bi-directional Tunnels	**No**	**Yes**
Static Co-routed and Associated bi-directional Tunnels	**No**	**Yes**
Unidirectional and bi-directional non-IP Tunnels	**No**	**Yes**
Support MPLS TP identifiers and TP specific objects	**No**	**No**
Support for TP LSP's in BFD MIB	**No**	**No**
MIB support for LSP Ping	**No**	**No**

MPLS TP extensions to TE MIB

- MPLS Tunnel Table in MPLS-TE-STB-MIB is used for MPLS TP tunnels as well
- MPLS Node Configuration Table is being added to map Global ID and Node ID combination and/or ICC identifier for Ingress and Egress LSR's
- A local number generated for the combination, will be used to index into MPLS Tunnel Table.
- MPLS Tunnel Table is augmented to support MPLS TP specific objects

MPLS TP extensions to TE MIB

Tunnel Index	Tunnel Instance	Ingress LSR Id	Egress LSR Id	XC Index	Etc.....	.....
100	1	10.0.0.10	50.0.0.10	5	....	.....
200	1	10	20	10	.....	.....

Standard MPLS Tunnel table

Global ID	Node ID	ICC ID	LSR ID
G1	101	-	10
G4	104	-	20
-	-	ICC1	30
-	-	ICC2	40

MPLS Node Configuration table

Tunnel Index	Tunnel Instance	Ingress LSR Id	Egress LSR Id	Tunnel operating environment (IP/ NON-IP)	Destination Tunnel Number	Tunnel Application
100	1	10.0.0.10	20.0.0.10	IP	-	MPLS
200	1	10	20	NON-IP	500	MPLS-TP

MPLS tunnel extension table

Constraints & Restrictions

In order to maintain MPLS TP Tunnels to work with existing TE MIB, few requirements had to be considered

- Node map table to be used to generate local number for ingress and egress LSR ID's.
- The local number generated should be within the range of 0 - 16777215 (< 1.0.0.0)

Additional MPLS TP MIBs We Are Working On

To support MPLS TP OAM requirements, more MIBS are being added and will appear after the IETF meeting:

- BFD extensions to support MPLS LSP's including TP
- MPLS TP OAM MIB to support identifiers
- MPLS TP Protection Schemes (LPS, RPS and MPS) support using MIB
- MPLS LSP Ping support using MIB

Next Steps

- Does the WG find this work useful and satisfying of the chartered items for MPLS-TP management?
  - If so, we ask that the WG Accept draft-vkst-mpls-tp-te-mib-00 as WG document
- Publish additional aforementioned MIBs after this meeting.
- Additional comments/review are requested.

Thank You