# G.8131, G.8132, G.8133

MPLS-TP Protection Switching – Linear, Shared Ring, Dual-Homing

- ITU-T G.8131 focuses on subnetwork connection protection switching and describes uni- and bidirectional switching types and revertive/non-revertive operation types.
- ITU-T G.8132 focuses on shared ring protection switching. Point-to-point MPLS-TP LSPs are

protected at the MPLS-TP section layer.
- ITU-T G.8133 focuses on PW dual-homing protection based on the description in IETF RFCs 8184 and 8185. Point-to-point MPLS-TP PWs are protected against failures within or at the edges of the MPLS-TP network.
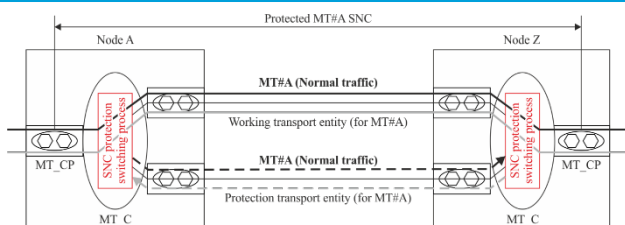
Bidirectional 1:1 SNC/S protection switching architecture per ITU-T G.8131
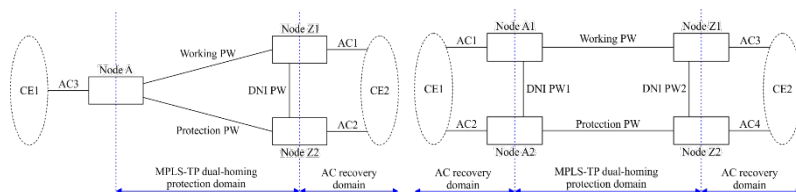
One- and two-side MPLS-TP dual-homing reference networks per ITU-T G.8133
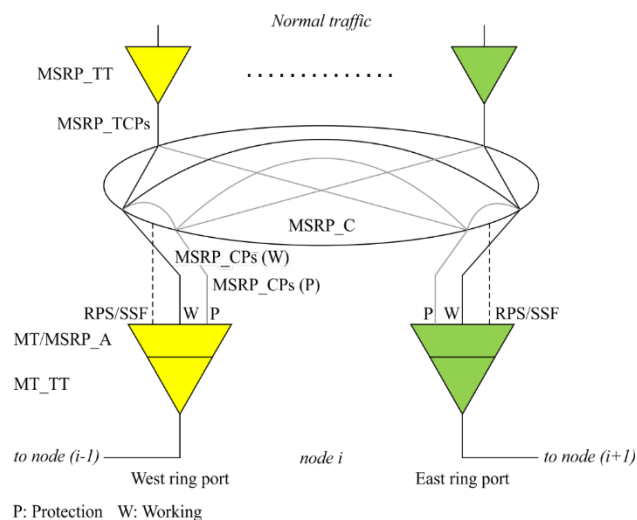
MSRP functional model per ITU-T G.8132

The three following Recommendations provide a representation of the multi-protocol label switching transport profile (MPLS-TP) technology using the methodologies that have been used for other transport technologies [e.g., optical transport network (OTN) and Ethernet].

These ITU-T Recommendations are intended to be aligned with the Internet Engineering Task Force (IETF) MPLS requests for comments (RFCs) normatively referenced by these Recommendations.

1. ITU-T G.8131 – Linear protection switching for MPLS transport profile

Recommendation ITU-T G.8131 provides architecture and mechanisms for linear protection switching for MPLS-TP networks. The automatic protection

coordination protocol, and 1+1 and 1:1 protection architecture are defined in this Recommendation. This Recommendation describes the protection switching functionality for point-to-point connections using the automatic protection switching (APS) mode defined in IETF RFC 7271.

2. ITU-T G.8132 – MPLS-TP shared ring protection

Recommendation ITU-T G.8132 provides architecture and mechanisms for shared ring protection for MPLS-TP networks. It describes the MPLS-TP shared ring protection (MSRP) mechanisms and the ring protection switch (RPS) protocol defined in IETF RFC 8227. The mechanisms defined in this Recommendation protect point-to-point MPLS-TP label switched paths (LSPs) against failures at the MPLS-TP section layer.

3. ITU-T G.8133 – Dual-homing protection for multi-protocol label switching transport profile pseudowires

Recommendation ITU-T G.8133 provides architecture and mechanisms for pseudowire (PW) dual-homing protection in MPLS-TP networks. It also describes the dual-homing coordination (DHC) protocol defined in IETF RFC 8184 and IETF RFC 8185. Both one-side and two-side dual-homing protection mechanisms are provided.

The mechanisms defined in this Recommendation protect point-to-point MPLS-TP PWs against failures within or at the edges of the MPLS-TP network.