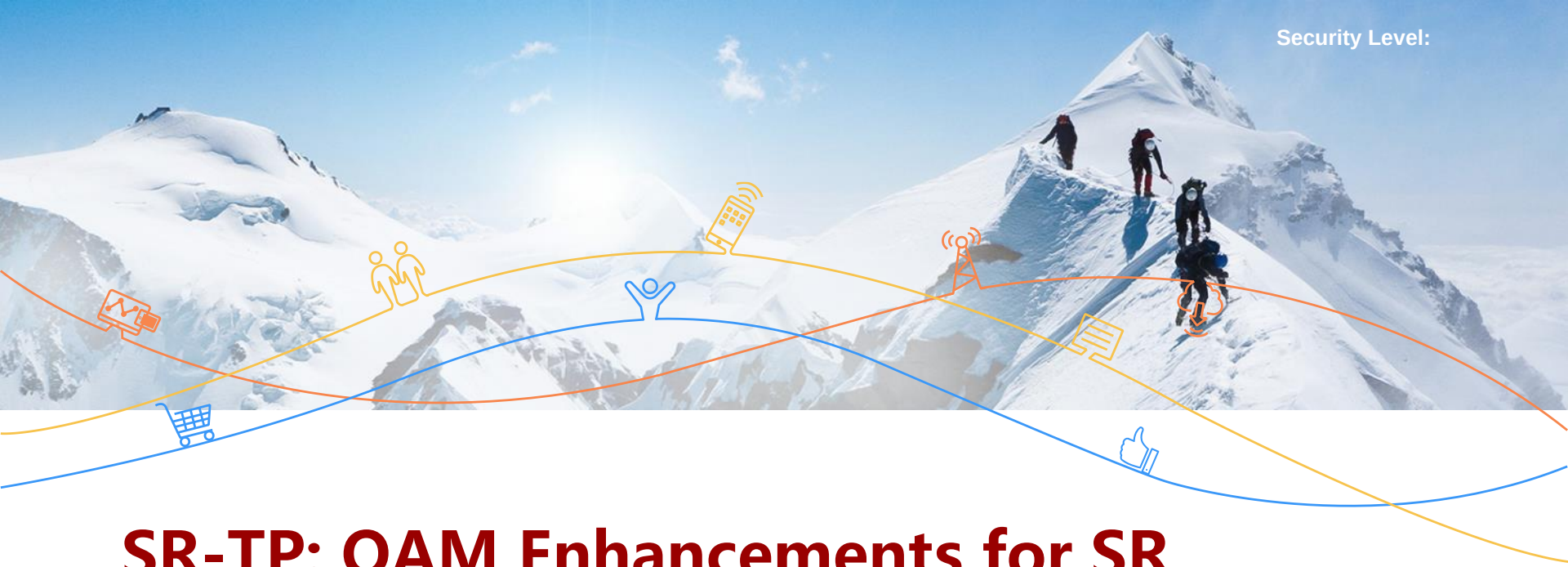


SR-TP: OAM Enhancements for SR

Mach Chen， Cheng Li

Agenda

- Overview
- Path Segment for SR-MPLS

Overview

- What is SR-TP(Transport Profile):
  - SR-TP refers to OAM enhanced SR.
  - Similar to MPLS-TP, SR-TP has more OAM features than native SR.
  - SR-TP meets transport network requirements, and will be implemented in China Mobile Slicing Packet Network(SPN).
- What we have done in SR-TP:
  - Path segment for SR-MPLS: PM, Bi-directional Tunnel, Protection, etc.
  - In-situ PM based on SIDs for SRv6: Delay measurement, Loss measurement.

Path Segment for SR-MPLS

Why path segment

- Transport Profile requires(RFC 5654):
  - control and deterministic usage of network resources.
  - end-to-end control to engineer network paths and to efficiently utilize network resources.
  - capabilities to support static or dynamic provisioning of deterministic, protected, and secured services and their associated resources.
- **China Mobile** will introduce SR-MPLS into their new PTN, called SPN(Slicing Packet Network), since SR-MPLS can provide better programmability for network control.
- However, more OAM mechanisms are needed in SR-MPLS to meet TP requirement.
- We proposed a draft:**draft-cheng-spring-mpls-path-segment-00** to identify a SR path with path segment.

Path segment for SR-MPLS

In **draft-cheng-spring-mpls-path-segment-00**, we proposed two solutions:

- One label solution:
  - **Path Segment** allocated by the egress node.
- Two labels solution:
  - **Source segment**(Non-routable) + **Path segment** allocated by the ingress node.

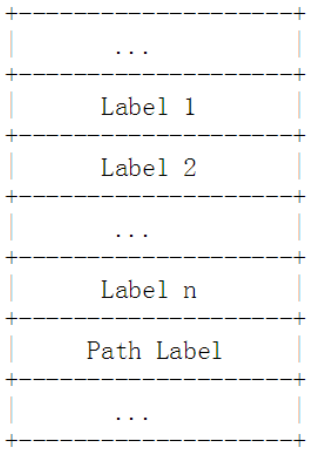


Figure1. One label Solution

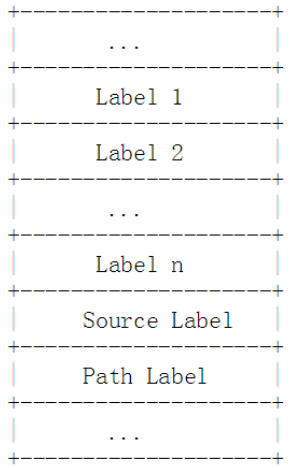
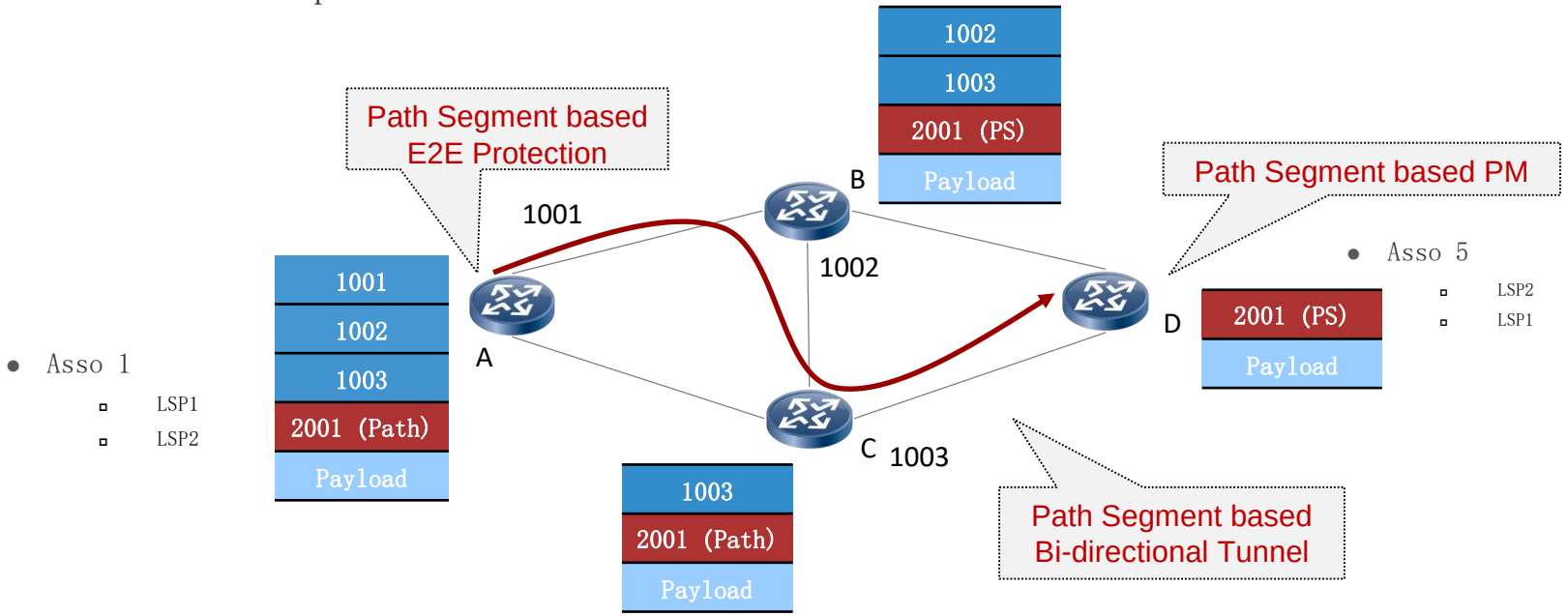


Figure2. Two labels Solution

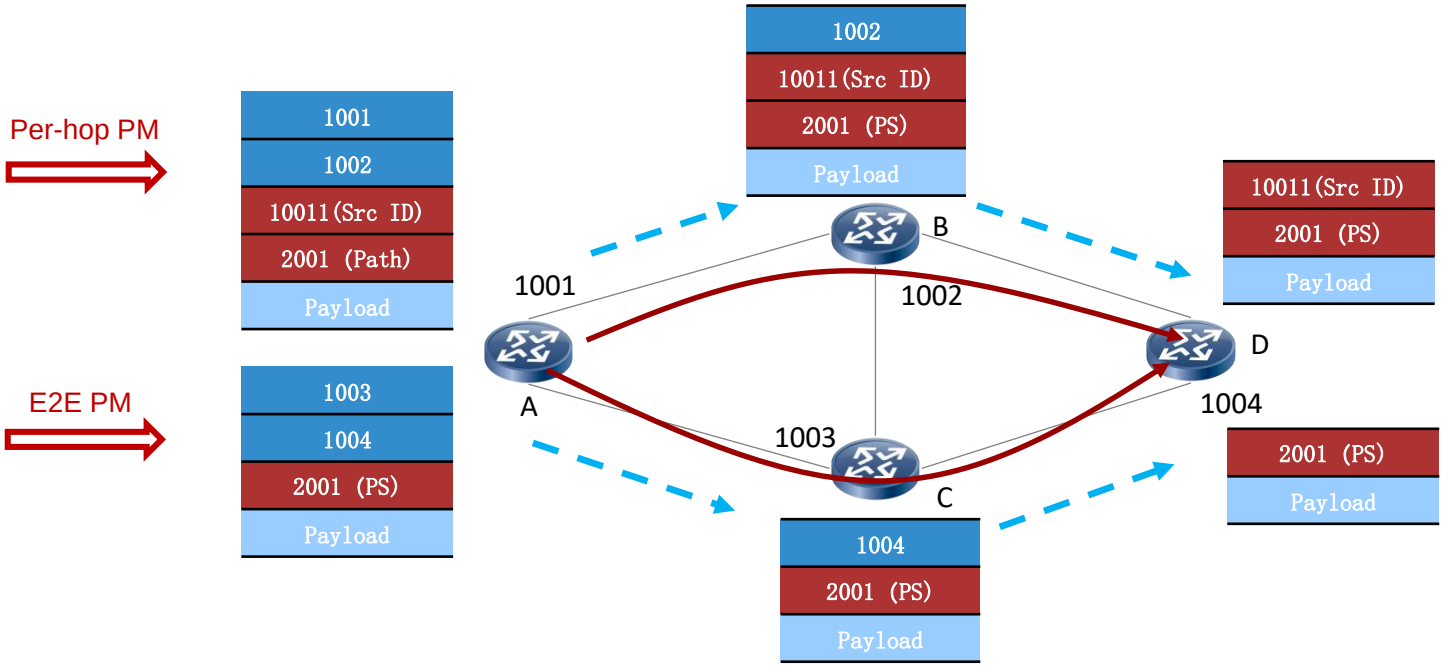
Use case for Path segment

- Path Segment based performance measurement
- Path Segment based end-to-end protection
- Path Segment based path correlation, e.g., associate two unidirectional paths to form a bi-directional path



Path Segment(PS) based PM

- Two options:
  - A single Path Segment (better for E2E PM)
  - Source Segment + Path Segment (can apply to both E2E and per-hop PM);



Q&A

Thank you