

Scope:

Applying SR to implement an MPLS traceroute option lowering the total number of end-to-end LSP validations as compared to commodity MPLS traceroute.

Framework and properties:

- High number of ECMP paths may reduce the number of „forwarding addresses“ to execute a particular forwarding path in the midst of an end-to-end path being traced.
- An end point might need to add MPLS traceroutes with a high number of IP destination addresses to validate all forwardings (or fail to validate them).
- SR allows to forward an MPLS OAM packets with any IP destination address to any node along the path. Use SR to reduce the number of MPLS OAM traceroutes if a large number of ECMP paths are present.
- Doesn't require new protocol elements - requires local implementation adaption however.
- Vendors: if you've implemented that independently, please speak up.
- Running code for Deutsche Telekom's (LDP) MPLS OAM code. Operators like it.

ECMP: 4096 path combinations between RS and RD.

Using SR topology information in router RS, all IP addresses may reach all nodes:
E.g., Top Label at RS Node-ID 110, stack below commodity MPLS OAM packet to RD

