

MPLS Egress Protection Framework

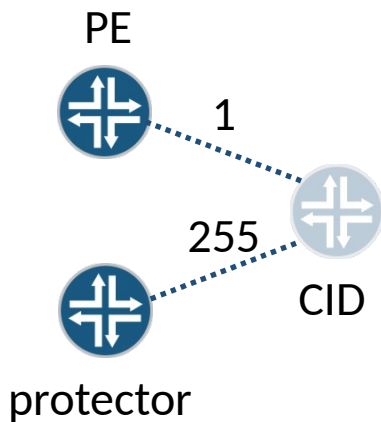
draft-ietf-mpls-egress-protection-framework-01

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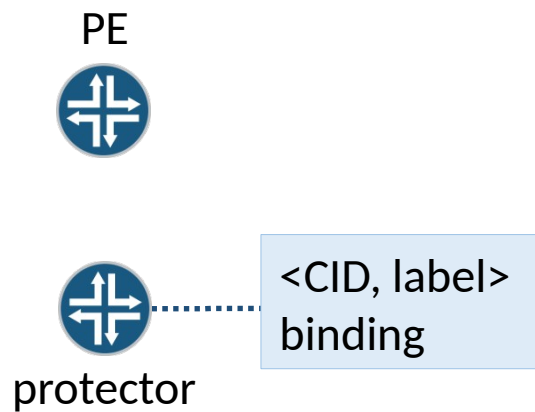
Update

Introduced a new “stub link” mode for IGP context ID advertisement.

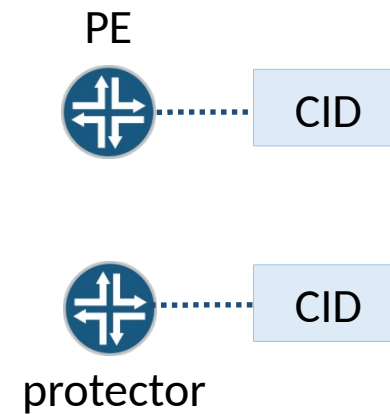
proxy mode



alias mode

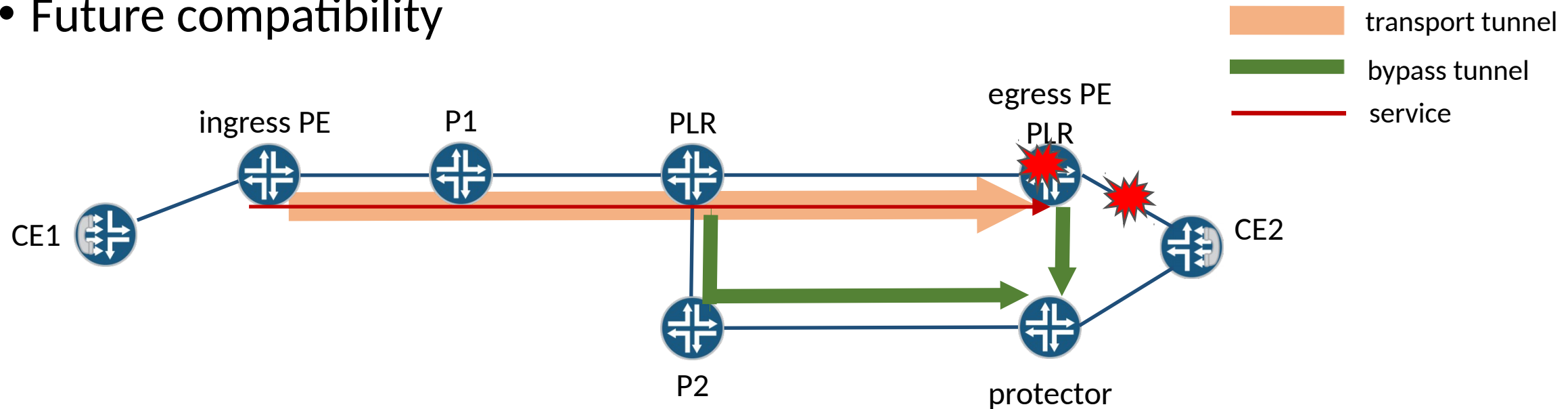


stub link mode



Framework

- Fast reroute (local detection + local repair) for egress node and link
- Multi-service and multi-transport
- Common architecture to unify solutions and minimize complexity
- Future compatibility



Applicability

- Services: L2/L3 VPNs, hierarchical LSPs, etc.
- Tunnels: RSVP, LDP, BGP, IGP, segment routing, etc.
- Homogeneous and heterogeneous transport tunnels and bypass tunnels.
- L3VPN egress protection is given as an example.
- PW egress protection is published as RFC 8104.

Architecture and Components

- Protection at service level and transport tunnel level
- Two roles of router:
 - PLR - detects a failure, and fast reroutes at transport tunnel level.
 - Protector - reroutes at service level, by forwarding to service destination based on a service label in the context of the protected egress router's label space (aka. context-based forwarding).
- Context-based forwarding
- Context ID of {egress router, protector}
 - Enables context-based forwarding on protector.
 - Facilitates bypass tunnel setup.
- Co-located protector and centralized protector

Relationship with Global Repair

- Egress protection can be used in conjunction with global repair to complement end-to-end failure protection.
 - Egress protection - local, fast but temporary repair
 - Global repair - permanent repair

Next Step

- We'd like to ask for consideration for WG last call.