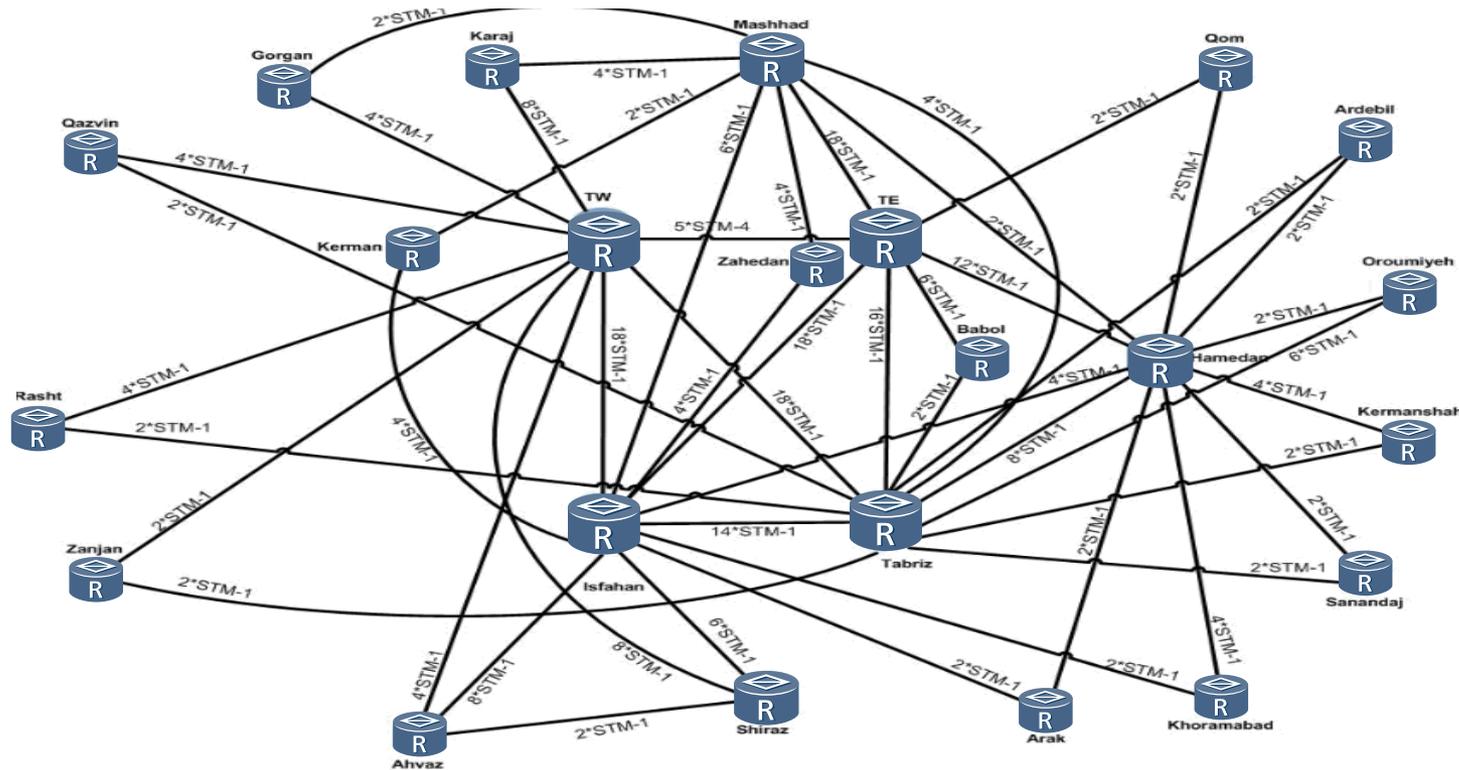


A Framework for Service-Driven Co-Routed MPLS TE LSPs

draft-li-mpls-serv-driven-co-lsp-fmwk-00

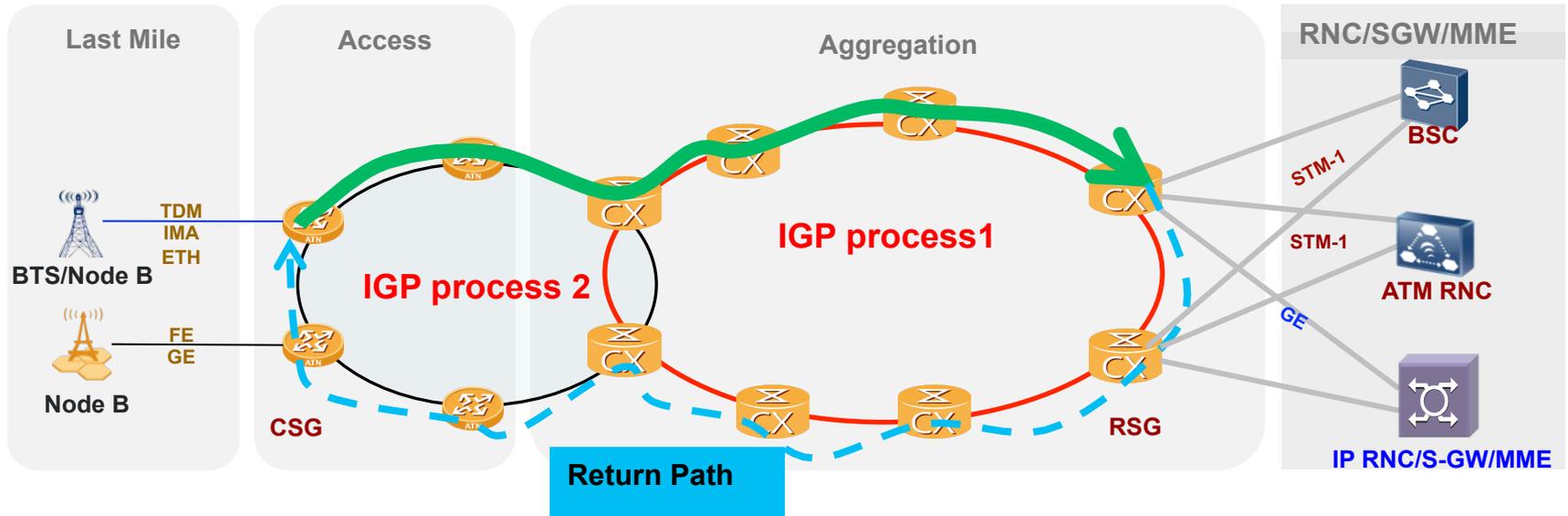
Zhenbin Li, Shunwan Zhuang, Jie Dong (Huawei)

Massive Configuration Issue of TE LSP



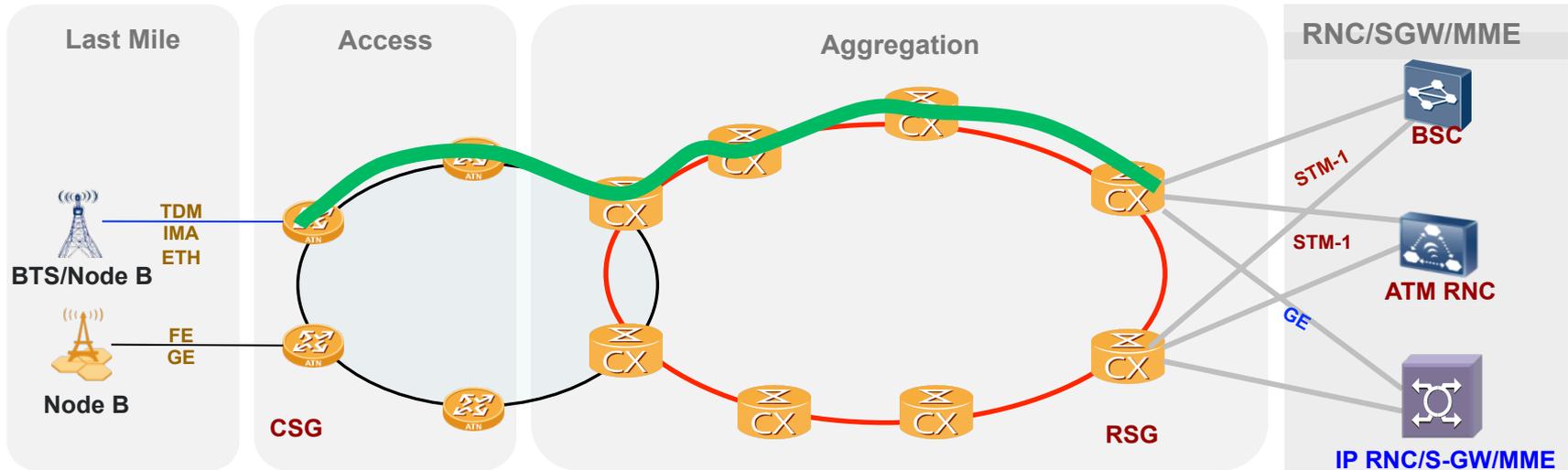
- Large Network with a lot of MPLS-TE Tunnels requires massive configuration work. The operation is not only time consuming but also prone to mis-configuration for Service Providers.

Return Path Issue of BFD for LSP



- When BFD for LSP is deployed, the return path may take an IP path which is different from the forwarding path.
- Failure happens in the return path may trigger wrong traffic switching.

Upgrading Issue of Co-routed Bidirectional LSP

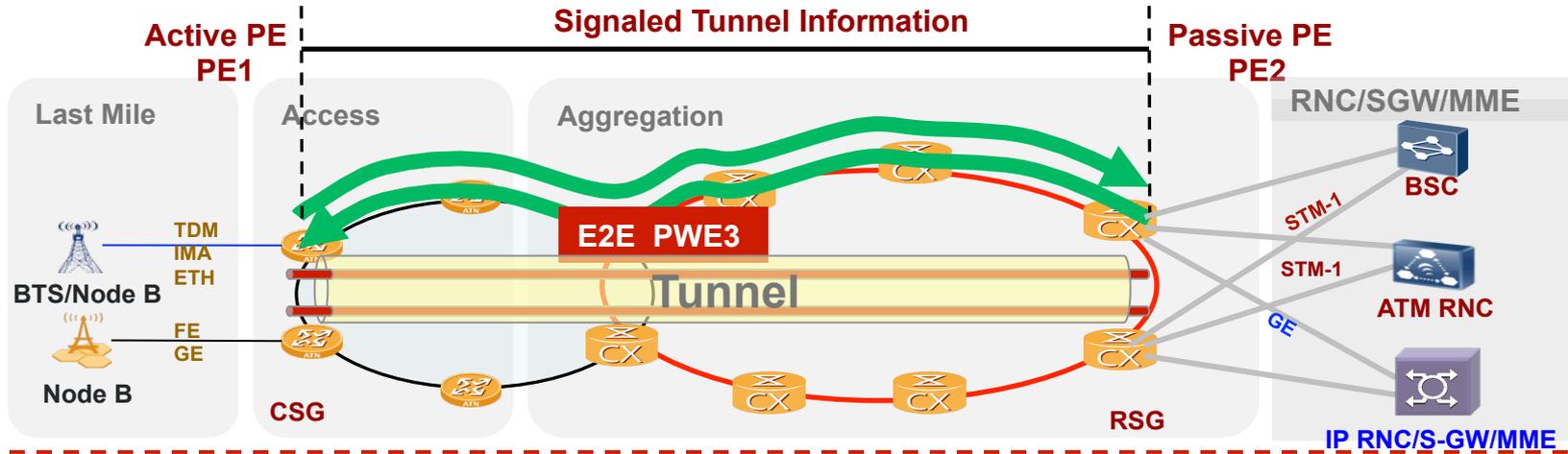


- The unidirectional MPLS TE LSP has been widely deployed and it is difficult for service providers to upgrade all possible routers to support co-routed bidirectional LSPs.

Service-driven Co-routed MPLS TE LSP

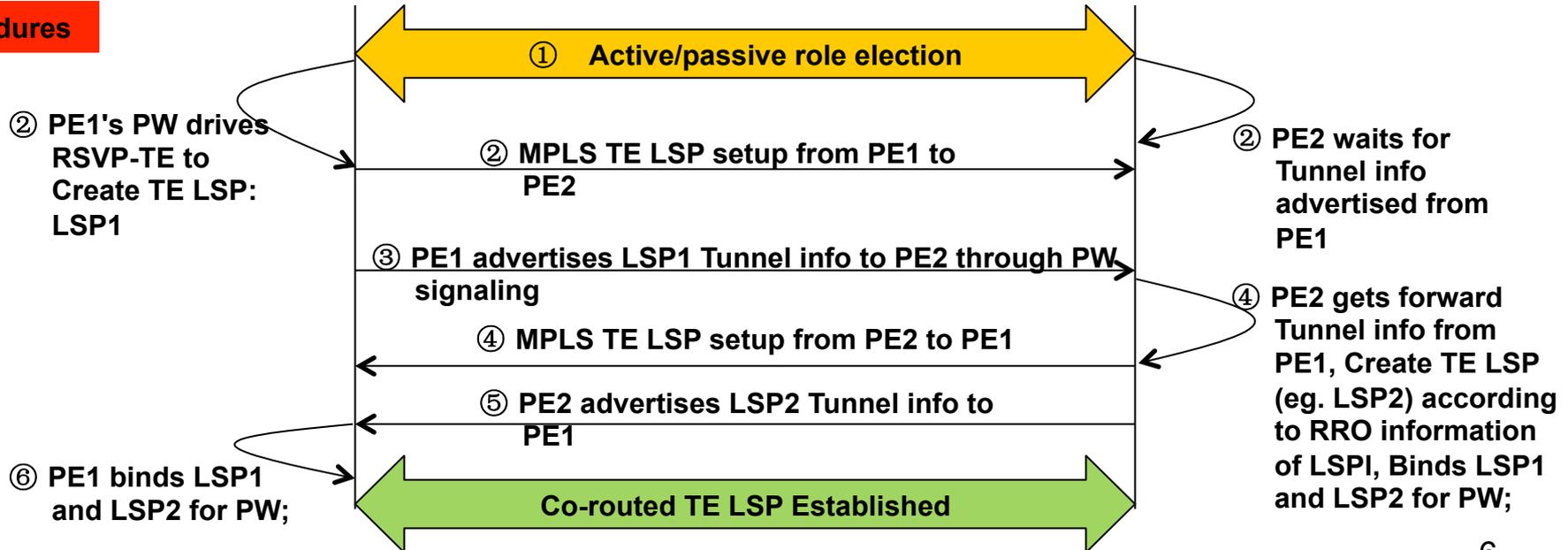
- LDP LSP: Topology-Driven LSP. LSPs can setup automatically, which save much effort and achieve higher scalability.
- MPLS TE LSP:
 - Depends heavily on static configuration though some auto-configuration method (e.g. auto mesh) is proposed.
 - Has close relation with services transported. Service-driven is a natural way to setup LSP on demand.
 - BGP-based MVPN is an example of service-driven tunnel. After the root node and leaf nodes of MVPN are discovered, P2MP TE tunnel is triggered.
- Service-Driven method is introduced to setup co-routed MPLS TE LSP

Service-Driven Co-Routed Unidirectional LSPs for L2VPN

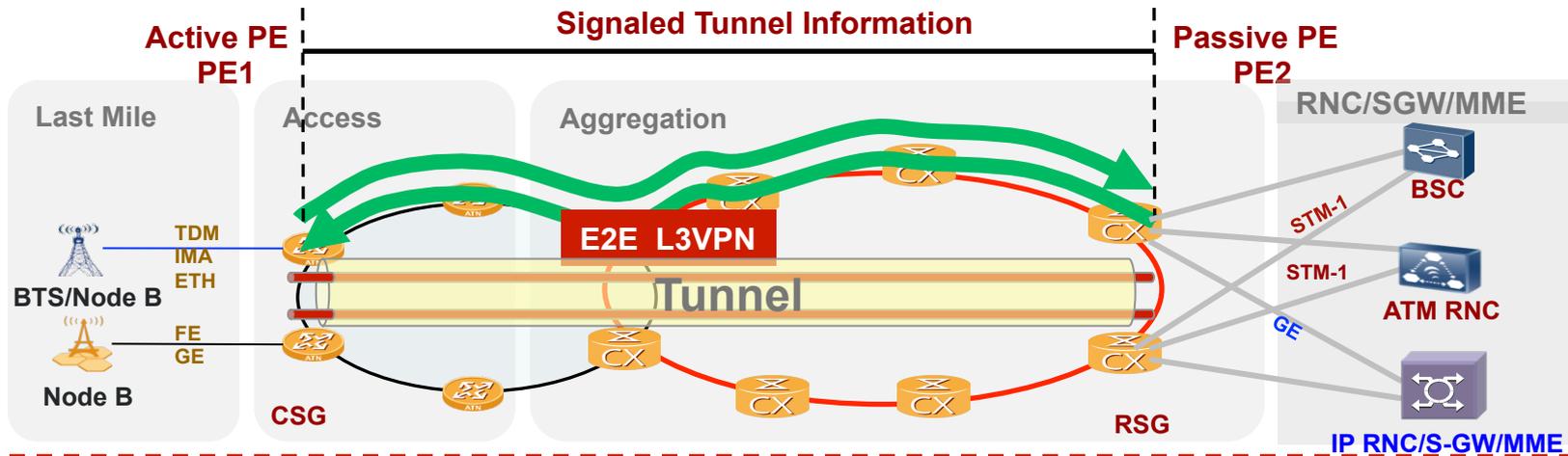


Scenarios

Procedures

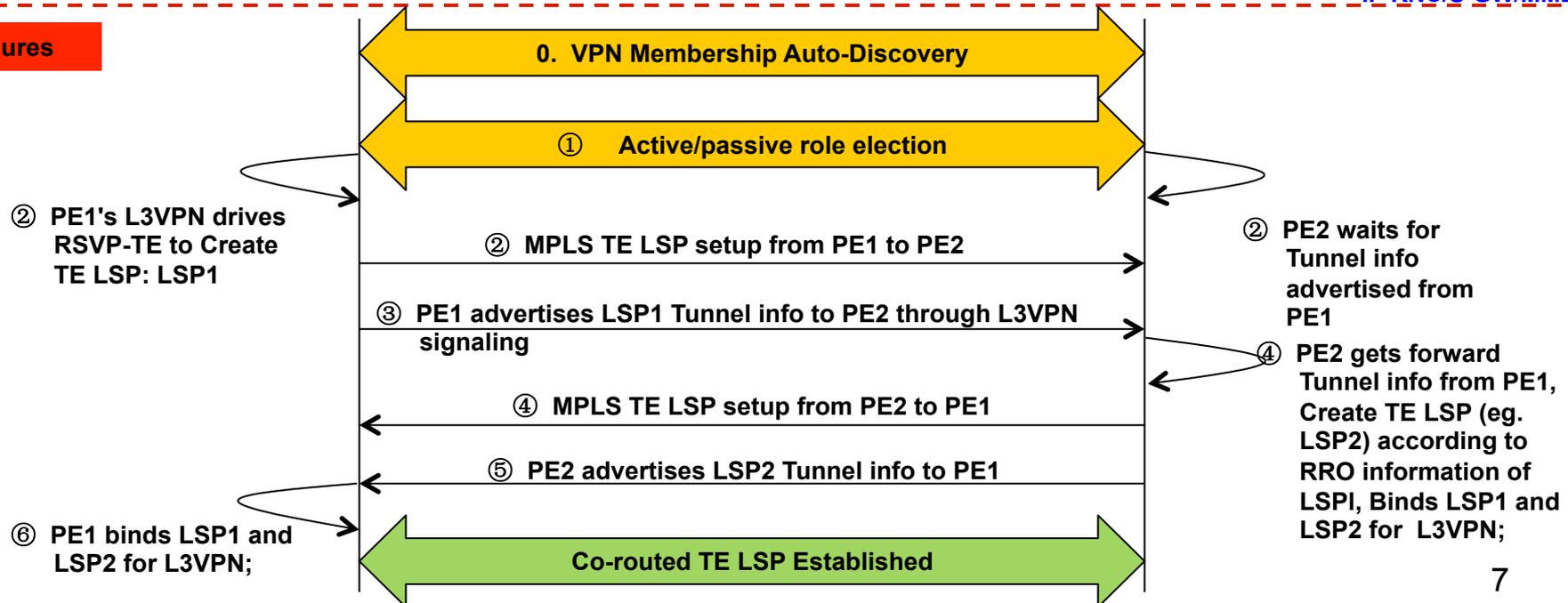


Service-Driven Co-Routed Unidirectional LSPs for L3VPN



Scenarios

Procedures



Summary

- Service-driven co-routed TE LSP has following advantages:
 - Setup LSPs on demand and save massive configuration effort
 - Reuse existing mechanism instead of whole network upgrading

Next Steps

- More scenarios will be taken into account
- Get comments on mailing list
- Welcome contributions to this work