

OSPF Link Overload

draft-hegde-ospf-link-overload

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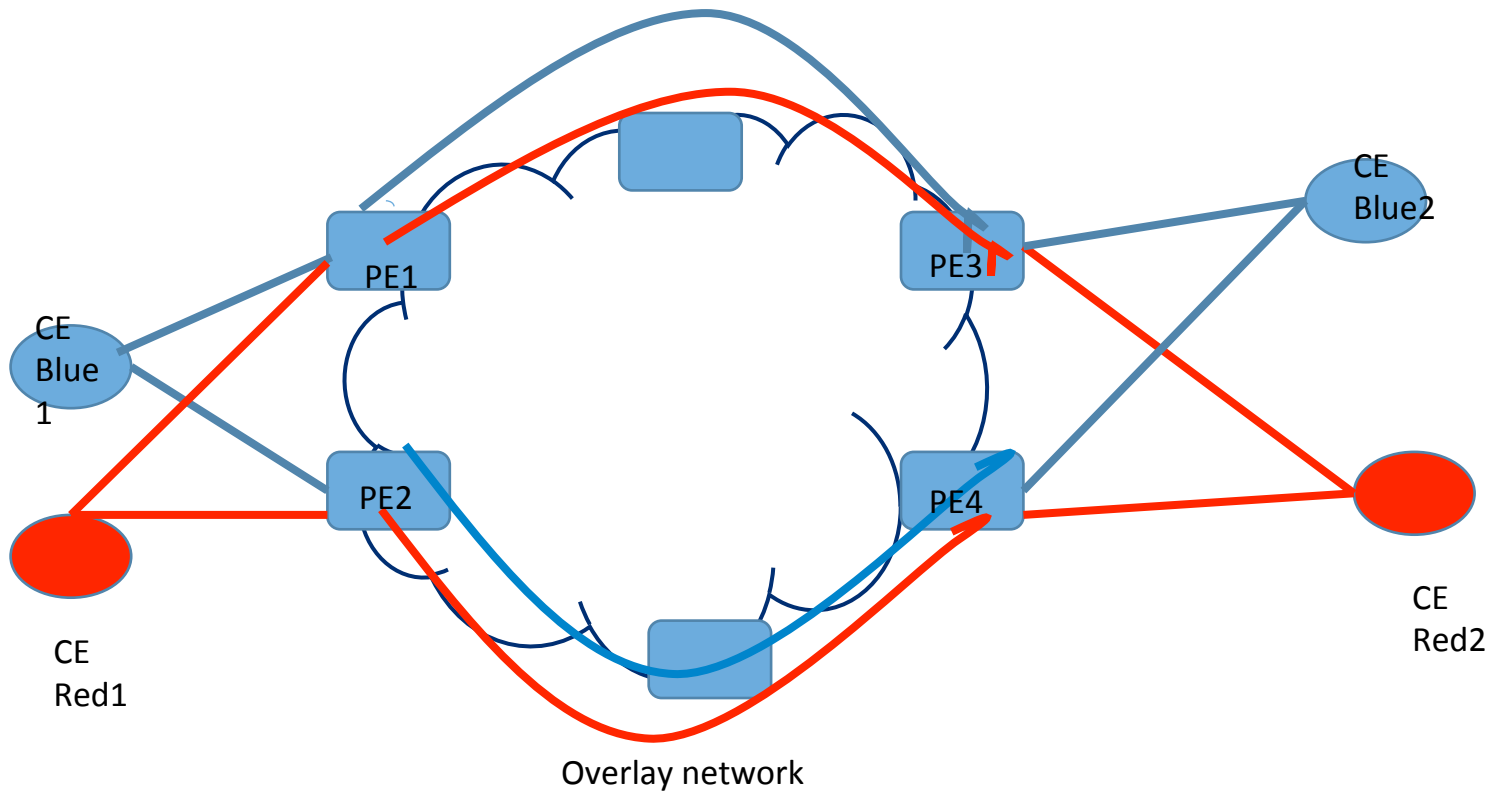
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Agenda

- Problem
- Motivation
- Solution
- OSPF protocol details
- Conclusion

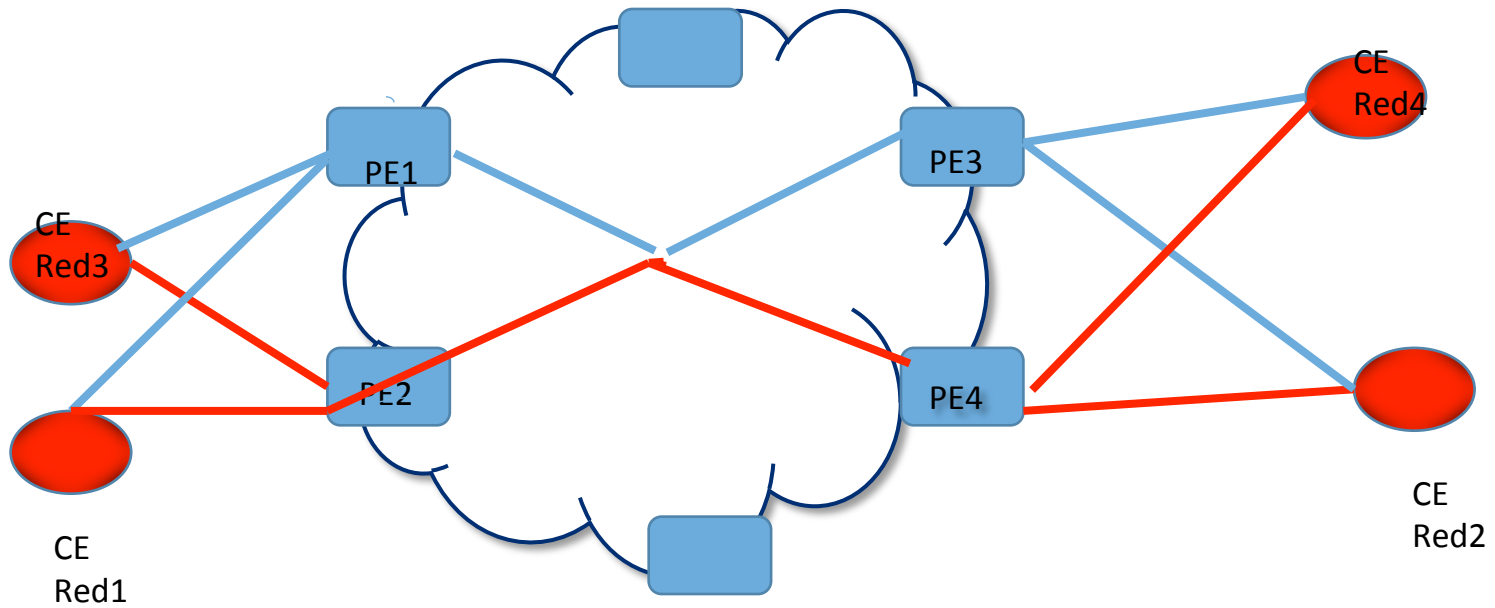
Overlay networks



Problems

- Traffic needs to be diverted away from the overlay links when the underlying network devices go for maintenance.
- It's difficult to manually configure every remote end to divert the traffic when PEs go for maintenance/upgradation

Overlay Broadcast networks



Overlay network over IRB interface

Motivation

- Ease of maintenance
- Automated upgradation
- Minimized traffic loss

Solution

P2P links

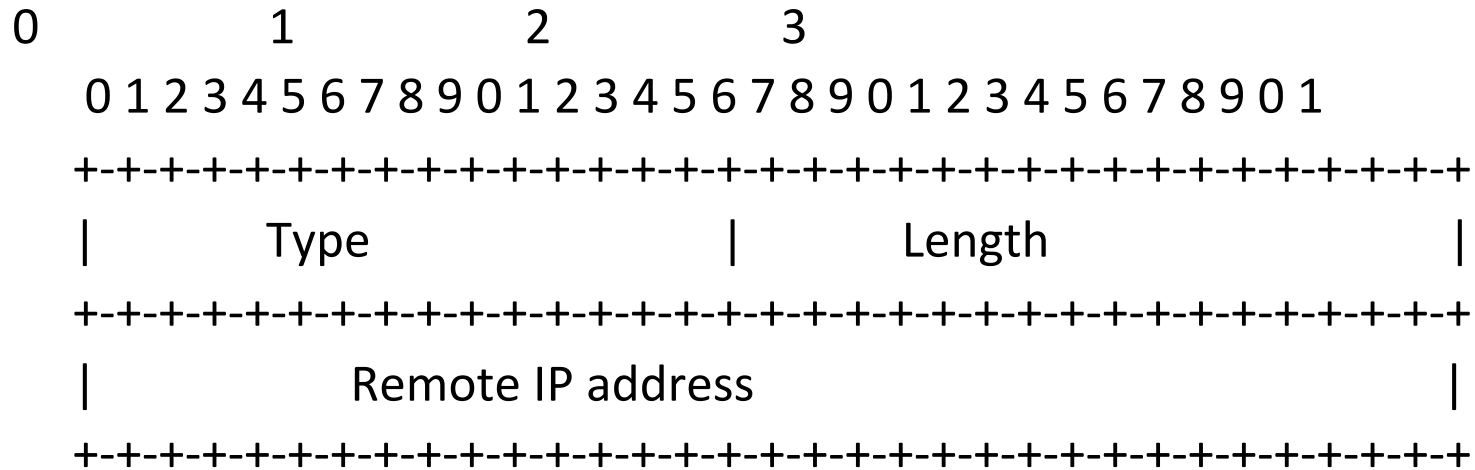
- Advertise a link overload TLV in Extended Link Opaque LSA
- Remote end identifies connecting link
- Increases metric to MAX-METRIC
- Re-floods Router LSA
- Traffic is diverted away from overloaded link
- Overlay Link is ready for maintenance

Solution

Broadcast links

- Advertise a link overload TLV in Extended Link Opaque LSA
- DR for the link recognizes the new TLV
- Removes the TLV Originating router from list of connected neighbors in Network LSA
- Re-floods Network LSA
- Traffic is diverted away from overloaded link
- Overlay Link is ready for maintenance

TLV details



Remote IP address distinguishes the link when there are two parallel links between the nodes. Remote-IP address is zero in case of broadcast links.

Questions?

THANKS