

Extensions to Path Computation Element Protocol (PCEP) to Support Resource Sharing-based Path Computation

PCE WG, IETF 90th, Toronto, Canada
draft-zhang-pce-resource-sharing-01.txt

Xian Zhang (zhang.xian@huawei.com)

Haomian Zheng(zhenghaomian@huawei.com)

Oscar Gonzales de Dios (ogondio@tid.es)

Victor Lopez(vlopez@tid.es)

Dhruv Dhody (dhruv.dhody@huawei.com)

Igor Bryskin(ibryskin@advaoptical.com)

Overview

- ✓ Current issues:
 - ✓ Do not work when resource sharing is carried out for two LSPs does not sharing common end points;
 - ✓ Do not support specifying resource sharing strategy;
- ✓ Use Cases
 - ✓ Use case for Single PCE
 - ✓ Use case for Inter-PCE scenario
 - ✓ Resource sharing with different Bandwidth/End nodes
- ✓ Extensions to PCEP
 - ✓ Resource Sharing Object (RSO).

Changes from 00.txt

- Description Revision:

- Specify 'resource sharing' definition:

- It is worth noting the 'resource sharing' in this draft not only means one LSP re-using the same link(s) of another LSP, but also the same bandwidth resource.

- Specify the routing priorities:

- For R mode, partial sharing > total diverse > computation failure
- For D mode, totally diverse > partial sharing > computation failure

- Object Changes:

- Reuse IPv4 and IPv6 LSP Info TLV in [draft-ietf-pce-stateful-pce-09]

- RSO used together with bandwidth, to enable services with different bandwidth when request resource sharing LSP computation

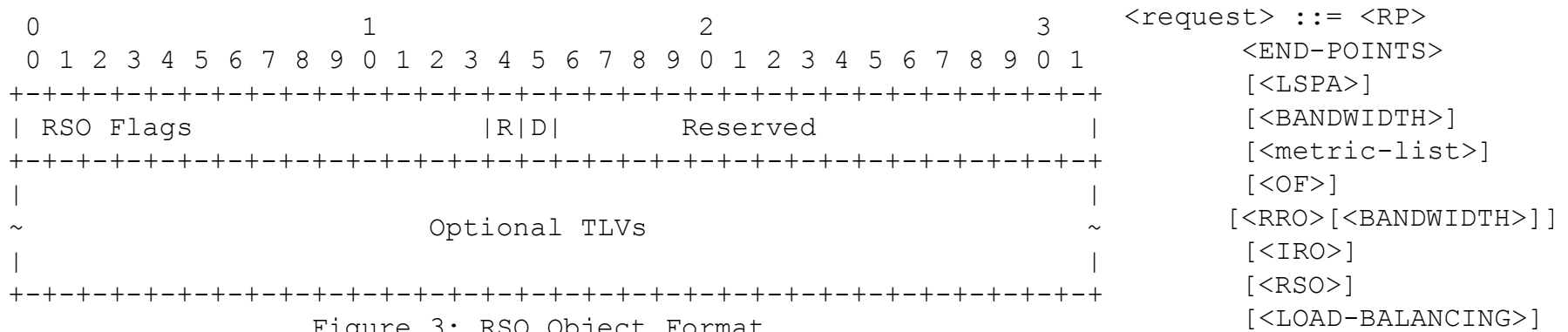
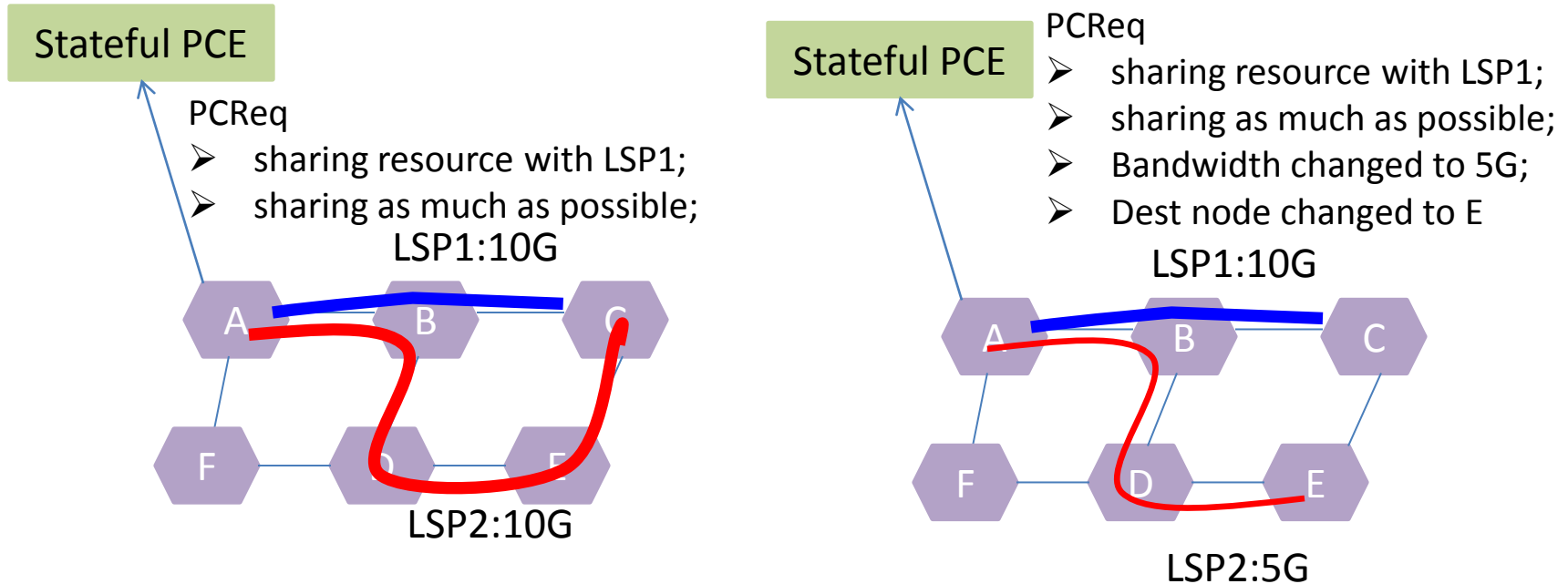


Figure 3: RSO Object Format

Example: sharing between services with diff BW



Information needed:

- To which the LSP is sharing resource with?
- Resource sharing strategy
- Parameter Specification (the right scenario)
 - Given LSP1 information, and corresponding sharing strategy;
 - Specify 5G bandwidth in PCReq and LSP1 in RSO when compute LSP2;
 - Specify different end-node in some cases
- Can be extended to multi-PCE case

Discussion and Next Step

- Other scenarios for resource sharing?
 - Now include different bandwidth services
- Comments?
 - Any suggestion to the solution?
- WG Adoption