PCE for Path Ingress Protections

draft-chen-pce-sr-ingress-protection-06

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Overview

- Merged 2 Ingress Protection drafts
  - pce-sr-ingress-protection
  - pce-bier-te-ingress-protect
- PCE for ingress protection of 2 types of paths:
  - SR paths
  - BIER-TE paths
- Foundation for protecting ingress of different types of paths
Capability for Ingress Protection /w Backup Ingress

When PCE and PCC running on a backup ingress establish a PCEP session, they exchange their capabilities of protecting ingress for different types of paths.

```
|          Type = TBD2          |           Length=4            |
| Reserved | PathInd | S | B | Flags | D | A |
```

**INGRESS_PROTECTION_CAPABILITY** sub-TLV

**PathInd:** 1 octet. Indicators for the types of paths whose ingress protections are supported. Two indicators are defined.

- **S**: $S = 1$ indicating that **ingress protection of SR path** is supported.
- **B**: $B = 1$ indicating that **ingress protection of BIER-TE path** is supported.
Extensions for Backup Ingress

When PCE sends PCC PCInitiate message for initiating a backup path to protect the primary ingress node of a primary path, the message contains:

```
|       Type = TB       |           Length=4           |
|                   |                                      |
| Reserved          | PathInd | S|B|    Flags    | A |
|                   |                                      |
~                   ~                        sub-TLVs (optional) ~
~                   ~                                      ~
~                   ~                                      ~
```

PathInd: 1 octet. Indicator for the type of path whose ingress is protected. Two indicators are defined.
- S: S = 1 indicating ingress protection of a SR path.
- B: B = 1 indicating ingress protection of a BIER-TE path.
Next Step

- Comments
- Request for adoption