

PCEP extensions for BIER-TE

draft-chen-pce-bier-09

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Virtual PCE WG IETF-111 Meeting, July 2021

Introduction

- This document specifies extensions to the Path Computation Element Protocol (PCEP) that allow a stateful PCE to compute and initiate the path for the BIER-TE.

Extensions

- BIER Capability Advertisement.
 - Defines a new Path Setup Type (PST) for BIER.
 - Defines the BIER-TE-PCE-CAPABILITY sub-TLV to exchange BIER capability.
- The SRP Object
 - Defines a new Path Setup Type (PST=TBD2) for BIER-TE.
- END-POINTS Object, two options:
 - Reuses the P2MP END-POINTS object body for IPv4 and END-POINTS object body for IPv6 (Object-Type 4) which is defined in [RFC8306].
- Objective Functions
 - Defines a new Objective Function for path calculation.
- ERO Object
 - Defines an BIER-TE-ERO subobjects to carry a adjacencies BitStrings, BSL,subdomain and SI.
- RRO Object
 - Defines an BIER-TE-RRO subobjects to reports an BIER-TE to PCE .

Update

- Merge draft-chen-pce-bier-te-path-01, and add Huaimo Chen and Aijun Wang as co-authors.
- Add the Objective Functions

Objective Function Code: TBD3

Name: Minimum Bit Sets (MBS)

Description: Find a path represented by BitPositions that has the minimum number of bit sets.

- Add the RRO Object

```

      0             1             2             3
      0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-----+-----+-----+-----+
|  Type=TBD5  |      Length  |
+-----+-----+-----+-----+
|  BS Length  | subdomain-id |      SI      |  Reserved  |
+-----+-----+-----+-----+
|              Adjacency BitString (first 32 bits)              ~
+-----+-----+-----+-----+
~                                                                    ~
+-----+-----+-----+-----+
~              Adjacency BitString (last 32 bits)              |
+-----+-----+-----+-----+
```

Next Step

- Comments welcome.
- It's in WG adoption queue. WG adoption



Thanks!