Extension to PCEP for P2MP LSP

draft-palleti-pce-rfc6006bis-00

Ramanjaneya Reddy Palleti
Dhruv Dhody
Huawei

Introduction

- While working on the update and implementation of stateful P2MP we noticed some issues in RFC 6006.

- We should update RFC6006, making sure the RBNF matches with the text in the RFC -
  - SVEC and multiple request in single message
  - Adding BNC, UNREACH-DESTINATION, SRRO in RBNF
  - Handling of Bandwidth Object with RRO

- Taking care of all errata (including one held for document update)

Request Message

Below is the message format for the request message:

```
<PCReq Message>::= <Common Header>
                       <request>
    where:
```

```
<request>::= <RP>
                <end-point-rro-pair-list>
                [<OF>]
                [<LSPA>]
                [<BANDWIDTH>]
                [<metric-list>]
                [<IRO>]
                [<LOAD-BALANCING>]
```

```
    where:
```

```
<end-point-rro-pair-list>::=
                       <END-POINTS>[<RRO-List>][<BANDWIDTH>]
                       [<end-point-rro-pair-list>]
```

```
<RRO-List>::=<RRO>[<BANDWIDTH>][<RRO-List>]
<metric-list>::=<METRIC>[<metric-list>]
```

Below is the message format for the request message:

```
<PCReq Message>::= <Common Header>
                       [<svec-list>]
                       <request-list>
    where:
```

```
<svec-list>::=<SVEC>
                   [<OF>]
                   [<metric-list>]
                   [<svec-list>]
```

```
<request-list>::=<request>[<request-list>]
```

```
<request>::= <RP>
                <end-point-rro-pair-list>
                [<OF>]
                [<LSPA>]
                [<BANDWIDTH>]
                [<metric-list>]
                [<IRO>|<BNC>]
                [<LOAD-BALANCING>]
```

```
    where:
```

```
<end-point-rro-pair-list>::=
                       <END-POINTS>[<RRO-List>[<BANDWIDTH>]]
                       [<end-point-rro-pair-list>]
```

```
<RRO-List>::=(<RRO>|<SRRO>)[<RRO-List>]
<metric-list>::=<METRIC>[<metric-list>]
```

Response Message

Below is the message format for the reply message:

```
<PCRep Message>::= <Common Header>
                        <response>
<response>::=<RP>
                [<end-point-path-pair-list>]
                [<NO-PATH>]
                [<attribute-list>]

where:

    <end-point-path-pair-list>::=
            [<END-POINTS>]<path>[<end-point-path-pair-list>]

    <path> ::= (<ERO>|<SERO>) [<path>]

    <attribute-list>::=[<OF>]
                        [<LSPA>]
                        [<BANDWIDTH>]
                        [<metric-list>]
                        [<IRO>]
```

Below is the message format for the reply message:

```
<PCRep Message>::= <Common Header>
                        <response-list>

    where:

    <response-list>::=<response>[<response-list>]

    <response>::=<RP>
                    [<end-point-path-pair-list>]
                    [<NO-PATH>]
                    [<UNREACH-DESTINATION>]
                    [<attribute-list>]

    <end-point-path-pair-list>::=
            [<END-POINTS>]<path>[<end-point-path-pair-list>]

    <path> ::= (<ERO>|<SERO>) [<path>]

    where:

    <attribute-list>::=[<OF>]
                        [<LSPA>]
                        [<BANDWIDTH>]
                        [<metric-list>]
                        [<IRO>]
```

Next Step

- Is a bis document needed for RFC6006?

  - In the author's opinion the changes are "clarifications" and will help with inter-operability.
  - Impact current and future P2MP work like
    - draft-ietf-pce-stateful-pce-p2mp
      - Which is also updated and posted

- Are there any comments?

Thank You!