Extension to PCEP for P2MP LSP

draft-palleti-pce-rfc6006bis-00

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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)
Below is the message format for the request message:

```xml
<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>]
```

In the diagram, the same message format is represented visually with the same hierarchical structure as the XML syntax.
Response Message

Below is the message format for the reply message:

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

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

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

Below is the message format for the reply message:

```xml
<PCRep Message>::= <Common Header>
    <response>
        <response-list>
            <end-point-path-pair-list>::= [END-POINTS][path][end-point-path-pair-list] [NO-PATH] [UNREACH-DESTINATION] [attribute-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!