Updates for PCEP Extension for Native IP Network

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Motivation

• Introduce the updates for “PCEP extension for Native IP Network”
• Seek feedbacks for the overall updated solution
• Ready for WG Last Call
Overview of the Solution

- Building Dual/Multi BGP sessions between edge routers upon request via PCEP
- Advertises different prefixes via different BGP sessions, w/PCEP-based setup
- Steer traffic towards particular routes via BGP next-hop w/PCEP-based setup
- Detail explanation can be referred at /meeting/110/materials/slides-110-pce-31-native-ip-01

CCDR* - Centralized Control Dynamic Routing, RFC 8735
Updates Considerations

Native Traffic Forwarding

- Destination of user traffic based
- Traffic from different sources to the same destination may share the priority path
- Moderate traffic path control

Tunneled Traffic Forwarding

- Destination of tunnel based
- Traffic for different (source, address) tuple are put into different tunnel
- Strict traffic path control
Flag “T” bit indicates whether the field “Tunnel Address” are presence or not.

- T=1, “Tunnel Address” field is presence
- T=0, “Tunnel Address” field is not presence
Flag “T” bit in BPI (BGP Peer Info Object) indicates whether the field “Next Hop Address” in EPR (Explicit Peer Route Object) Object are for “Peer Address” or “Tunnel Destination Address”:
- T=1, “Next Hop Address” field is for Tunnel Destination Address
- T=0, “Next Hop Address” field is for Peer Address

From the POV of PCC, there is no difference between these two addresses. The actions based on this Object are same.
Next Step

1. Comments/Q&A
2. WG Last Call?

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