PCE based BIER Procedures and Protocol Extensions

[draft-li-pce-based-bier]

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• Overview of PCE based BIER solution
• Updates
• Further Action
Main flow for PCE based BIER multicast
1. PCE receives the registration information from ingress and responds.
2. PCE gets reports about egresses in PCRpt.
3. PCE generates BitString and sends it to ingress via PCUpd.
4. Ingress encapsulate BIER header and forward multicast packets.
5. The number of receivers is regularly synchronized between egress and PCE, and between PCE and ingress, using PCRpt and PCUpd respectively.
New TLVs

Figure 3: Multicast Source Address TLV Format

Figure 7: Multicast Group Address TLV Format
New TLVs

Figure 5: VPN Information TLV Format

Figure 4: BIER Information TLV Format
Update for Multicast Source Registration Object

✓ Can be used in both BIER and non-BIER scenarios

✓ BIER:
  - Multicast Source Address TLV, VPN Information TLV, BIER Information TLV

✓ Non-BIER:
  - Multicast Source Address TLV, VPN Information TLV
Update for Multicast Receiver Information Object

- Can be used in both BIER and non-BIER scenarios

- **BIER:**
  Multicast Source Address TLV, Multicast Group Address TLV, VPN Information TLV, BIER Information TLV

- **Non-BIER:**
  Multicast Source Address TLV, Multicast Group Address TLV, VPN Information TLV

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Figure 6: MRI Object Body Format
Can be used in BIER scenario:

Multicast Source Address TLV, Multicast Group Address TLV, VPN Information TLV
Update for Multicast Receiver Status Object

✓ Can be used in both BIER and non-BIER scenarios

✓ BIER:
Multicast Source Address TLV, Multicast Group Address TLV

✓ Non-BIER:
Multicast Source Address TLV, Multicast Group Address TLV
Next Step

• Comments

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