



PCEP extensions for SRv6 Policy SID List Optimization

draft-ali-pce-srv6-policy-sid-list-optimization-01

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Problem Statement

- In some use cases, an SRv6 policy's SID list ends with the policy endpoint's node SID, and the traffic steered (over policy) already ensures that it is taken to the policy endpoint.
 - For example, service SID, a binding SID for transit policies, an EPE SID
- Carrying back-to-back end-point node SID is inefficient
- The End-point node SID exclusion is not possible in all use cases
 - For example, when the SRv6 policy is used to carry MPLS traffic

Solution Summary

- A PCE computes the SRv6 TE Policy SID list from the headend to the endpoint.
- The endpoint's node SID inclusion or exclusion is a policy attribute
 - Allow SR Policy API to control the inclusion or exclusion of the Policy Endpoint node SID depending on the type of traffic steered over it.
 - Encoded in PCEP in LSP attributes (CP attributes)
 - The flag is expected to be set to the same value for all CPs of policy.

Proposed Protocol Changes

- I-flag (endpoint node SID Inclusion capability flag) is proposed in the SRv6-PCE-CAPABILITY sub-TLV defined in [RFC9603].
- I-flag (endpoint node SID Inclusion flag) is proposed in the LSP-EXTENDED-FLAG TLV defined in [RFC9357].

Operations

- A PCEP speaker indicates its ability to support I-flag in LSP-EXTENDED-FLAG TLV during the PCEP initialization phase by setting the I-flag in the SRv6-PCE-CAPABILITY sub-TLV in the Open message.
- A PCEP peer indicates the inclusion or exclusion of the endpoint's Node SID in I-flag in LSP-EXTENDED-FLAG TLV].

Next Steps

- Agreed with the authors of draft-lin-pce-srv6-segment-list-optimize to merge the documents
- Looking for workgroup feedback