Validity of SR Policy Candidate Path

draft-chen-spring-sr-policy-cp-validity-01

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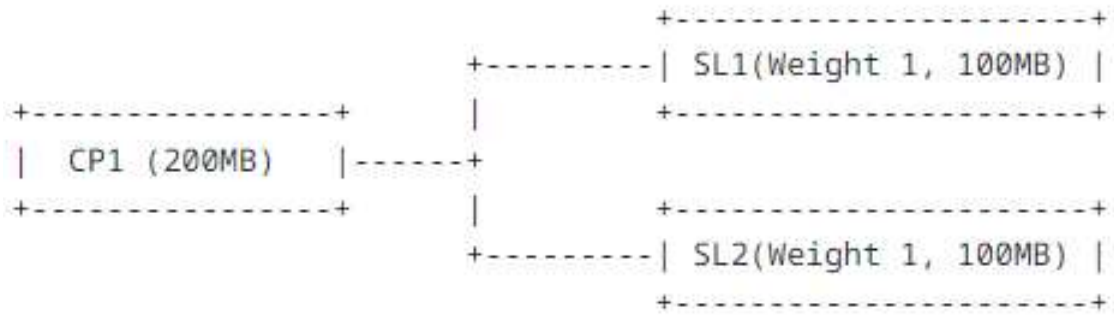
Introduction

- SR Policy architecture are specified in [RFC9256]. An SR Policy comprises one or more candidate paths (CP) of which at a given time one and only one may be active. Each CP in turn may have one or more SID-List of which one or more may be active. when multiple SID-List are active then traffic is load balanced over them. However, a CP is valid when at least one SID-List is active.
- This candidate path validity criterion cannot meet the needs of some scenarios.

- This document defines the validity control parameters under candidate Path to control the validity judgment of candidate Path, and it does not change the segment list invalidation rules defined in SR Policy architecture are specified in [RFC9256].

Motivation

- The candidate path validity criterion defined in [RFC9256] can't meet the needs of the following scenarios:



  - The CP1 carries a total of 200MB of traffic. Within the POL1, the flow-based hashing over its each SL with a ratio 50%, that is each SL carry 100MB of traffic. At this time, if one of the Segment Lists is invalids, the remaining Segment List cannot carry 200MB of traffic. However, the CP1 is still active.

Extensions

- Defines the following validity control parameters under candidate Path to control the validity judgment of candidate Path:
  - SL quantity： 1-octet field which indicates the minimum number of valid segment Lists under the active candidate path. 0 indicates no requirement for SL quantity. 0xff indicates that the candidate path is considered valid only if all the segment Lists are valid.
  - valid SL weight: 4-octet field which indicates the minimum value of the sum of the weights of the valid segment List under the active candidate Path. 0 indicates no requirement for weight. 0xffffffff indicates that the candidate path is considered valid only if all the segment Lists are valid.

Next Step

- Comments welcome.

Thanks!