

IETF 102 – Montreal July 2018 IDR Working Group

draft-ietf-idr-te-lsp-distribution-09

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Overview

- Defines a new BGP-LS NLRI Type for TE Policy advertisement
- Covers different types of TE Policies
 - RSVP-TE
 - Segment Routing
 - Local Cross Connects
- Signals the path details and status

Updates in version 09

- Alignment of Segment Routing Policies with draft-ietf-springsegment-routing-policy adopted by SPRING WG
- Major updates for SR Policy advertisement
 - Updated descriptors to align with SR Policy Architecture
 - Updated attributes to not just advertise the segment-list but also other key attributes and status
- Editorial changes in other parts of the document for clarity and section re-organization
- No changes for RSVP-TE advertisements

SR Policy Descriptor

Describes the SR Policy Candidate Path in the TE Policy NLRI

2 0 3 8901 678901 Type Length Protocol-origin Flags RESERVED -+-+-+-+-+-+-+-+ Endpoint (4 or 16 octets) Policy Color (4 octets) Originator AS Number (4 octets) -+-+-+-+-+-+-+-+-+ Originator Address (4 or 16 octets) Discriminator (4 octets)

SR Policy State TLVs

Attributes of the TE Policy NLRI for SR Policies

- 1. SR Binding SID TLV
 - Indicates the BSID in use and its properties
- 2. SR Candidate Path State TLV
 - Indicates whether the CP is active and its validation state
 - Indicates how the CP was instantiated (e.g. PCE initiated, PCE delegated, ODN instantiated, etc.)
 - Other attributes and properties like Preference, Priority, etc.
- 3. SR Candidate Path Name TLV

SR Policy State TLVs – contd.

- 4. SR Candidate Path Constraints TLV
 - Indicates the algorithm and constraints associated with the path
 - SR Affinity Constraint sub-TLV
 - SR SRLG Constraint sub-TLV
 - SR Bandwidth Constraint sub-TLV
 - SR Disjoint Group sub-TLV
- 5. SR Segment List TLV
 - One or more Segment-Lists associated with the CP
 - Indicates whether it was computed dynamically or was explicit path
 - Indicates the computation and validation/resolution state
 - Also indicates the weight and algorithm of the SR Policy
 - Includes one or more SR Segment sub-TLVs

SR Policy State TLVs – contd.

- 6. SR Segment TLV
 - Indicates the segment-type and a type-specific descriptor
 - Indicates the SID corresponding to the segment
 - Indicates the validation/resolution status of the SID
- 7. SR Segment List Metric TLV
 - Sub-TLV of the SR Segment List TLV
 - Indicates the metric type, metric value and bounds for the computation

Procedures

- SR Policies may be instantiated on the headend by
 - Local configuration
 - PCEP
 - BGP SR Policy
- Headend reports the SR Policies instantiated on it via BGP-LS using this specification
- Document describes how Attribute TLVs are used to convey the state of the SR Policy

Next Steps

- Document needs review in view of the content changes
- Requesting WG review and any inputs/feedback
- Consider early code-point allocation for implementations