# IETF Author Tools

This service allows you to convert an Internet-Draft from one format into another, including rendered outputs. In the background this service uses id2xml, kramdown-rfc, mmark and xml2rfc, chaining them together as needed to deliver the requested conversion.
The input must be a valid Internet-Draft in one of the following formats:

- XML as .xml (automatically recognises v3 as defined in RFC 7991 and v2 as defined in RFC 7749)
- Markdown as .md or .mkd (kramdown-rfc and mmark dialects are supported)
- Plain text as .txt

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Input file

Choose file draft-ietf-pce-sid-algo-10.xml

Text HTML XML PDF Diff with latest Validate (idnits)

**draft-ietf-pce-sid-algo-09.txt** | **draft-ietf-pce-sid-algo-10.txt**

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```
Intended status: Standards Track                    Cisco Systems, Inc.
Expires: 9 December 2024                                        S. Peng
                                                              ZTE Corporation
                                                                S. Peng
                                                        Huawei Technologies
                                                               A. Stone
                                                                  Nokia
                                                            7 June 2024


        Carrying SR-Algorithm information in PCE-based Networks.
                        draft-ietf-pce-sid-algo-09

Abstract

   The SR-Algorithm associated with a Prefix Segment-ID (SID) defines
   the path computation algorithm used by Interior Gateway Protocols
   (IGPs).  This information is available to controllers such as the
   Path Computation Element (PCE) via topology learning.  This document
   proposes an approach for informing headend routers regarding the SR-
   Algorithm associated with each Prefix SID used in PCE-computed paths,
   as well as signalling a specific SR-Algorithm as a constraint to the
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# 1. Introduction

A PCE can compute SR-TE paths using SIDs with different SR-Algorithms depending on the use-case, constraints, etc. While this information is available on the PCE, there is no method of conveying this information to the headend router.

Similarly, the headend can also compute SR-TE paths using different

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Considerations section of [RFC9350], but which are also applicable to path computation done by PCE.

# 8. IANA Considerations

## 8.1. SR Capability Flag

IANA maintains a sub-registry, named "SR Capability Flag Field", within the "Path Computation Element Protocol (PCEP) Numbers" registry to manage the Flags field of the SR-PCE-CAPABILITY TLV.

IANA is requested to make the following assignment:

| Bit | Description | Reference |
|---|---|---|
| 5 | SR-Algorithm Capability | This document |

Table 1

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IANA is requested to confirm the following early allocation:

| Bit | Description | Reference |
|---|---|---|
| 5 | SR-Algorithm Capability | This document |

Table 1

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| TBD1 | SR-Algorithm Capability | This document |

Table 2

### 8.3. SR-ERO Flag

IANA maintains a sub-registry, named "SR-ERO Flag Field", within the "Path Computation Element Protocol (PCEP) Numbers" registry to manage the Flags field of the SR-ERO Subobject. IANA is requested to make the following assignment:

| Bit | Description | Reference |
|---|---|---|
| 7 | SR-Algorithm Flag | This document |

Table 3

skipping to change at *page 17, line 18*

| TBD2 | SR-Algorithm Flag | This document |

Table 4

### 8.5. PCEP TLV Types

IANA maintains a subregistry, named "PCEP TLV Type Indicators", within the "Path Computation Element Protocol (PCEP) Numbers" registry. IANA is requested to allocate a new TLV type for the new LSPA TLV specified in this document.

| Type | Description | Reference |
|---|---|---|
| 66 | SR-Algorithm | This document |

Table 5

### 8.6. Metric Types

IANA maintains a subregistry for "METRIC Object T Field" within the

| TBD1 | SR-Algorithm Capability | This document |

Table 2

### 8.3. SR-ERO Flag

IANA maintains a sub-registry, named "SR-ERO Flag Field", within the "Path Computation Element Protocol (PCEP) Numbers" registry to manage the Flags field of the SR-ERO Subobject. IANA is requested to confirm the following early allocation:

| Bit | Description | Reference |
|---|---|---|
| 7 | SR-Algorithm Flag | This document |

Table 3

skipping to change at *page 17, line 18*

| TBD2 | SR-Algorithm Flag | This document |

Table 4

### 8.5. PCEP TLV Types

IANA maintains a subregistry, named "PCEP TLV Type Indicators", within the "Path Computation Element Protocol (PCEP) Numbers" registry. IANA is requested to confirm the early allocation of a new TLV type for the new LSPA TLV specified in this document.

| Type | Description | Reference |
|---|---|---|
| 66 | SR-Algorithm | This document |

Table 5

### 8.6. Metric Types

IANA maintains a subregistry for "METRIC Object T Field" within the

"Path Computation Element Protocol (PCEP) Numbers" registry. IANA is requested to allocate a new values for metric types defined in this document:

| Type | Description | Reference |
|---|---|---|
| 22 | Path Min Delay Metric | This document |
| 23 | P2MP Path Min Delay Metric | This document |
| 24(TBA) | Bandwidth Metric | This document |
| 25(TBA) | P2MP Bandwidth Metric | This document |
| 128-255 (TBA) | User Defined Metric | This document |

Table 6

9. References

9.1. Normative References

[I-D.ietf-lsr-flex-algo-bw-con]
Hegde, S., Britto, W., Shetty, R., Decraene, B., Psenak, P., and T. Li, "Flexible Algorithms: Bandwidth, Delay, Metrics and Constraints", Work in Progress, Internet-Draft, draft-ietf-lsr-flex-algo-bw-con-12, 19 May 2024,

"Path Computation Element Protocol (PCEP) Numbers" registry. IANA is requested to confirm the early allocated codepoints as follows:

| Type | Description | Reference |
|---|---|---|
| 22 | Path Min Delay Metric | This document |
| 23 | P2MP Path Min Delay Metric | This document |

Table 6

IANA is requested to allocate new values for the following metric types defined in this document. Please note the suggested values for the IANA to consider.

| Type | Description | Reference |
|---|---|---|
| 24(TBA) | Bandwidth Metric | This document |
| 25(TBA) | P2MP Bandwidth Metric | This document |
| 128-255 (TBA) | User Defined Metric | This document |

Table 7

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**End of changes. 8 change blocks.**

*25 lines changed or deleted* *35 lines changed or added*

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