

Signaling & Routing Extension for Links with Variable Discrete Bandwidth

draft-long-ccamp-rsvp-te-availability-03
draft-long-ccamp-ospf-availability-extension-02

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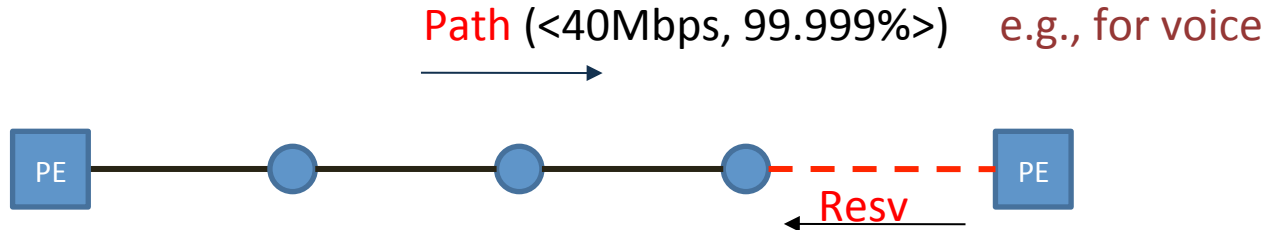
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Problem and Solution



Availability	Remaining sub-bandwidth
99.999%	50Mbps
99.995%	50Mbps
99.99%	100Mbps

link bandwidth capacity table

- Packet switching network may pass through the links with variable discrete bandwidth
- Availability is used to describe the bandwidth for such links.
- Availability requirement is proposed to consider when setting up an LSP

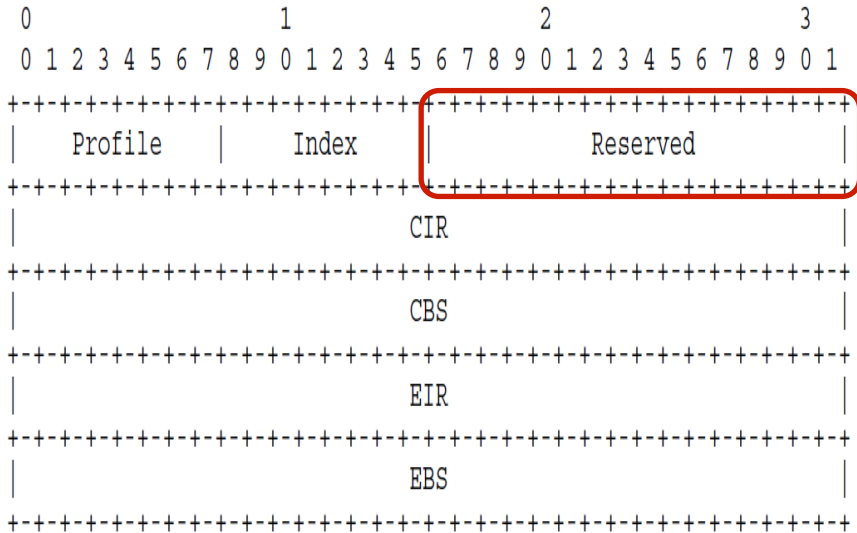
Signaling & Routing Extension

- “draft-long-ccamp-rsvp-te-availability-03” addresses the signaling extension
 - Define an availability field in bandwidth Profile TLV
 - Define an availability sub-TLV to specify the availability requirement
- “draft-long-ccamp-ospf-availability-extension-02” addresses the routing extension
 - Define an availability information sub-TLV to notify the availability information for path calculation

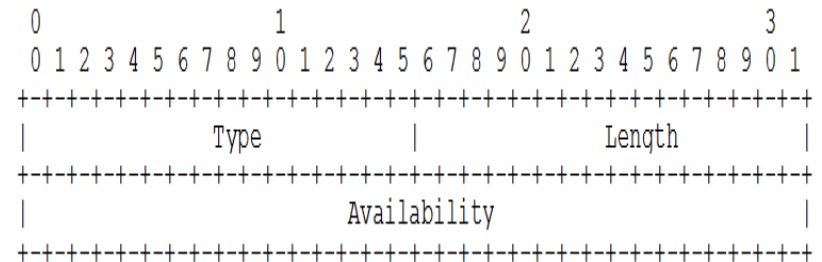
Changes

- A new co-author: Himanshu Shah
- A new appendix to explain the bandwidth and availability
- Addressed comments received on the draft
 - Contention resolution: by comparing the node ID
 - Backward compatibility: A node who doesn't support availability TLV should ignore the related information
- Editorial improvements

Open Discussion - 1



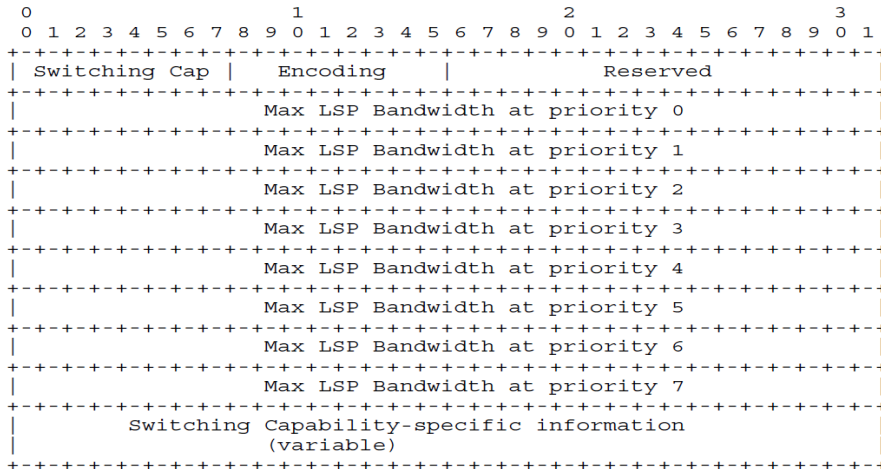
Ethernet bandwidth profile



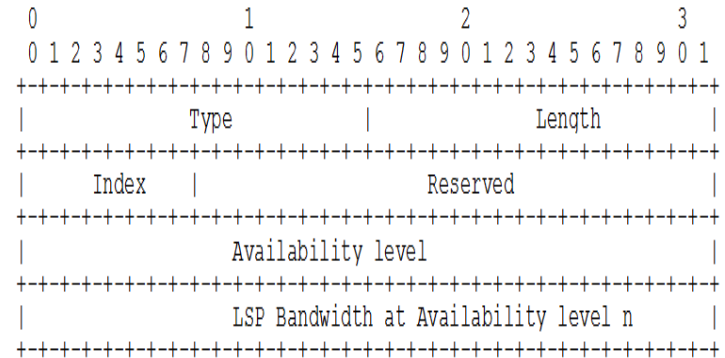
Availability requirement sub-TLV

- Availability value in the signaling extension
 - Option 1: use the Reserved field(16 bits)
 - Option 2: define a sub-TLV (32 bits)
- The maximum availability value is 0.99999

Open Discussion - 2



ISCD sub-TLV



Availability information sub-TLV

- The routing extension is to define a sub-TLV under ISCD sub-TLV of the link TLV (RFC4203).
- Switching capability consideration
 - Option 1: Bond to a certain switching capability: L2SC
 - Option 2: Define a switching capability for links with variable discrete bandwidth for backward compatibility

Next step

- Solicit comments from the group
- Update the drafts after the meeting

Thanks