

PCE Working Group  
Internet Draft  
Intended status: Standard Track  
Expires: April 20, 2014

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October 21, 2013

Resource ReserVation Protocol-Traffic Engineering (RSVP-TE)  
Extension for Additional Signal Types in G.709 OTN  
draft-ali-ccamp-additional-signal-type-g709v3-00.txt

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Abstract

[I-D.draft-ietf-ccamp-gmpls-signaling-g709v3] provides the extensions to the Generalized Multi-Protocol Label Switching (GMPLS) signaling to control the full set of OTN features including ODU0, ODU4, ODU2e and ODUflex. However, it does not cover additional signal types mentioned in [G.Sup43] (ODU1e, ODU3e1, ODU3e2) or (ODU1f, ODU2f). This draft provides GMPLS signaling extension for these additional signal types.

Conventions used in this document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119].

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1. Introduction

[I-D.draft-ietf-ccamp-gmpls-signaling-g709v3] updates the ODU-related portions of [RFC4328] to provide Resource ReserVation Protocol-Traffic Engineering (RSVP-TE) extensions to support control for [G.709-v3]. However, it does not cover additional signal types mentioned in [G.Sup43] (ODU1e, ODU3e1, ODU3e2) or (ODU1f and ODU2f).

With the evolution and deployment of Optical Transport Network (OTN) technology, it is necessary to support additional signal types mentioned in [G.Sup43] and (ODU1f and ODU2f). [I-D.draft-khuzema-ccamp-gmpls-signaling-g709] had support for signal types mentioned in [G.Sup43] but the signal types values collides with values defined in [I-D.draft-ietf-ccamp-gmpls-signaling-g709v3]. The draft has expired and also does not support ODU1f and ODU2f signal type.

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This draft provides GMPLS signaling extension to support additional signal types mentioned in [G.Sup43] and (ODU1f and ODU2f).

## 2. RSVP-TE extension for Additional Signal Types

[I-D.draft-ietf-ccamp-gmpls-signaling-g709v3] defines the format of Traffic Parameters in OTN-TDM SENDER\_TSPEC and OTN-TDM FLOWSPEC objects. The said traffic parameters have a signal type field. This document defines the signal type for ODU1e, ODU3e1, ODU3e2, ODU1f and ODU2f, as follows:

Value	Type
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23	ODU1e (10Gbps Ethernet [GSUP.43])
24	ODU1f (10Gbps Fiber Channel)
25	ODU2f (10Gbps Fiber Channel)
26	ODU3e1 (40Gbps Ethernet [GSUP.43])
27	ODU3e2 (40Gbps Ethernet [GSUP.43])

## 3. Security Considerations

This document does not introduce any additional security issues above those identified in [I-D.draft-ietf-ccamp-gmpls-signaling-g709v3].

## 4. IANA Considerations

This document defines signal type for ODU1e, ODU3e1, ODU3e2, ODU1f and ODU2f to be carried in Traffic Parameters in OTN-TDM SENDER\_TSPEC and OTN-TDM FLOWSPEC objects [I-D. draft-ietf-ccamp-gmpls-signaling-g709v3].

## 5. Acknowledgments

The authors would like to thank Sudip Shukla for comments.

## 6. References

### 6.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.
- [RFC4328] Papadimitriou, D., Ed., "Generalized Multi-Protocol Label Switching (GMPLS) Signaling Extensions for G.709 Optical Transport Networks Control", RFC 4328, January 2006.

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[G.709-v3] ITU-T, "Interface for the Optical Transport Network (OTN)", G.709/Y.1331 Recommendation, December 2009.

[GSUP.43] ITU-T, "Proposed revision of G.sup43 (for agreement)", December 2008.

[I-D.draft-ietf-ccamp-gmpls-signaling-g709v3] F.Zhang, G.Zhang, S.Belotti, D.Ceccarelli, K.Pithewan, "Generalized Multi-Protocol Label Switching (GMPLS) Signaling Extensions for the evolving G.709 Optical Transport Networks Control, draft-ietf-ccamp-gmpls-signaling-g709v3, work in progress.

## 6.2. Informative References

[I-D.draft-khuzema-ccamp-gmpls-signaling-g709] Pithewan, K., et al, "Signaling Extensions for Generalized MPLS (GMPLS) Control of G.709 Optical Transport Networks", expired draft.

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