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Allocation of a Generic Associated Channel Type for ITU-T MPLS Transport Profile Operation, Maintenance, and Administration (MPLS-TP OAM)

Abstract

This document assigns a Generic Associated Channel (G-ACh) Type for carrying ITU-T MPLS Transport Profile Operations, Administration, and Management (MPLS-TP OAM) messages in the MPLS Generic Associated Channel.

Status of This Memo

This document is not an Internet Standards Track specification; it is published for informational purposes.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Not all documents approved by the IESG are a candidate for any level of Internet Standard; see Section 2 of RFC 5741.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at http://www.rfc-editor.org/info/rfc6671.

IESG Note

The IESG notes that the IETF has developed a set of OAM tools for MPLS-TP that have been published as Standards Track RFCs. A list of the relevant RFCs can be found in RFC 6669. The approval of this document and the assignment of an ACh Type does not constitute endorsement by the IETF of the alternate MPLS-TP OAM documented in G.8113.1. The IESG recommends instead that the RFCs noted above should be implemented.

1. Introduction

The Transport Profile of MPLS (MPLS-TP) defined in [RFC5654] is a profile of MPLS technology for use in packet transport networks. The MPLS-TP profile includes a set of Operations, Administration, and Management (OAM) tools defined by the IETF [RFC6669] that are used to meet the OAM functional requirements defined in [RFC5860].

ITU-T Recommendation [G.8113.1] documents MPLS-TP OAM. This Recommendation builds upon Ethernet OAM as documented in [Y.1731]. The messages in [G.8113.1] are defined to be carried in a new Generic Associated Channel (G-ACh) Type in the MPLS Generic Associated Channel. In order to carry these messages in an interoperable fashion, a Generic Associated Channel Type from the IANA maintained registry "Pseudowire Associated Channel Types" is to be used.

To fulfill the request from ITU-T SG15 in [LS370] and to allow deployment of the [G.8113.1] OAM solution without using an experimental G-ACh Type, IANA has assigned a G-ACh Type <0x8902> for use by the ITU-T for [G.8113.1]. This G-ACh Type is known as the "G.8113.1 OAM G-ACh Type".

A number of experts in the IETF do not consider that the development or deployment of a second protocol solution within the same architectural problem space is necessary or advisable [RFC6670].

2. Conventions Used in This Document

2.1. Requirements Notation

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 [RFC2119].

3. Scope of the G.8113.1 OAM G-ACh Type

The G-ACh Type assigned by this document MUST only be used for OAM messages, as defined in the ITU-T Recommendation [G.8113.1], carried in the G-ACh. The OAM messages and procedures carried behind this G-ACh Type are restricted to only those that address the OAM functional requirements defined in [RFC5860]. Other message types MUST NOT be carried behind this G-ACh Type.

All ITU-T Recommendations are subject to updates by errata, corrigenda, amendments, or complete revisions. In any update of [G.8113.1], the G-ACh Type assigned by this document MUST NOT be used for any functions not identified as OAM functional requirements in [RFC5860]. An update of [G.8113.1] may use the G-ACh Type assigned by this document to support the OAM functions identified in [RFC5860]. When an amendment or complete revision of G.8113.1 is approved, the reference to [G.8113.1], provided in this document, should be updated to show the approval date of the new version.

The G-ACh Type assigned by this document may be used on any transport construct that uses the G-ACh, e.g., MPLS-TP Sections, MPLS-TP LSPs, or PWs as described in [G.8113.1].

4. Security Considerations

As noted in [RFC5586], when new G-ACh Types are defined, the "security considerations MUST be described in the relevant associated channel type specification". The IETF takes this opportunity to remind the ITU-T of the need to describe security considerations in [G.8113.1].

5. IANA Considerations

IANA maintains the "Pseudowire Associated Channel Types" sub-registry of the "Pseudowire Name Spaces (PWE3)" registry.

IANA has allocated a new G-ACh Type as follows:

Value	Description	TLV Follows	Reference
0x8902	G.8113.1 OAM	No	[RFC6671]

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.

[RFC5586] Bocci, M., Ed., Vigoureux, M., Ed., and S. Bryant, Ed., "MPLS Generic Associated Channel", RFC 5586, June 2009.

[RFC5654] Niven-Jenkins, B., Ed., Brungard, D., Ed., Betts, M., Ed., Sprecher, N., and S. Ueno, "Requirements of an MPLS Transport Profile", RFC 5654, September 2009.

[RFC5860] Vigoureux, M., Ed., Ward, D., Ed., and M. Betts, Ed., "Requirements for Operations, Administration, and Maintenance (OAM) in MPLS Transport Networks", RFC 5860, May 2010.

[G.8113.1] ITU-T Recommendation G.8113.1/Y.1372.1, "Operations, Administration and Maintenance mechanism for MPLS-TP in Packet Transport Network (PTN)", 11/2012, http://www.itu.int/rec/T-REC-G.8113.1/en.

[Y.1731] ITU-T Recommendation G.8013/Y.1731, "OAM functions and mechanisms for Ethernet based networks" 07/2011 as updated by Corrigendum 1, 10/2011, and Amendment 1, 05/2012, http://www.itu.int/rec/T-REC-G.8013/en.

6.2. Informative References

[LS370] "Liaison Statement: LS370 - Current status of Recommendation ITU-T G.8113.1/Y.1372.1, Operations, Administration and Maintenance mechanism for MPLS-TP in Packet Transport Network (PTN)", January 2012, https://datatracker.ietf.org/liaison/1125/.

[RFC6669] Sprecher, N. and L. Fang, "An Overview of the Operations, Administration, and Maintenance (OAM) Tool Set for MPLS-Based Transport Networks", RFC 6669, July 2012.

[RFC6670] Sprecher, N. and KY. Hong, "The Reasons for Selecting a Single Solution for MPLS Transport Profile (MPLS-TP) Operations, Administration, and Maintenance (OAM)", RFC 6670, July 2012.

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