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Codepoint Registry for the Flags Field in the Resource Reservation Protocol-Traffic Engineering (RSVP-TE) Session Attribute Object

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Abstract

This document provides instructions to IANA for the creation of a new codepoint registry for the flags field in the Session Attribute object of the Resource Reservation Protocol Traffic Engineering (RSVP-TE) signaling messages used in Multiprotocol Label Switching (MPLS) and Generalized MPLS (GMPLS) signaling.

1. Introduction

The Resource Reservation Protocol (RSVP) [RFC2205] has been extended as RSVP for Traffic Engineering (RSVP-TE) for use in Multiprotocol Label Switching (MPLS) signaling [RFC3209] and Generalized MPLS (GMPLS) [RFC3473].

[RFC3209] introduced a new signaling object, the Session Attribute object, that is carried on the RSVP Path message. The Session Attribute object contains an eight-bit field of flags.

The original specification of RSVP-TE assigned uses to three of these bit flags. Subsequent MPLS and GMPLS RFCs have assigned further flags.

There is a need for a codepoint registry to track the use of the bit flags in this field, to ensure that bits are not assigned more than once, and to define the procedures by which such bits may be assigned.

This document lists the current bit usage and provides information for IANA to create a new registry. This document does not define the uses of specific bits -- definitive procedures for the use of the bits can be found in the referenced RFCs.

2. Existing Usage

2.1. RFC 3209

[RFC3209] defines the use of three bits as follows:

0x01 Local protection desired

0x02 Label recording desired

0x04 SE Style desired

2.2. RFC 4090

[RFC4090] defines the use of two bits as follows:

0x08 Bandwidth protection desired

0x10 Node protection desired

2.3. RFC 4736

[RFC4736] defines the use of one bit as follows:

0x20 Path re-evaluation request

3. Security Considerations

This informational document exists purely to create an IANA registry. Such registries help to protect the IETF process against denial-of-service attacks.

Otherwise there are no security considerations for this document.

4. IANA Considerations

IANA has created a new codepoint registry as follows.

The new registry has been placed under the "RSVP-TE Parameters" branch of the tree.

The new registry has been termed "Session Attribute Object Flags."

Flags from this registry may only be assigned by IETF consensus [RFC2434].

The registry references the flags already defined as described in Section 2 of this document.

5. Acknowledgements

Thanks to JP Vasseur, Bill Fenner, and Thomas Narten for reviewing this document.

6. References

6.1. Normative References

[RFC2205] Braden, R., Ed., Zhang, L., Berson, S., Herzog, S. and S. Jamin, "Resource ReSerVation Protocol (RSVP) -- Version 1, Functional Specification", RFC 2205, September 1997.

[RFC2434] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", BCP 26, RFC 2434, October 1998.

[RFC3209] Awduche, D., Berger, L., Gan, D., Li, T., Srinivasan, V. and G. Swallow, "RSVP-TE: Extensions to RSVP for LSP Tunnels", RFC 3209, December 2001.

[RFC3473] Berger, L., Ed., "Generalized Multi-Protocol Label Switching (GMPLS) Signaling - Resource ReserVation Protocol-Traffic Engineering (RSVP-TE) Extensions", RFC 3473, January 2003.

6.2. Informative References

[RFC4090] Pan, P., Ed., Swallow, G., Ed., and A. Atlas, Ed., "Fast Reroute Extensions to RSVP-TE for LSP Tunnels", RFC 4090, May 2005.

[RFC4736] Vasseur, JP., Ed., Ikejiri, Y., and R. Zhang, "Reoptimization of Multiprotocol Label Switching (MPLS) Traffic Engineering (TE) Loosely Routed Label Switched Path (LSP)", RFC 4736, November 2006.

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