

Updates to the IS-IS TLV Codepoints Registry

Abstract

This document recommends some editorial changes to the IANA "IS-IS TLV Codepoints" registry to more accurately document the state of the protocol. It also sets out new guidelines for Designated Experts to apply when reviewing allocations from the registry.

Status of This Memo

This is an Internet Standards Track document.

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). Further information on Internet Standards is available in [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/rfc7370>.

Copyright Notice

Copyright (c) 2014 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<http://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

This document may contain material from IETF Documents or IETF Contributions published or made publicly available before November 10, 2008. The person(s) controlling the copyright in some of this material may not have granted the IETF Trust the right to allow modifications of such material outside the IETF Standards Process. Without obtaining an adequate license from the person(s) controlling the copyright in such materials, this document may not be modified outside the IETF Standards Process, and derivative works of it may not be created outside the IETF Standards Process, except to format it for publication as an RFC or to translate it into languages other than English.

Table of Contents

1. Introduction	3
1.1. Requirements Language	3
2. IS Neighbor Sub-TLV Registry	4
3. Prefix Reachability Sub-TLV Registry	4
4. Guidance for Designated Experts	4
5. IANA Considerations	5
6. Security Considerations	5
7. References	6
7.1. Normative References	6
7.2. Informative References	6
Acknowledgements	7
Author's Address	7

1. Introduction

The "IS-IS TLV Codepoints" registry was created by [RFC3563] and extended by [RFC6233]. The assignment policy for the registry is "Expert Review" as defined in [RFC5226]. As documents related to IS-IS are developed, the codepoints required for the protocol extensions are reviewed by the Designated Experts and added to the IANA-managed registry. As these documents are published as RFCs, the registries are updated to reference the relevant RFC.

In the case of TLVs supporting prefix advertisement, currently separate sub-TLV registries are maintained for each TLV. These registries need to be combined into a common sub-TLV registry similar to what has been done for neighbor advertisement TLVs.

In some cases, there is a need to allocate codepoints defined in Internet-Drafts (I-Ds) that seem likely to eventually gain Working Group approval, without waiting for those I-Ds to be published as RFCs. This can be achieved using Expert Review, and this document sets out guidance for the Designated Experts to apply when reviewing allocations from the registry.

1.1. Requirements Language

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].

2. IS Neighbor Sub-TLV Registry

There was an existing common sub-TLV registry named "Sub-TLVs for TLVs 22, 141, and 222". [RFC5311] defines the IS Neighbor Attribute TLV (23) and the MT IS Neighbor Attribute TLV (223). The format of these TLVs is identical to TLVs 22 and 222, respectively. The IS Neighbor sub-TLV registry has been extended to include these two TLVs. Settings for inclusion of each sub-TLV are identical to the settings for TLVs 22 and 222, respectively.

3. Prefix Reachability Sub-TLV Registry

Previously, there existed separate sub-TLV registries for TLVs 135, 235, 236, and 237. As in the case of the IS Neighbor TLVs discussed in the previous section, assignment of sub-TLVs applicable to one or more of these TLVs is intended to be common. Therefore, the existing separate sub-TLV registries have been combined into a single registry entitled "Sub-TLVs for TLVs 135, 235, 236, and 237". As existing sub-TLV assignments are common to all the TLVs, this represents no change to the protocol -- only a clearer representation of the intended sub-TLV allocation strategy. The format of the registry is as shown below:

Type	Description	135	235	236	237	Reference
----	-----	---	---	---	---	-----
0	Unassigned					
1	32-bit Administrative Tag Sub-TLV	y	y	y	y	[RFC5130]
2	64-bit Administrative Tag Sub-TLV	y	y	y	y	[RFC5130]
3-255	Unassigned					

4. Guidance for Designated Experts

When new I-Ds are introduced requiring new codepoints, it is advantageous to be able to allocate codepoints without waiting for them to progress to RFC. The reasons this is advantageous are described in [RFC7120]. However, the procedures in [RFC7120] for early allocation do not apply to registries, such as the "IS-IS TLV Codepoints" registry, that utilize the "Expert Review" allocation policy. In such cases, what is required is that a request be made to the Designated Experts who MAY approve the assignments according to the guidance that has been established for the registry concerned.

The following guidance applies specifically to the "IS-IS TLV Codepoints" registry.

1. Application for a codepoint allocation MAY be made to the Designated Experts at any time.

2. The Designated Experts SHOULD only consider requests that arise from I-Ds that have already been accepted as Working Group documents or that are planned for progression as AD Sponsored documents in the absence of a suitably chartered Working Group.
3. In the case of Working Group documents, the Designated Experts SHOULD check with the Working Group chairs that there is consensus within the Working Group to make the allocation at this time. In the case of AD Sponsored documents, the Designated Experts SHOULD check with the AD for approval to make the allocation at this time.
4. The Designated Experts SHOULD then review the assignment requests on their technical merit. The Designated Experts SHOULD NOT seek to overrule IETF consensus, but they MAY raise issues for further consideration before the assignments are made.
5. Once the Designated Experts have granted approval, IANA will update the registry by marking the allocated codepoints with a reference to the associated document as normal.
6. In the event that the document fails to progress to RFC, the Expiry and deallocation process defined in [\[RFC7120\]](#) MUST be followed for the relevant codepoints -- noting that the Designated Experts perform the role assigned to Working Group chairs.

5. IANA Considerations

This document provides guidance to the Designated Experts appointed to manage allocation requests in the "IS-IS TLV Codepoints" registry.

IANA has updated the registry that was specified as "Sub-TLVs for TLVs 22, 141, and 222" to be named "Sub-TLVs for TLVs 22, 23, 141, 222, and 223".

Per this document, the existing sub-TLV registries for TLVs 135, 235, 236, and 237 have been combined into a single registry -- the "Sub-TLVs for TLVs 135, 235, 236, and 237" registry -- as described in [Section 3](#).

6. Security Considerations

This document introduces no new security issues.

7. References

7.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997, <<http://www.rfc-editor.org/info/rfc2119>>.
- [RFC5130] Previdi, S., Shand, M., and C. Martin, "A Policy Control Mechanism in IS-IS Using Administrative Tags", [RFC 5130](#), February 2008, <<http://www.rfc-editor.org/info/rfc5130>>.
- [RFC5226] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", [BCP 26](#), [RFC 5226](#), May 2008, <<http://www.rfc-editor.org/info/rfc5226>>.
- [RFC5311] McPherson, D., Ginsberg, L., Previdi, S., and M. Shand, "Simplified Extension of Link State PDU (LSP) Space for IS-IS", [RFC 5311](#), February 2009, <<http://www.rfc-editor.org/info/rfc5311>>.
- [RFC6233] Li, T. and L. Ginsberg, "IS-IS Registry Extension for Purges", [RFC 6233](#), May 2011, <<http://www.rfc-editor.org/info/rfc6233>>.
- [RFC7120] Cotton, M., "Early IANA Allocation of Standards Track Code Points", [BCP 100](#), [RFC 7120](#), January 2014, <<http://www.rfc-editor.org/info/rfc7120>>.

7.2. Informative References

- [RFC3563] Zinin, A., "Cooperative Agreement Between the ISOC/IETF and ISO/IEC Joint Technical Committee 1/Sub Committee 6 (JTC1/SC6) on IS-IS Routing Protocol Development", [RFC 3563](#), July 2003, <<http://www.rfc-editor.org/info/rfc3563>>.

Acknowledgements

The author wishes to thank Alia Atlas and Amanda Baber for their input in defining the correct process to follow to get these changes implemented. Special thanks to Adrian Farrel for crafting the text in [Section 4](#).

Author's Address

Les Ginsberg
Cisco Systems
510 McCarthy Blvd.
Milpitas, CA 95035
United States

EMail: ginsberg@cisco.com