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Distribution of Traffic Engineering Extended Administrative Groups using
BGP-LS
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Abstract

Administrative groups are link attributes advertised used for traffic engineering. This document defines an extension to BGP-LS for advertisement of extended administrative groups (EAGs).

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[1.](#) Introduction

Administrative groups (commonly referred to as "colors" or "link colors") are link attributes that are advertised by link state protocols like IS-IS [[RFC1195](#)], OSPFv2 [[RFC2328](#)] and OSPFv3 [[RFC5340](#)]. The BGP-LS advertisement of the originally defined (non-extended) administrative groups is encoded using the Administrative Group (color) TLV 1088 as defined in [[RFC7752](#)].

These administrative groups are defined as a fixed-length 32-bit bitmask. As networks grew and more use-cases were introduced, the 32-bit length was found to be constraining and hence extended administrative groups (EAG) were introduced in [[RFC7308](#)].

This document specifies an extension to BGP-LS for advertisement of the extended administrative groups.

[1.1.](#) Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [BCP 14](#) [[RFC2119](#)] [[RFC8174](#)] when, and only when, they appear in all capitals, as shown here.

[2.](#) Advertising Extended Administrative Group in BGP-LS

This document defines an extension that enable BGP-LS speakers to signal the EAG of links in a network to a BGP-LS consumer of network topology such as a centralized controller. The centralized controller can leverage this information in traffic engineering

Code Point	Description	IS-IS TLV/Sub-TLV
1173	Extended Administrative Group	22/14

4. Security Considerations

The procedures and protocol extensions defined in this document do not affect the BGP security model. See the "Security Considerations" section of [RFC4271] for a discussion of BGP security. Also, refer to [RFC4272] and [RFC6952] for analyses of security issues for BGP. Security considerations for acquiring and distributing BGP-LS information are discussed in [RFC7752]. The TLV introduced in this document is used to propagate the EAG extensions defined in [RFC7308]. It is assumed that the IGP instances originating this TLV will support all the required security (as described in [RFC7308]) in order to prevent any security issues when propagating the TLVs into BGP-LS. The advertisement of the link attribute information defined in this document presents no significant additional risk beyond that associated with the existing link attribute information already supported in [RFC7752].

5. Acknowledgments

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