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 BMP Loc-RIB: Peer address

Abstract

BMP Loc-RIB lets a BMP publisher set the Peer Address value of a path information to zero. This document introduces the option to communicate the actual peer from which a path was received when advertising that path with BMP Loc-RIB.

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.

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1. Introduction

Using BMP Loc-RIB [[RFC9069](#)], the Peer Address field of a Per-Peer header is Zero-filled. This prevents a collector from knowing from which peer a path selected as best was received. The nexthop attribute of a path is indeed not an identifier of the peer from which the path was received.

This document introduces the option to actually set this field to the IP Address of the peer from which the installed path was received. For BMPv4, it introduces a TLV describing the Peer Address.

2. BMPv3 Behavior

A BMPv3 Loc-RIB enabled node following this specification sets the Peer Address field in the Per-Peer header to the address of the Peer from which this path was received. The V flag is applicable, so that if the peer address is an IPv6 address, the V flag MUST be set to 1. If the peer address is an IPv4 address, the V flag MUST be set to 0.

This behavior SHOULD be disabled by default and enabled through configuration, so that a defensive BMP receiver would not terminate a BMP session over which it receives a BMP Loc-RIB messages with a non-zero Peer Address field. This behavior can be enabled when the operator knows that the receiver can receive BMP Loc-RIB messages following this specification.

3. BMPv4 TLV Based Behavior

In BMP v4 [[I-D.ietf-grow-bmp-tlv](#)], TLV's can be used to provide optional information along with monitored paths. Peer Address information can be included using one such TLV.

A TLV type "Peer-Address TLV" needs to be reserved from the BMP Route Monitoring TLVs registry. The length field is 4 when the peer is IPv4 and 16 when the peer is IPv6, as the index field of the TLV is not included in the length field. The value is the IP address the peer from which the monitored path was received.

4. Security Considerations

This document does not introduce new security considerations.

5. Acknowledgements

These are the acks.

6. References

6.1. Normative References

[[I-D.ietf-grow-bmp-tlv](#)] Lucente, P. and Y. Gu, "TLV support for BMP Route Monitoring and Peer Down Messages", Work in Progress, Internet-Draft, draft-ietf-grow-bmp-tlv-10, 8 November 2022, <<https://datatracker.ietf.org/doc/html/draft-ietf-grow-bmp-tlv-10>>.

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[[RFC8174](#)] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/info/rfc8174>>.

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6.2. Informative References

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