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Use of the Cost Community to carry the Accumulated IGP Metric
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Abstract

This document explains the use of the Cost Community to flexibly carry the Accumulated IGP Metric.

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[1.](#) Introduction

The Accumulated IGP Metric (AIGP) Attribute [[RFC7311](#)] has been defined with the purpose of carrying an AIGP. The attribute is used in the BGP selection process before the tie braking procedures [[RFC4271](#)], effectively after the LOCAL_PREF comparison.

The Cost Community [[I-D.ietf-idr-custom-decision](#)] can provide a flexible mechanism to carry the AIGP. It can be used both at a different point in the selection process, or as a direct replacement for the AIGP attribute in networks that don't fully support it.

[2.](#) 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 [[RFC2119](#)].

[3.](#) Use of the Cost Community to carry the AIGP

The applicability and procedures defined in [[RFC7311](#)] for originating and modifying the AIGP value are not changed in this document. The value is used as the Cost of the Cost Community.

The Point of Insertion (POI) can be set to any of the values defined in [[I-D.ietf-idr-custom-decision](#)]. Note that the use of the LOCAL_PREF POI is equivalent to using the AIGP Attribute in routers that don't support it.

If the Cost Community is used to carry the AIGP value, then the AIGP

Attribute SHOULD NOT be used. If used, then the high-order bit of the Community-ID MUST be set in a Cost Community with a POI of AIGP to avoid an inconsistent selection process. Note that this operation doesn't preclude using a Cost Community with a Cost of the AIGP at a different POI.

[4.](#) Security Considerations

This document explains the use of the Cost Community to provide flexibility in the application of routing policy related to the accumulated IGP metric of a route. As such, it does not introduce new security risks than the ones considered in [\[I-D.ietf-idr-custom-decision\]](#) or [\[RFC7311\]](#).

[5.](#) IANA Considerations

This document has no IANA actions.

[6.](#) Acknowledgements

TBD

[7.](#) References

[7.1.](#) Normative References

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- [RFC4271] Rekhter, Y., Li, T., and S. Hares, "A Border Gateway Protocol 4 (BGP-4)", [RFC 4271](#), January 2006.

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Cost Community for AIGP

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