

Advertising Infinity Links in OSPF

draft-ietf-lsr-ospf-ls-link-infinity-01

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Overview

- This document specifies that if the IGP metric of a link is advertised as LSLinkInfinity (0xffff), it **MUST NOT** be considered during the related SPF computation
- Became a WG document since IETF 119, March, 2024
- Updated version-01 based on the discussion from the mailing list

<https://author-tools.ietf.org/iddiff?url1=draft-ietf-lsr-ospf-ls-link-infinity-00&url2=draft-ietf-lsr-ospf-ls-link-infinity-01&difftype=--html>

Updates:

1. **Terminology Update**

LSLinkInfinity ---0xffff

MaxReachableLinkMetric ---0xfffe

2. **FA-Related Descriptions**

3. Solution based on MaxLinkMetric

This document specifies that if a link is advertised with the MaxLinkMetric (0xffff), it MUST NOT be considered during the normal SPF computation.

3. Solution based on LSLinkInfinity

This document specifies that if the IGP metric of a link is advertised as LSLinkInfinity (0xffff), it MUST NOT be considered during the related SPF computation. This applies to both Flex-Algorithm SPF and base SPF as long as the IGP metric is being used.

3. **OSPFv3-Related Description**

MaxLinkMetric is applicable for the following TLVs/LSAs:

- o The Router-LSA [RFC2328]
- o The OSPFv2 Extended Link TLV of OSPFv2 Extended Link Opaque LSA [RFC7684]
- o The Router-Link TLV of OSPFv3 E-Router-LSA [RFC8362]

LSLinkInfinity is applicable for the following TLVs/LSAs:

- o The Router-LSA [RFC2328] and [RFC5340]
- o The OSPFv2 Extended Link TLV of OSPFv2 Extended Link Opaque LSA [RFC7684]
- o The Router-Link TLV of OSPFv3 E-Router-LSA [RFC8362]

Updates:

4. **Updates to RFCs 6987 and 8770**

This document updates [RFC6987] and [RFC8770]. When an OSPFv2 router supports LSLinkInfinity capability defined in this document, The MaxLinkMetric(0xffff) MUST be updated to MaxReachableLinkMetric(0xfffe).

5. **Sentence Optimization**

Bit	Capabilities
TBD	MaxLinkMetric support

Upon detecting the presence of a reachable Router-LSA without a companion RI LSA that has the bit set, all routers in the area MUST recalculate routes without considering MaxLinkMetric.

Bit	Capabilities
TBD	LSLinkInfinity support

Upon detecting the change of a Router Information (RI) LSA, all routers in the area MUST recalculate routes.

6. **Grammar and Phrasing**

Next Steps

- Welcome your comments and suggestions
- Ready to WG Last Call

Thanks