



IETF 117, LSR WG
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draft-ppsenak-lsr-igp-ureach-prefix-announce

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Context

- Presented previously at IETF 114, IETF 115, IETF 116
- Draft describes how to announce the prefix unreachability in IGPs
- Using mostly existing protocol mechanisms
- Backward compatible solution

Signaling UPA - Summary

- Rely on prefix metric larger than 0xFE000000 (ISIS), or equal to LSInfinity (OSPFv2/OSPFv3) to maintain backward compatibility
 - Handling of such metrics is clearly specified in the existing RFCs
- Allows UPA to be deployed incrementally
- Explicit Signaling of UPA origin
 - Used to indicate the “reason” for which the prefix was advertised with unreachable metric
 - Treatment of the U-Flag and UP-Flag on the receiver is optional and outside of the scope of the draft.
- Supported by all prefix reachability advertisements in OSPFv2/OSPFv3 and ISIS

Version 03 changes – Signaling UPA Origin in OSPFv2

- The prefix that is advertised with U or UP flag **MUST** have the metric set to a value of LSInfinity, otherwise the new flags **MUST** be ignored.
 - Required for backward compatibility
- The new U/UP flags are advertised in OSPFv2 Extended Prefix TLV carried in OSPFv2 Extended Prefix LSA
- For default algorithm 0 prefixes with U-Flag or UP-Flag, it is **REQUIRED** to advertise the unreachable prefix in the base OSPFv2 LSA with LSInfinity metric
 - OSPFv2 Summary-LSA, AS-external-LSAs, NSSA AS-external LSA

Version 03 changes - Signaling UPA Origin in OSPFv3

- The prefix that is advertised with U or UP flag MUST have the metric set to a value of LSInfinity and NU-bit set, otherwise the new flags MUST be ignored
- For default algorithm 0 prefixes, the LSInfinity as well as NU-bit MUST be set in the prefix TLV:
 - Inter-Area-Prefix TLV, External-Prefix TLV
- For IP Algorithm Prefix the LSInfinity MUST be set in OSPFv3 IP Algorithm Prefix Reachability sub-TLV.
 - NU-bit and LSInfinity in parent TLV is already mandated by the [I-D.ietf-lsr-ip-flexalgo](https://datatracker.ietf.org/doc/draft-ietf-lsr-ip-flexalgo/)

Next Steps ...

- Comments are welcome
- Sufficient interest to address the problem in hand
- Ready for WG adoption
 - Draft is mature
 - Implementation is available
 - Field deployments are available