draft-ietf-lsr-ospf-prefix-originator-06

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Recap

• First presented at IETF 103 Bangkok
• Adopted by WG just before IETF 104 Prague

• Draft proposes a mechanism that enables inclusion of originator router information along with a prefix advertisement for OSPFv2/v3

• RFC 7794 specifies similar extensions for IS-IS
Prefix Source Router ID Sub-TLV

• Document specified this Sub-TLV for inclusion along with the Prefix Advertisement
  • For OSPFv2 : Sub-TLV of OSPFv2 Extended Prefix TLV advertised using OSPFv2 Extended Prefix Opaque LSAs
  • For OSPFv3 : Sub-TLV of the Extended LSA prefix TLVs advertised using OSPFv3 Extended LSAs

• It carries the OSPF Router ID of the OSPFv2/v3 router that has originated the prefix advertisement in the OSPF domain
• OSPF Router ID is not necessarily a reachable address of the originating router and is required to be unique only within an OSPF domain
New: Prefix Originator Sub-TLV

- The updated version additionally introduces this new Sub-TLV for inclusion along with the Prefix Advertisement in OSPFv2/v3 similar to the Prefix Source Router-ID Sub-TLV

- It carries a unique and reachable IP address of the OSPFv2/v3 router that has originated the prefix advertisement
  - May be picked based on the TE Router-ID of the originating node
- Enables signalling of originator node information across domains for external prefixes (from another OSPF or some other protocol domain)
Reasons for Two Sub-TLVs

• Both are complementary and optional – each with their individual use cases

• Prefix Source Router ID Sub-TLV provides
  • OSPF Router ID for identification of nodes in OSPF domain for use cases related to topology learning/identification

• Prefix Originator Sub-TLV provides
  • Reachable Address of the originating router (e.g. to determine it’s SR Node SID) for traffic engineering use cases
  • Determination of originating router for prefixes redistributed across IGP domains (e.g. even from ISIS into OSPF)
  • Aligns with RFC7794 for ISIS that conveys reachable and unique IP address of the originating router
Other Updates

• Added clarifications on the use cases
• Removed references to ELC as that is now advertised as a Prefix Option and does not require identification of the Originating Router
• Removed references to ERLD and MSD since they are not relevant to the reaching the originating node for the prefix
• Move some remaining text related to inter-area and inter-AS topology re-construction use case based on prefix advertisement into an informative Appendix section
• More detailed procedures for advertisement of originating node information
• Added Security Considerations
Next Steps ...

- Request reviews/feedback for document progression towards WGLC