



IS-IS Routable IP Address in IS-IS Router Capability TLV

draft-xu-isis-routable-ip-address-01

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IS-IS Routable IP Address in Capability TLV

- Initially published this draft May 2014
- Lot of discussion happened in the WG
- Specifically asked for use cases and were added in this version ('01')

Why do we need this ?

Intra-Area

Multiple loopbacks can be advertised and no mechanism to indicate it's node IP address (well, till Oct 5th 2014!).

- <https://tools.ietf.org/html/draft-ietf-rtgwg-remote-lfa-08>
 - If Private addresses are used in PQ nodes (for TLDP sessions)
- <https://tools.ietf.org/html/draft-ietf-i2rs-problem-statement-04>
 - For the orchestrator to identify the node IP address

Inter-Area

IS-IS routers in one area to find correlations between routable IP addresses and capabilities of IS-IS routers in another area

- <http://tools.ietf.org/html/draft-xu-isis-mpls-elc-00>
 - For identifying the ELC TLV originating node IP address in another area
[useful when EL (RFC 6790) Signaling is done through IS-IS]
- <https://tools.ietf.org/html/draft-ietf-isis-sbfd-discriminator-01>
 - For identifying the S-BFD Discriminator TLV originating node IP address in another area

How?

Through new Sub-TLV (S) in IS-IS Router Capability TLV [RFC 4971]

▪Routable IPv4 Address sub-TLV

- One or more routable addresses can be carried over in TLV 242
- TYPE (TBD), Length (Variable, Multiple of 4)
- Scope: Depends on the application
- Corresponding IP?MT Reachability TLV information (RFC 5305/5120) should be there
- Should not be advertised if it's already advertised as RID (RFC 5305/5316)

▪Routable IPv6 Address sub-TLV

- One or more routable global addresses can be carried over in TLV 242
- TYPE (TBD), Length (Variable, Multiple of 16)
- Scope: Depends on the application
- Corresponding IP/MT Reachability TLV information (RFC 5308/5120) should be there

And..

- This allows association of Node's capability to the Node's routable IP address (as needed)
- MT awareness is not needed here (MT info is already available at the corresponding reachability TLV)
- Domain wide flooding semantics - already inherent with Capability TLV.

Node Property or Prefix Property ?

Example1: <https://tools.ietf.org/html/draft-psarkar-isis-node-admin-tag-03>

Example2: <https://tools.ietf.org/html/draft-przygienda-bier-isis-ranges-01>



Questions & Comments?

Thank You!