OSPFv3 Auto-Configuration
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OSPFv3 Auto-Configuration History

- Zero Configuration OSPFv3 work by Arthur Dimitrelis and Aidan Williams - No standard.
- Homenet Interim Meeting in Philadelphia in 2011 – Autoconfiguration for IGP required
- OSPFv3 Draft authored by Jari and Acee
- Implementation from Markus Stenberg and Jari Arkko. Possibly one other.
- Close to WG Last Call in Berlin
- Les Ginsberg Issue on Duplicate Router ID resolution
Ginsberg Elder Respect Issue

- OSPFv3 Mechanism offers deterministic resolution of router-id collisions.
- However, mechanism doesn’t favor the router that has been up the longest – No respect for Elders!!!
- Change of Router ID will result in some network churn and potentially packet loss (voice or video streams).
- Lots of discussion on the list of various solutions of varying complexity.
Curtis Villamizar and Les Ginsberg went through several iterations of simplifying the mechanisms.

Last mechanism was a single LSA option bit indicating whether or not the OSPFv3 router had been up (or connected to the routing domain) for some period of time.

Consensus was that the mechanism would work but for the use case of a new router being added to the OSPFv3 Router Domain and colliding with an existing router.
Consensus was to not solve the problem since:

- OSPFv3 Router ID collisions will be extremely infrequent.
- Auto-configured environments should be more tolerant network churn and the OSPFv3 routing domain should be smaller (e.g., homenet).
- Single use case was not worth the additional machinery and option bit.
Changes since Berlin

- Reference to RFC 6209 added (IPv6 CPE Requirements) for SP connection requirements
- Add SHOULD statement regarding preservation of non-duplicate OSPF Router-ID (to avoid recurrent collisions) – Credit: Curtis Villamizar.
- Added RECOMMENDED statement regarding the content of Router-Hardware-Fingerprint to include a MAC address or IEEE EUI-64 ID. Credit: Les Ginsberg
Changes since Berlin (Continued)

- Added applicability statement for OSPFv3 routing domains where a router-id change cannot be tolerated.
Next Steps for Draft (Déjà Vu Berlin)

- Actually have implementations.
- Other drafts are based on this draft. Need to move forward.
- No IPR claims from E/// (Jari and Acee)
- Editorial revision coming
- Hope to WG Last Call shortly thereafter