OSPFv3 Auto-Configuration IETF 89, London

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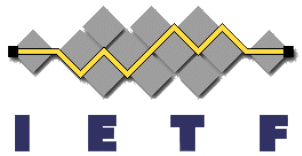
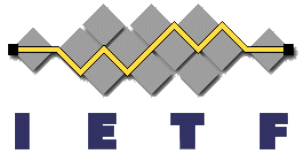
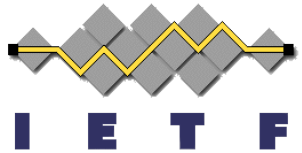


OSPFv3 Auto-Configuration History



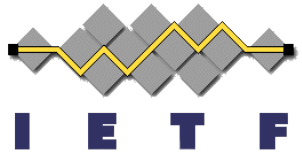
- Zero Configuration OSPFv3 work by Arthur Dimitrelis and Aidan Williams - No standard.
- Homenet Interim Meeting in Philadelphia in 2011 – Autoconfiguration for IGP required
- OSPFv3 Draft authored by Jari and Acee
- Implementation from Markus Stenberg and Jari Arkko. Possibly one other.
- Close to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

Ginsberg Elder Respect Issue



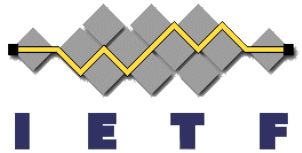
- OSPFv3 Mechanism offers deterministic resolution of router-id collisions.
- However, mechanism doesn't favor the router that has been up the longest – No respect for Elders!!!
- Change of Router ID will result in some network churn and potentially packet loss (voice or video streams).
- Lots of discussion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

Ginsberg Elder Respect Issue (Continued)



- 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.

Ginsberg Elder Respect Issue (Continued)

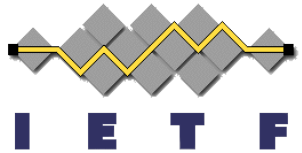


- Consensus was to not solve the problem since:
  - OSPFv3 Router ID collisions will be extremely infrequent.
  - Auto-configured environments should be more tolerant network churn and the OSPFv3 routing domain should be smaller (e.g., homenet).
  - Single use case was not worth the additional machinery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

Changes since Berlin

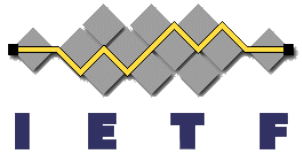
- Reference to RFC 6209 added (IPv6 CPE Requirements) for SP connection requirements
- Add SHOULD statement regarding preservation of non-duplicate OSPF Router-ID (to avoid recurrent collisions) – Credit: Curtis Villamizar.
- Added RECOMMENDED statement regarding the content of Router-Hardware-Fingerprint 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