Advancing DHCPv6 to Internet Standard

IETF-116 (Yokohama), DHC WG
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Motivation for Advancing DHCPv6 to Internet Standard (from Proposed)

- DHC Charter
  - The third item main objective in the DHC charter states:

    Issue an updated version of the DHCPv6 base specification, and after an appropriate interval following publication, advance to Internet Standard.

- But we can always leave as Proposed …

Standards? Who needs standards?

BREVITY/ by Guy & Rodd

UH-OH.
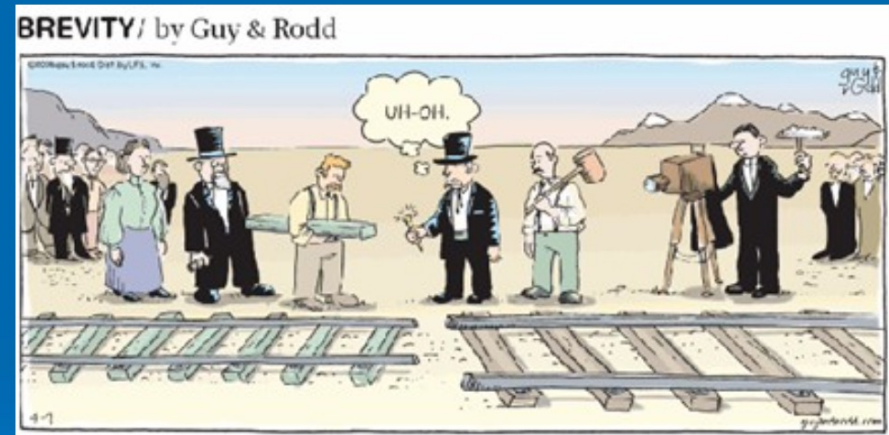
Pay now or pay later…

Requirements for Internet Standard (from RFC 6410)

The characterization of an Internet Standard remains as described in RFC 2026.

The criteria are:

(1) There are at least **two independent interoperating** implementations with widespread deployment and successful operational experience.

(2) There are no errata against the specification that would cause a new implementation to fail to interoperate with deployed ones.

(3) There are no unused features in the specification that greatly increase implementation complexity.

(4) If the technology required to implement the specification requires patented or otherwise controlled technology, then the set of implementations must demonstrate at least two independent, separate and successful uses of the licensing process.

Independent Implementation Status

- Many client, server, and relay implementations in operation across the world:
  - Cable modems (too many to list)
  - Home gateways (routers)
  - Routers (Cisco, Juniper, Ubiquiti, Microtik, …)
  - End user devices (Windows, Linux, Apple iOS/macOS, Android*, …)
  - Servers (ISC Kea, Cisco Prime Network Registrar, …)
- Appear to interoperate well …
  - USGv6 Testing (https://www.iol.unh.edu/registry/usgv6)
  - Field deployments (Comcast broadband service)
  - IETF meeting network offers DHCPv6

Proposed RFC 8415 bis Schedule

- Adopted by DHC working group – Completed
- One pending update to address IANA comments which has not yet been published.
  - It is minor - to update all 8415 references on IANA pages to RFC-to-be when published.
- Removing all checks related to unicast (including UseMulticast status)?
  - Any opinions?
- Purely formatting update: xml2rfc v2 to v3 (RFC7991)
- Aiming for submitting to IESG before IETF 117.

Implementation Report

- Provide a list of implementations for IESG benefit

- Need to create a formal list of implementations of 8415.

- They could be listed in 8415bis and removed after it goes to RFC Editor.

- Brag about your impl here: https://tinyurl.com/dhcpv6-impl

Next Steps

- We need reviews of this document and send any comments to the DHC list!

- Post another version of the draft in May

  - Resolving any outstanding comments.
  - Add Implementation Status

- Submit to the IESG in June.