

IPv6 Support Within IETF work draft-george-ipv6-support

Lee Howard Lee.Howard@twcable.com

Wes George Wesley.George@twcable.com

Abstract

1. IETF standards work should be IP version agnostic or explicitly include IPv6
2. Revisit previous review of IPv6 compliance

Not rfc6540

- “IPv6 Support Required” told implementers to assume IPv6
- This tells IETF to support IPv6

IETF New Work

- All IETF work must work with IPv6-only
- Functional parity
 - But only for features people use
 - Unused IPv4 options not required in IPv6
 - Except nonsense, e.g. NAT traversal techniques
- New features should be in IPv6
- “IETF effort SHOULD NOT be spent retrofitting features into the legacy protocol”

IETF Review

- Update these docs to confirm gaps are closed
 - Internet Area [[RFC3790](#)]
 - Routing Area [[RFC3791](#)]
 - Security Area [[RFC3792](#)]
 - Sub-IP Area [[RFC3793](#)]
 - Transport Area [[RFC3794](#)]
 - Applications Area [[RFC3795](#)]
 - Operations and Management Area [[RFC3796](#)]
- Update for all work done since then
 - Roughly rfc3100

Procedure

- Review every document since 3100
 - Except ISE series, obsolete or historic
- Consider whether it can work without IPv4.
- Provide guidance on the use of 32-bit identifiers commonly populated by IPv4 addresses.
- Consider protocols on which specifications depend or interact, to identify indirect dependencies on IPv4.
- Consider how to migrate from an IPv4 environment to an IPv6 environment.

Summary

1. IETF should make updates to IPv4 protocols and features to facilitate IPv4 decommissioning.
2. IETF work SHOULD explicitly support IPv6 or SHOULD be IP version agnostic (because it is implemented above the network layer), except IPv4-specific transition or address-sharing technologies.
3. IETF SHOULD NOT initiate new IPv4 extension technology development.
4. IETF work SHOULD function completely on IPv6-only nodes and networks, unless consensus exists that it is unnecessary to use a given feature or protocol on IPv6-only networks.
5. IETF SHOULD identify and update IPv4-only protocols and applications to support IPv6 unless consensus exists that it is unnecessary for a given feature or protocol.

Proceed?

- Right sentiment? Clearly communicated?
- IETF stream? IESG document? IAB?
- WG document?

