                Reducing the Standards Track to Two Maturity Levels

Abstract

   This document updates the Internet Engineering Task Force (IETF)
   Standards Process defined in RFC 2026.  Primarily, it reduces the
   Standards Process from three Standards Track maturity levels to two.

Status of This Memo

   This memo documents an Internet Best Current Practice.

   This document is a product of the Internet Engineering Task Force
   (IETF).  It represents the consensus of the IETF community.  It has
   received public review and has been approved for publication by the
   Internet Engineering Steering Group (IESG).  Further information on
   BCPs is available in Section 2 of RFC 5741.

   Information about the current status of this document, any errata,
   and how to provide feedback on it may be obtained at
   http://www.rfc-editor.org/info/rfc6410.

1.  Introduction

   This document changes the Internet Standards Process defined in RFC
   2026 [1].  In recent years, the Internet Engineering Task Force
   (IETF) witnessed difficulty advancing documents through the maturity
   levels: Proposed Standard, Draft Standard, and finally Standard.
   These changes are designed to simplify the Standards Process and
   reduce impediments to standards progression while preserving the most
   important benefits of the IETF engineering approach.  In addition,
   the requirement for annual review of Standards Track documents that
   have not reached the top of the maturity ladder is removed from the
   Internet Standards Process.

   Over the years, there have been many proposals for refining the
   Internet Standards Process to reduce impediments to standards
   progression.  During May 2010, the Internet Engineering Steering
   Group (IESG) discussed many of these proposals.  Then, a plenary
   discussion at IETF 78 in July 2010 demonstrated significant support
   for transition from a three-tier maturity ladder to one with two
   tiers.

   In the Internet Standards Process, experience with a Proposed
   Standard is expected to motivate revisions that clarify, modify,
   enhance, or remove features.  However, in recent years, the vast
   majority of Standards Track documents are published as Proposed
   Standards and never advance to a higher maturity level.  Very few
   specifications have advanced on the maturity ladder in the last
   decade.  Changing the Internet Standards Process from three maturity
   levels to two is intended to create an environment where lessons from
   implementation and deployment experience are used to improve
   specifications.

   The primary aspect of this change is to revise the requirements for
   advancement beyond Proposed Standard.  RFC 2026 [1] requires a report
   that documents interoperability between at least two implementations
   from different code bases as an interim step ("Draft Standard")
   before a specification can be advanced further to the third and final
   maturity level ("Standard") based on widespread deployment and use.
   In contrast, this document requires measuring interoperability
   through widespread deployment of multiple implementations from
   different code bases, thus condensing the two separate metrics into
   one.

   The result of this change is expected to be maturity-level
   advancement based on achieving widespread deployment of quality
   specifications.  Additionally, the change will result in the
   incorporation of lessons from implementation and deployment

experience, and recognition that protocols are improved by removing
complexity associated with unused features.

In RFC 2026 [1], widespread deployment is essentially the metric used
for advancement from Draft Standard to Standard.  The use of this
same metric for advancement beyond Proposed Standard means that there
is no longer a useful distinction between the top two tiers of the
maturity ladder.  Thus, the maturity ladder is reduced to two tiers.

In addition, RFC 2026 [1] requires annual review of specifications
that have not achieved the top maturity level.  This review is no
longer required.

## 2.  Two Maturity Levels

This document replaces the three-tier maturity ladder defined in RFC
2026 [1] with a two-tier maturity ladder.  Specifications become
Internet Standards through a set of two maturity levels known as the
"Standards Track".  These maturity levels are "Proposed Standard" and
"Internet Standard".

A specification may be, and indeed, is likely to be, revised as it
advances from Proposed Standard to Internet Standard.  When a revised
specification is proposed for advancement to Internet Standard, the
IESG shall determine the scope and significance of the changes to the
specification, and, if necessary and appropriate, modify the
recommended action.  Minor revisions and the removal of unused
features are expected, but a significant revision may require that
the specification accumulate more experience at Proposed Standard
before progressing.

## 2.1.  The First Maturity Level: Proposed Standard

The stated requirements for Proposed Standard are not changed; they
remain exactly as specified in RFC 2026 [1].  No new requirements are
introduced; no existing published requirements are relaxed.

## 2.2.  The Second Maturity Level: Internet Standard

This maturity level is a merger of Draft Standard and Standard as
specified in RFC 2026 [1].  The chosen name avoids confusion between
"Draft Standard" and "Internet-Draft".

   The characterization of an Internet Standard remains as described in
   RFC 2026 [1], which says:

      An Internet Standard is characterized by a high degree of
      technical maturity and by a generally held belief that the
      specified protocol or service provides significant benefit to the
      Internet community.

   The IESG, in an IETF-wide Last Call of at least four weeks, confirms
   that a document advances from Proposed Standard to Internet Standard.
   The request for reclassification is sent to the IESG along with an
   explanation of how the criteria have been met.  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.

   After review and consideration of significant errata, the IESG will
   perform an IETF-wide Last Call of at least four weeks on the
   requested reclassification.  If there is consensus for
   reclassification, the RFC will be reclassified without publication of
   a new RFC.

   As stated in RFC 2026 [1], in a timely fashion after the expiration
   of the Last Call period, the IESG shall make its final determination
   and notify the IETF of its decision via electronic mail to the IETF
   Announce mailing list.  No changes are made to Section 6.1.2 of RFC
   2026 [1].

2.3.  Transition to a Standards Track with Two Maturity Levels

   Any protocol or service that is currently at the Proposed Standard
   maturity level remains so.

   Any protocol or service that is currently at the Standard maturity
   level shall be immediately reclassified as an Internet Standard.

   Any protocol or service that is currently at the abandoned Draft
   Standard maturity level will retain that classification, absent
   explicit actions.  Two possible actions are available:

   (1) A Draft Standard may be reclassified as an Internet Standard as
       soon as the criteria in Section 2.2 are satisfied.

   (2) At any time after two years from the approval of this document as
       a BCP, the IESG may choose to reclassify any Draft Standard
       document as Proposed Standard.

3.  Removed Requirements

3.1.  Removal of Requirement for Annual Review

   In practice, the annual review of Proposed Standard and Draft
   Standard documents after two years (called for in RFC 2026 [1]) has
   not taken place.  Lack of this review has not revealed any ill
   effects on the Internet Standards Process.  As a result, the
   requirement for this review is dropped.  No review cycle is imposed
   on Standards Track documents at any maturity level.

3.2.  Requirement for Interoperability Testing Reporting

   Testing for interoperability is a long tradition in the development
   of Internet protocols and remains important for reliable deployment
   of services.  The IETF Standards Process no longer requires a formal
   interoperability report, recognizing that deployment and use is
   sufficient to show interoperability.

   Although no longer required by the IETF Standards Processes, RFC 5657
   [2] can be helpful to conduct interoperability testing.

4.  Security Considerations

   This document does not directly affect the security of the Internet.

5.  Acknowledgements

   A two-tier Standards Track has been proposed many times.  Spencer
   Dawkins, Charlie Perkins, and Dave Crocker made a proposal in 2003.
   Additional proposals were made by Scott Bradner in 2004, Brian
   Carpenter in June 2005, and Ran Atkinson in 2006.  This document
   takes ideas from many of these prior proposals; it also incorporates
   ideas from the IESG discussion in May 2010, the IETF 78 plenary
   discussion in July 2010, and yet another proposal submitted by
   Spencer Dawkins, Dave Crocker, Eric Burger, and Peter Saint-Andre in
   November 2010.

6.  References

6.1. Normative References

   [1]   Bradner, S., "The Internet Standards Process -- Revision 3", BCP
         9, RFC 2026, October 1996.

6.2. Informative References

   [2]   Dusseault, L. and R. Sparks, "Guidance on Interoperation and
         Implementation Reports for Advancement to Draft Standard", BCP
         9, RFC 5657, September 2009.

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