Domain Name Basics Request For Comments

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What is a Request for Comments?

The Request for Comments (**RFC**) is a series of **technical** and **organizational documents** on the Internet that have been issued since April 7, 1969.
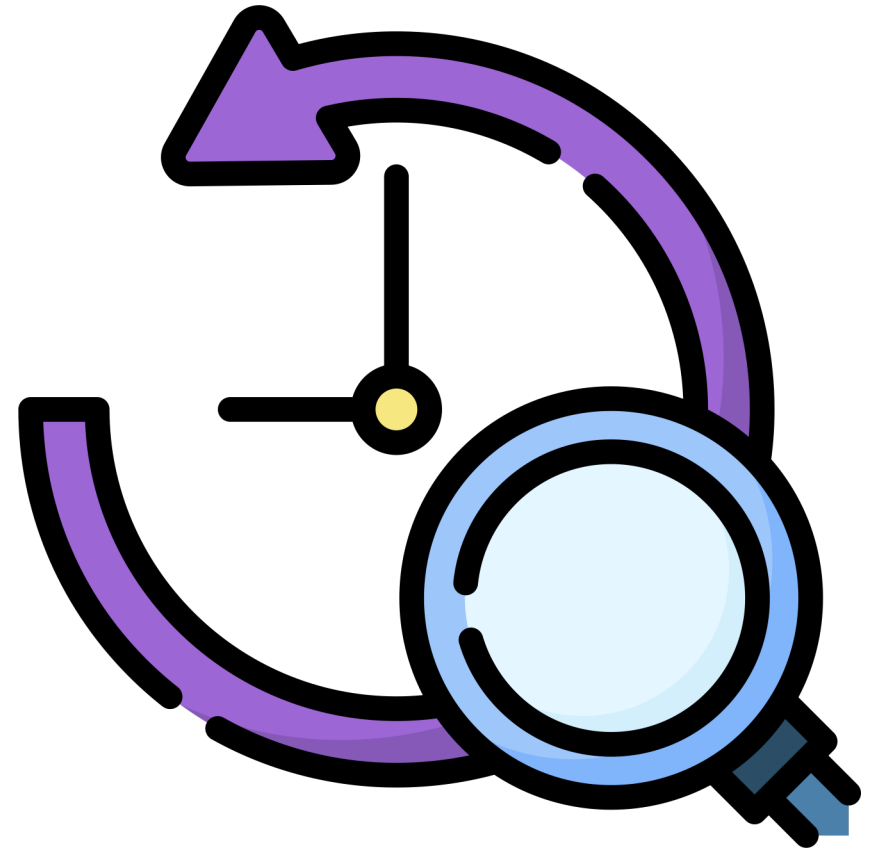
An RFC is a publication from the Internet Society (ISOC) and its associated bodies, most prominently the Internet Engineering Task Force (IETF).

Some RFCs, but **not all**, represent **Internet standards**, such as TCP, UDP, SMTP, HTTP/2, and many more. By now, there are more than 8,500 RFCs.
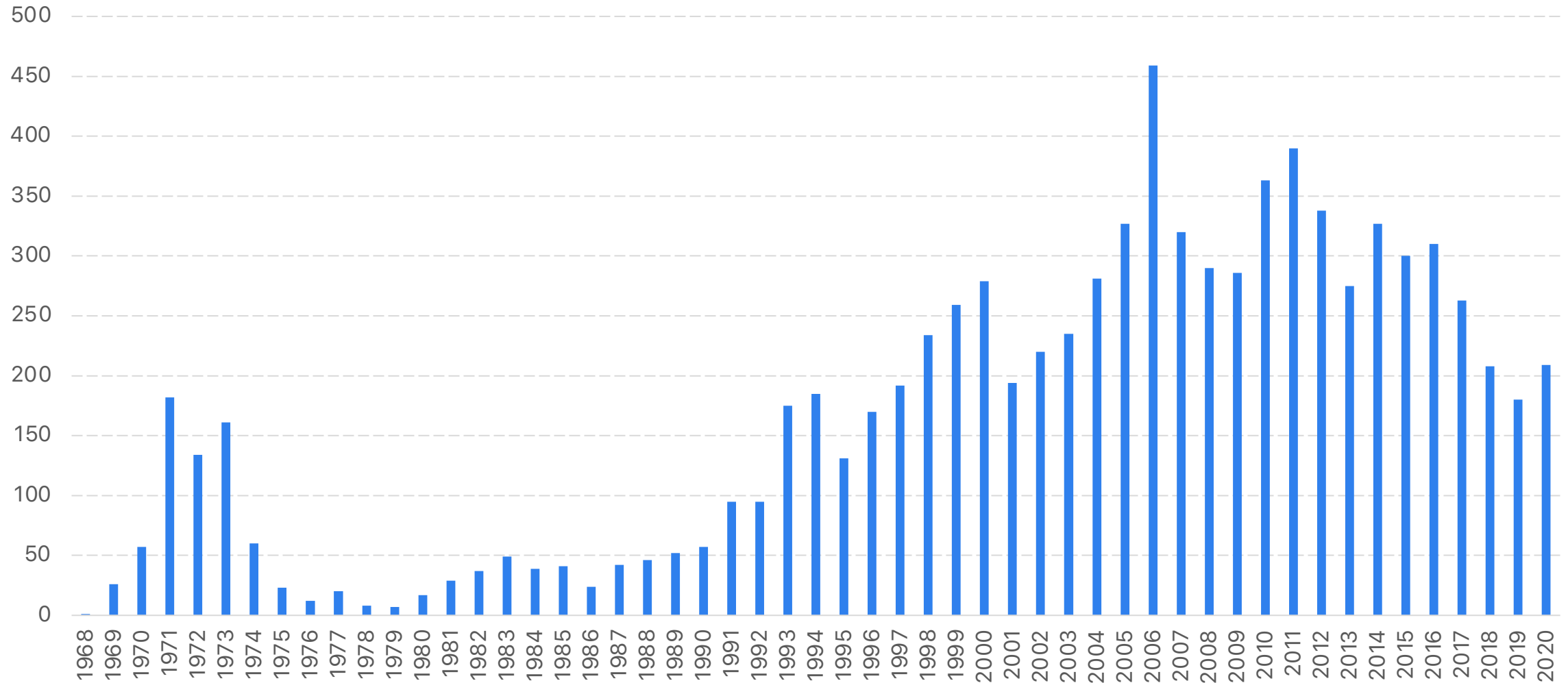
Some historical milestones

- 1969 RFC1   Host Software
- 1972 RFC354   FTP
- 1974 RFC675   TCP/IP
- 1980 RFC768   UDP
- 1981 RFC788   SMTP
- 1981 RFC791   Internet Protocol
- 1987 RFC1034   DNS
- 1996 RFC1945   HTTP
- 1998 RFC2460   IPv6
- 2000 RFC2778   Instant Messaging
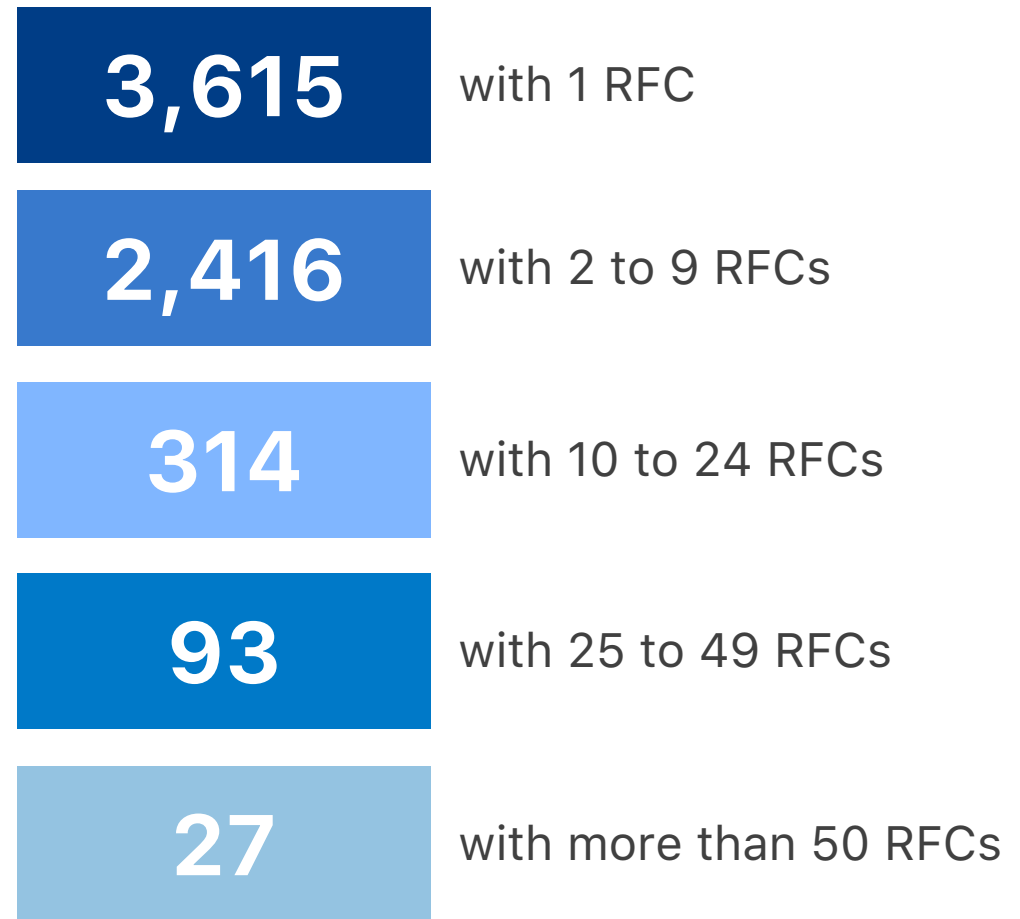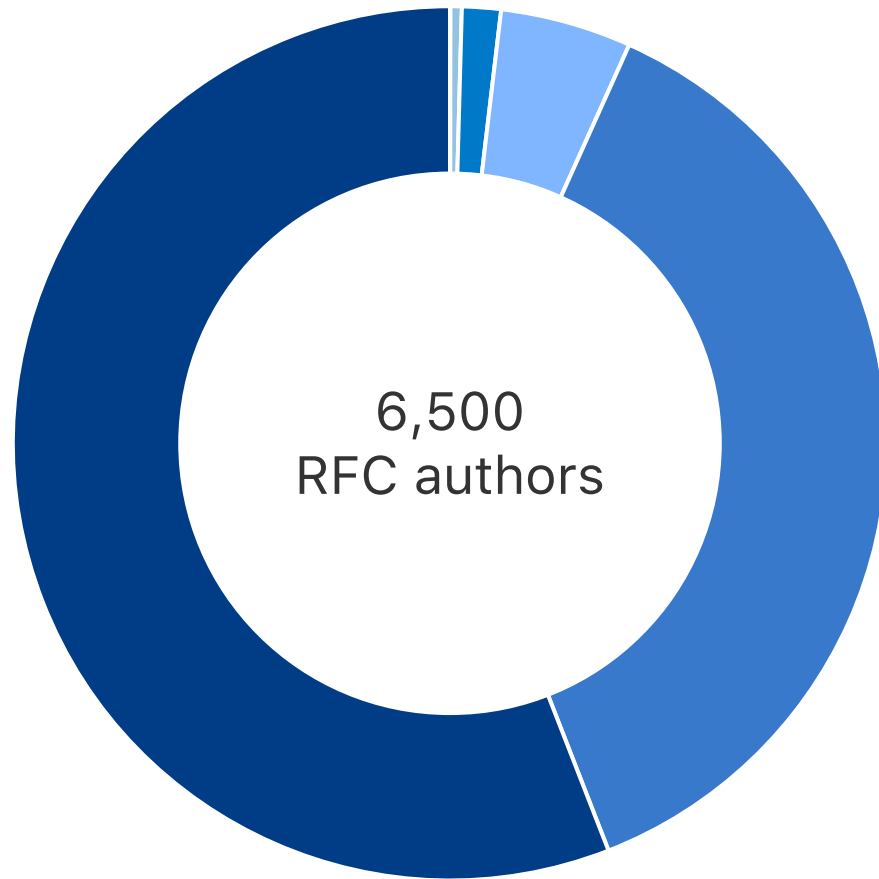- 2004 RFC3730   EPP
- 2015 RFC7540   HTTP/2

Steadily growing number of RFCs

4

1 author with +200 RFCs; Majority with only 1 RFC

6,500
RFC authors

3,615	with 1 RFC
2,416	with 2 to 9 RFCs
314	with 10 to 24 RFCs
93	with 25 to 49 RFCs
27	with more than 50 RFCs

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There are 6 types of RFCs

1. Standards Track
2. Informational
3. Experimental
4. Best Current Practices
5. Historic
6. Unknown
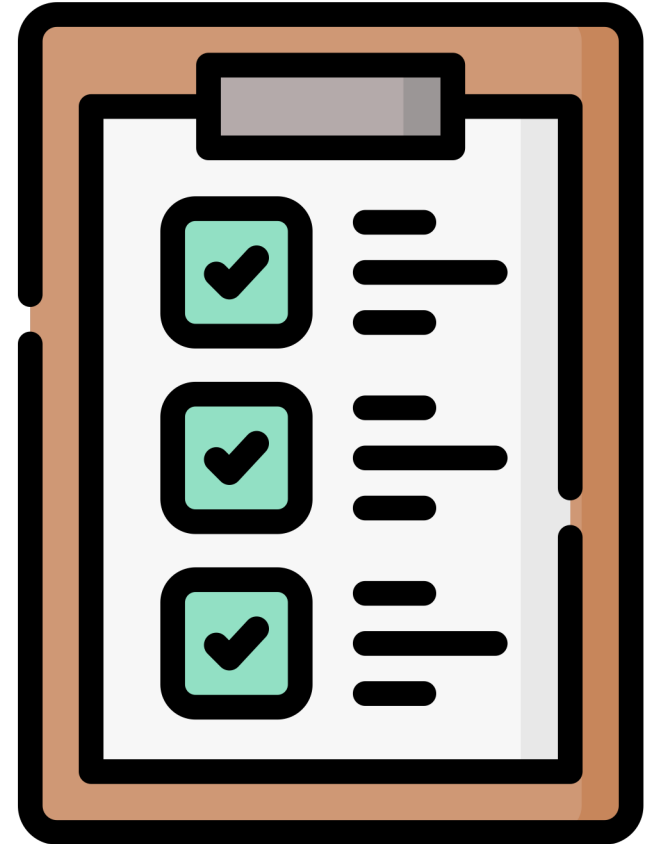
Standards Track and Informational

1

Standards Track

Standard-track documents are further divided into Proposed Standard and Internet Standard documents.

2

Informational

An informational RFC can be nearly anything from 1 April jokes to widely recognized essential RFCs like Domain Name System Structure and Delegation (RFC 1591).

Experimental and Best Current Practices

3

Experimental

An experimental RFC can be an IETF document or an individual submission to the RFC Editor. An experimental RFC may be promoted to standards track if it becomes popular and works well.

4

Best Current Practices

The BCP series was introduced in 1995 for RFCs that contain technical information or administrative specifications endorsed by the IETF.

Historic and Unknown

5

Historic

A historic RFC defines technology that is no longer recommended for use. Historic RFCs are different than "Obsoletes" type RFCs that replace previously published RFCs.

6

Unknown

The unknown status is used for very old RFCs, where it is unclear what the status of the document would be if the RFC were published today. Some unknown RFCs would not be published today.
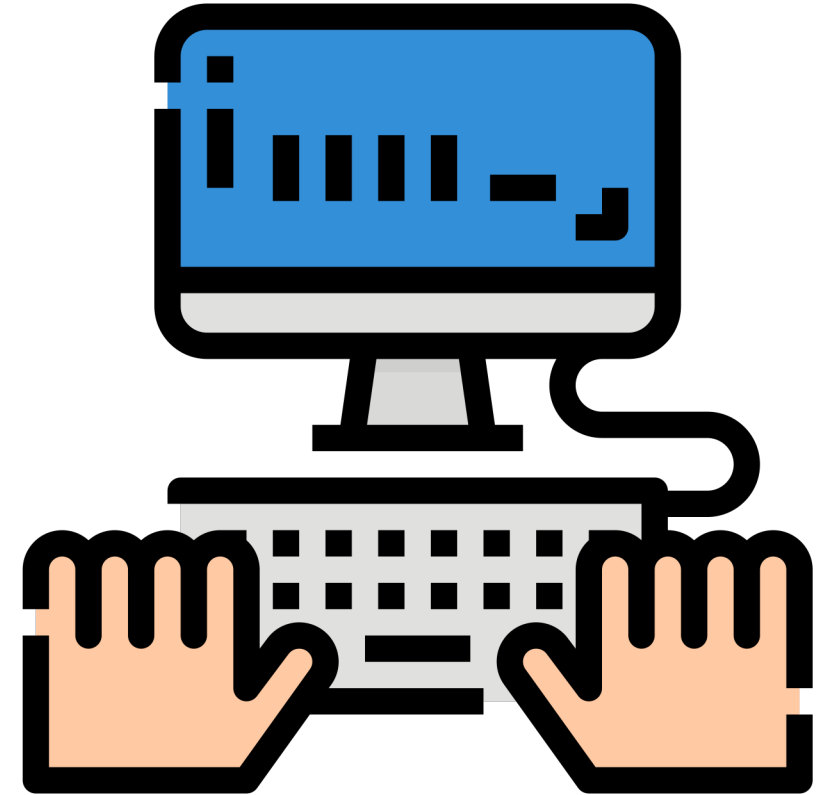
How to write an RFC

RFC7332 is an RFC Style Guide, and the RFC Editor published a tutorial on "How to write an RFC" (https://www.ietf.org/proceedings/62/slides/editor-0.pdf).

The **tools** below can be used to create an Internet-Draft:

- XML2RFC
- ID2XML
- IDNits

More tools can be found here: https://tools.ietf.org/


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IETF Datatracker

It is the primary **day-to-day front-end** to the IETF database for people who work on IETF standards. It contains data about the documents, working groups, meetings, agendas, minutes, presentations, and more of the IETF.

The Internet Engineering Steering Group (IESG) uses the IETF Datatracker to manage workflow as it evaluates Internet-Drafts that have been submitted for publication as RFCs.
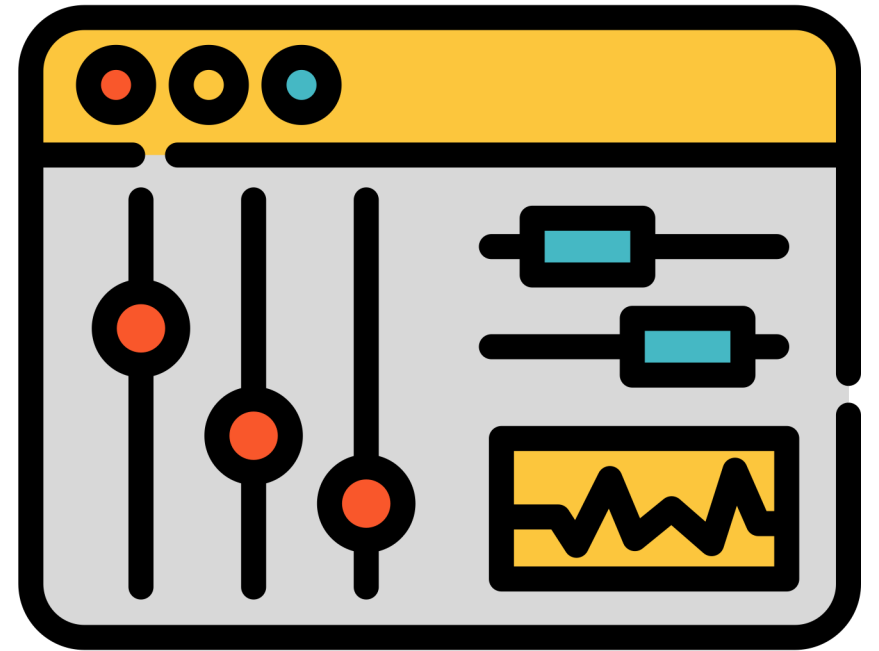
Two kinds of RFC submissions

1. *IETF*

    Most documents come from Working Groups; only a few are individual submissions to IESG. After approval and with an announcement to the community, the IESG submits it to RFC Editor.

2. *Independent*

    Experimental and informational documents can be submitted directly to RFC Editor. IESG reviews for conflict with IETF activity, but RFC Editor has the final decision.

IETF Working Groups

Working Groups are the primary mechanism for development of IETF specifications and guidelines, many of which are intended to be standards or recommendations.
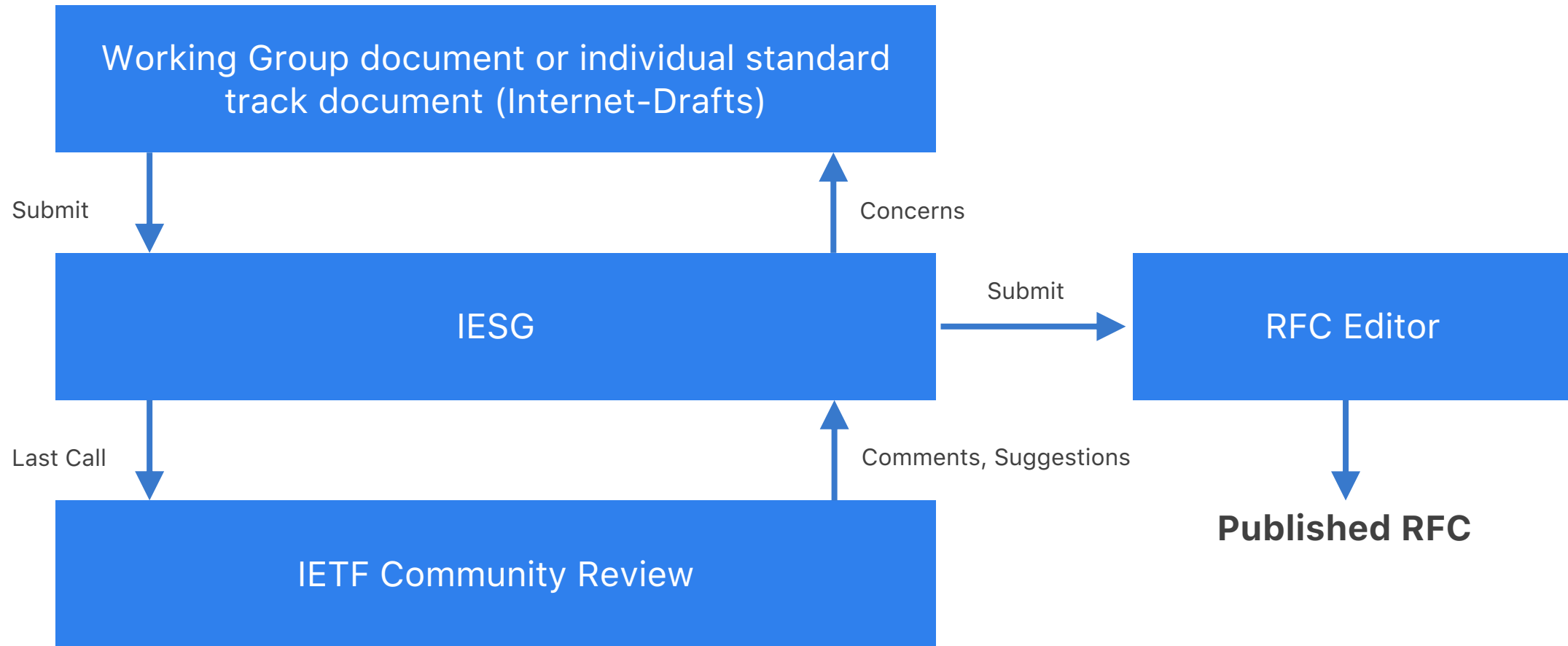
There are over 120 active Working Groups, such as

- REGEXT (Registration Protocols Extensions)
- HTTPBIS (HTTP)
- TLS (Transport Layer Security)

A full list can be found here: https://datatracker.ietf.org/wg/

Simplified IETF Submission Flow

Working Group document or individual standard track document (Internet-Drafts)

Submit

IESG

Concerns

Submit

RFC Editor

Last Call

Comments, Suggestions

IETF Community Review

Published RFC

Domain-related RFCs

- RFC1034   DNS
- RFC1101   DNS Encoding of Network Names and Other Types
- RFC2535   Domain Name System Security Extensions
- RFC3912   WHOIS Protocol Specification
- RFC3915   Domain Registry Grace Period Mapping for EPP
- RFC4033   DNS Security Introduction and Requirements
- RFC4044   Resource Records for the DNS Security Extensions
- RFC4045   Protocol Modifications for the DNS Security Extensions
- RFC5730   Extensible Provisioning Protocol (EPP)
- RFC5731   EPP Domain Name Mapping
- RFC5732   EPP Host Mapping
- RFC5733   EPP Contact Mapping
- RFC5936   DNS Zone Transfer Protocol
- RFC7480   HTTP Usage in RDAP
- RFC7481   Security Services for RDAP
- RFC7482   RDAP Query Format

- RFC7483   JSON Responses for RDAP
- RFC7451   Extension Registry for EPP
- RFC8020   NXDOMAIN
- RFC8056   EPP and RDAP Status Mapping
- RFC8334   Launch Phase Mapping for EPP
- RFC8495   Allocation Token Extension for EPP
- RFC8499   DNS Terminology
- RFC8521   RDAP Object Tagging
- RFC8543   EPP Organization Mapping
- RFC8544   Organization Extension for EPP
- RFC8590   Change Poll Extension for EPP
- RFC8748   Registry Fee Extension for EPP
- RFC8767   Serving Stale Data to Improve DNS Resiliency
- RFC8807   Login Security for EPP
- RFC8909   Registry Data Escrow Specification

Thank you!