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A Guide to the HTTP/1.1 Document Series
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Abstract

This document introduces a series of documents that comprise the definition of HTTP/1.1, providing a short summary of the content of each of those.

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1. Introduction

This document summarizes the series of documents comprising the definition of HTTP/1.1. A synopsis of each document is provided, as well as an enumeration of the key definitions (and, thus, their corresponding IANA actions) and security topics each one contains. This is intended to serve as a super table of contents for the series.

Future documents wishing to make general reference to HTTP/1.1 should refer to this document and not each document in the series.

2. Documents

2.1. Part 1: URIs, Connections, and Message Parsing

Part 1 ([\[HTTP-PART-1\]](#)) provides an overview of HTTP and its associated terminology, defines the "http" and "https" Uniform Resource Identifier (URI) schemes, defines the generic message syntax and parsing requirements for HTTP message frames, and describes general security concerns for implementations.

IANA actions in this document:

- o Registration of the following HTTP-specific header fields:

- * Close
- * Connection
- * Content-Length
- * Host
- * TE

- * Trailer
- * Transfer-Encoding
- * Upgrade
- * Via
- o Registration of the "http" and "https" URI schemes
- o Registration of the "message/http" and "application/http" media types

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- o Creates the HTTP Transfer Coding Registry and creates its initial entries
- o Creates the HTTP Upgrade Token Registry and creates its initial entries

Security considerations include:

- o Personal information
- o Abuse of server log information
- o Attacks based on file and path names
- o DNS-related attacks
- o Intermediaries and caching
- o Protocol element size overflows

[2.2.](#) Part 2: Message Semantics

Part 2 ([\[HTTP-PART-2\]](#)) defines the semantics of HTTP messages as expressed by request methods, request header fields, response status codes, and response header fields.

IANA actions in this document:

- o Creation of the HTTP Request Method Registry and registration of

its initial entries

- o Creation of the HTTP Status Code Registry and registration of its initial entries
- o Registration of the following HTTP-specific header fields:
 - * Allow
 - * Date
 - * Expect
 - * From
 - * Location
 - * Max-Forwards

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- * Referer
- * Server
- * User-Agent

Security considerations include:

- o Transfer of sensitive information
- o Encoding sensitive information in URIs
- o Location header fields: spoofing an information leakage
- o Issue with the CONNECT method

[2.3.](#) Part 3: Message Payload and Content Negotiation

Part 3 ([\[HTTP-PART-3\]](#)) defines HTTP message content, metadata, and content negotiation.

IANA actions in this document:

- o Registration of the following HTTP-specific header fields:
 - * Accept
 - * Accept-Charset
 - * Accept-Encoding
 - * Accept-Language
 - * Content-Encoding
 - * Content-Language
 - * Content-Location
 - * Content-Type
 - * MIME-Version
- o Creates the HTTP Content Codings registry and defines its initial values

Security considerations include:

- o Privacy issues connected to Accept header fields

[2.4.](#) Part 4: Conditional Requests

Part 4 ([\[HTTP-PART-4\]](#)) defines request header fields for indicating conditional requests and the rules for constructing responses to those requests.

IANA actions in this document:

- o Registration of the following HTTP Status Codes:
 - * 304: Not Modified
 - * 412: Precondition Failed

- o Registration of the following HTTP-specific header fields:

- * ETag
- * If-Match
- * If-Modified-Since
- * If-None-Match
- * If-Unmodified-Since
- * Last-Modified

[2.5.](#) Part 5: Range Requests and Partial Responses

Part 5 ([\[HTTP-PART-5\]](#)) defines range-specific requests and the rules for constructing and combining responses to those requests.

IANA actions in this document:

- o Registration of the following HTTP Status Codes:
 - * 206: Partial Content
 - * 416: Requested Range Not Satisfiable
- o Registration of the following HTTP-specific header fields:
 - * Accept-Ranges

- * Content-Range
- * If-Range
- * Range
- o Creates the HTTP Range Specifiers registry and its initial entry

Security considerations include:

- o Overlapping ranges

[2.6.](#) Part 6: Caching

Part 6 ([\[HTTP-PART-6\]](#)) defines requirements on HTTP caches and the associated header fields that control cache behavior or indicate cacheable response messages.

IANA actions in this document:

- o Creates the HTTP Cache Directives registry and its initial entries
- o Creates the HTTP Warn Codes registry and its initial entries
- o Registration of the following HTTP-specific header fields:
 - * Age
 - * Cache-Control
 - * Expires
 - * Pragma
 - * Vary
 - * Warning

Security considerations include:

- o General discussion of security issues related to caching

[2.7.](#) Part 7: Authentication

Part 7 ([\[HTTP-PART-7\]](#)) defines the HTTP Authentication framework.

IANA actions in this document:

- o Creates the HTTP Authentication Schemes registry

- o Registration of the following HTTP Status Codes:
 - * 401: Unauthorized
 - * 407: Proxy Authentication Required
- o Registration of the following HTTP-specific header fields:
 - * Authorization
 - * Proxy-Authenticate
 - * Proxy-Authorization
 - * WWW-Authenticate

Security considerations include:

- o Authentication credentials and idle clients

[3.](#) IANA Considerations

This document includes no actions for IANA.

[4.](#) Security Considerations

This document neither introduces nor modifies any protocol and as such has no security implications.

[5.](#) Informative References

- [HTTP-PART-1] Fielding, R., Ed., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 1: URIs, Connections, and Message Parsing", [draft-ietf-httpbis-p1-messaging](#) (work in progress), March 2012.
- [HTTP-PART-2] Fielding, R., Ed., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 2: Message Semantics", [draft-ietf-httpbis-p2-semantics](#) (work in progress), March 2012.
- [HTTP-PART-3] Fielding, R., Ed., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 3: Message Payload and Content Negotiation", [draft-ietf-httpbis-p3-payload](#) (work in progress), March 2012.

- [HTTP-PART-4] Fielding, R., Ed., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 4: Conditional Requests", [draft-ietf-httpbis-p4-conditional](#) (work in progress), March 2012.
- [HTTP-PART-5] Fielding, R., Ed., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 5: Range Requests and Partial Responses", [draft-ietf-httpbis-p5-range](#) (work in progress), March 2012.
- [HTTP-PART-6] Fielding, R., Ed., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 6: Caching", [draft-ietf-httpbis-p6-cache](#) (work in progress), March 2012.
- [HTTP-PART-7] Fielding, R., Ed., Lafon, Y., Ed., and J. Reschke, Ed., "HTTP/1.1, part 7: Authentication", [draft-ietf-httpbis-p7-auth](#) (work in progress), March 2012.

[Appendix A](#). Acknowledgements

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