**HTTP 1.1 vs HTTP 2**

CONTENT:

INTRODUCTION- What is HTTP?

What are the versions of HTTP?

HTTP 0.9

HTTP 1.0

HTTP 1.1 and its Features

HTTP 2.0 and its Features

HTTP 1.1 vs HTTP 2.0

**What is HTTP?**

[**HTTP**](https://www.cloudflare.com/learning/ddos/glossary/hypertext-transfer-protocol-http/) stands for hypertext transfer protocol, and it is the basis for almost all web applications. It is the method computers and servers use to request and send information. It is the foundation of the World Wide Web, and is used to load web pages using hypertext links. HTTP is an application layer protocol designed to transfer information between networked devices.

**What are the versions of HTTP?**

HTTP has four versions

HTTP/0.9,

HTTP/1.0,

HTTP/1.1,

HTTP/2.0

and also recently HTTP/3.0.

**HTTP/0.9:**

The **HyperText Transfer Protocol (HTTP)** is a data communications protocol and acts as the foundation of the World Wide Web. It was released in 1991.

**HTTP/1.0:**

HTTP 1.0 was officially introduced and recognized in 1996. Using HTTP 1.0 is extremely inefficient for a number of reasons. One significant reason that greatly impacts mobile applications is the older protocol's lack of support for persistent TCP connections. In HTTP 1.0, each TCP connection is responsible for only one object.

**HTTP 1.1:**

 It instead a TCP connection can be reused to make multiple resource requests (i.e. of HTML pages, frames, images, [scripts](https://en.wikipedia.org/wiki/Client-side_scripting), [stylesheets](https://en.wikipedia.org/wiki/Cascading_Style_Sheets" \o "Cascading Style Sheets), etc.).It’s communications therefore experience less [latency](https://en.wikipedia.org/wiki/Latency_(engineering)) as the establishment of TCP connections presents considerable overhead, specially under high traffic conditions.

**FEATURES**:

* A connection could be reused, which saved time. It no longer needed to be opened multiple times to display the resources.
* Pipelining was added. This allowed a second request to be sent before the answer to the first one was fully transmitted.
* Chunked responses were also supported.
* Additional cache control mechanisms were introduced.
* Content negotiation, including language, encoding, and type, was introduced.
* A client and a server could now agree on which content to exchange.
* The [Host](https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Host) header, the ability to host different domains from the same IP address allowed server collocation.

**HTTP 2.0:**

HTTP/2 protocol in 2015. HTTP/2 is the second version of the HTTP protocol aiming to make applications faster, simpler, and more robust by improving many of the drawbacks of the first HTTP version.

**FEATURES**:

* **Binary:** Meaning commands use 1s and 0s and not text
* **Multiplex:** Permits multiple requests and responses to be sent at the same time
* **Compression:** Compresses headers that have been requested previously to make things more efficient.
* **Stream prioritization:** This allows for the exchange of successive streams at one time
* **Server push:** The server can send additional information needed for a request before it is requested
* **Increased security:** HTTP/2 is supported through encrypted connections

**HTTP 1.1 vs HTTP 2.0:**

| **HTTP/1.1** | **HTTP/2** |
| --- | --- |
| It works on the textual format. | It works on the binary protocol. |
| There is head of line blocking that blocks all the requests behind it until it doesn’t get its all resources. | It allows multiplexing so one TCP connection is required for multiple requests. |
| It uses requests resource Inlining for use getting multiple pages | It uses PUSH frame by server that collects all multiple pages |
| It compresses data by itself. | It uses HPACK for data compression. |