DIFFERENCE BETWEEN HTTP1.1 VS HTTP2

**What is HTTP?**

HTTP (Hypertext Transfer Protocol) is the set of rules for transferring files -- such as text, images, sound, video and other multimedia files -- over the web. As soon as a user opens their web browser, they are indirectly using HTTP. HTTP is an application protocol that runs on top of the [TCP/IP](https://www.techtarget.com/searchnetworking/definition/TCP-IP) suite of protocols, which forms the foundation of the internet. The latest version of HTTP is [HTTP/2](https://www.techtarget.com/searchnetworking/definition/HTTP-2-protocol), which was published in May 2015. It is an alternative to its predecessor, [HTTP 1.1](https://www.techtarget.com/whatis/definition/HTTP-11), but does not it make obsolete.

**How HTTP works**

Through the HTTP protocol, resources are exchanged between client devices and servers over the internet. Client devices send requests to servers for the resources needed to load a web page; the servers send responses back to the client to fulfill the requests. Requests and responses share sub-documents -- such as data on images, text, text layouts, etc. -- which are pieced together by a client web browser to display the full web page file.

**HTTP1.1:**

**ADVANTAGES OF HTTP1.1**

HTTP/1.1 assumes that a TCP connection should be kept open unless directly told to close. This **allows the client to send multiple requests along the same connection without waiting for a response to each**, greatly improving the performance of HTTP/1.1 over HTTP/1.0.

**DISADVANTAGES OF HTTP1.1**

 **Loads Resources One After The Other**, so if one resource cannot be loaded, it blocks all the other resources behind it.

**HTTP 2:**

**ADVANTAGES OF HTTP 2**

HTTP/2 Protocol. Binary protocols – Binary protocols **consume less bandwidth, are more efficiently parsed and are less error-prone than the textual protocols used by HTTP/1.1.** Additionally, they can better handle elements such as whitespace, capitalization and line endings.

**DISADVANTAGES OF HTTP 2**

* While HTTP/2 mitigated the effects of HOL blocking in its predecessor, TCP-level block still causes problems.
* For Client Machines Operating on a slow network, data packets drop bit by bit, and the network quality gets degraded to a single HTTP/2 connection.

**HTTP status codes**

In response to HTTP requests, servers often issue response codes, indicating the request is being processed, there was an error in the request or that the request is being redirected. Common response codes include:

* **200 OK.** This means that the request, such as GET or POST, worked and is being acted upon.
* **300 Moved Permanently.** This response code means that the URL of the requested resource has been changed permanently.
* **401 Unauthorized.** The client, or user making the request of the server, has not been authenticated.
* **403 Forbidden**. The client's identity is known but has not been given access authorization.
* **404 Not Found.** This is the most frequent error code. It means that the URL is not recognized or the resource at the location does not exist.
* **500 Internal Server Error.** The server has encountered a situation it doesn't know how to handle.