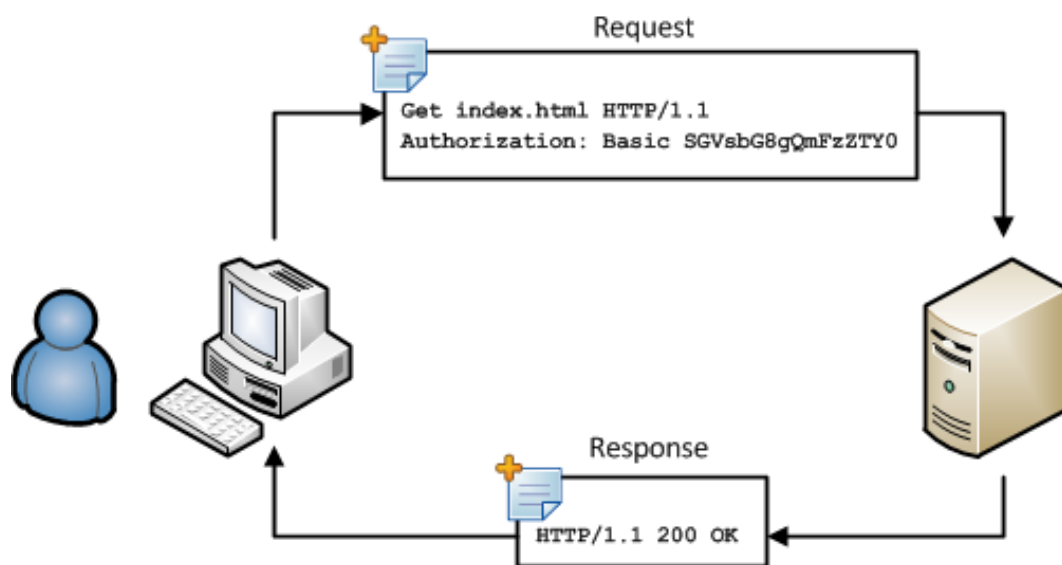


DIFFERENCE BETWEEN HTTP1.1 AND HTTP2

❖ WHAT IS HTTP?

HTTP stands for hypertext transfer protocol, and it is the basis for almost all web applications. More specifically, HTTP is the method computers and servers use to request and send information.

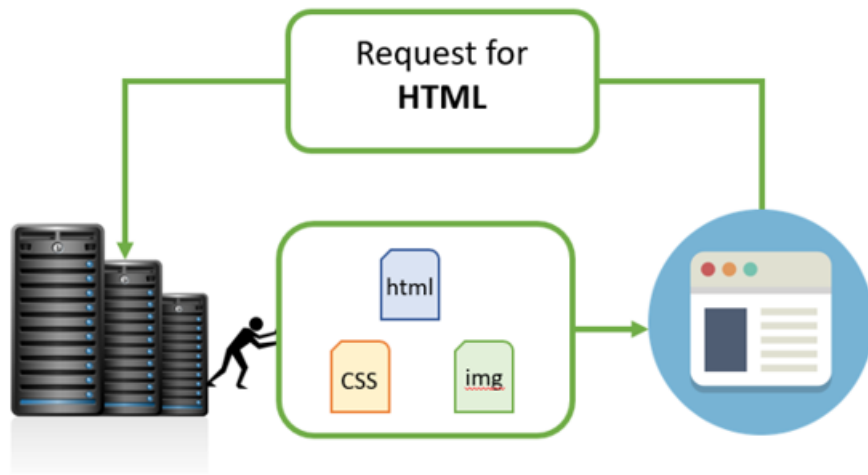


❖ WHAT IS HTTP1.1?

HTTP1.1, the first standardized version of HTTP, was introduced in 1997. It presented significant performance optimizations (over HTTP0.9 and HTTP1.0) and transformed the way requests and responses were exchanged between clients and servers.

❖ WHAT IS HTTP2?

At the beginning of 2010, Google introduced an experimental protocol, SPDY, which supported multiplexing (multiple requests/responses sent and received asynchronously over a single TCP connection) but as it gained traction IETF's HTTP Working Group came up with HTTP2 in 2015, which is based on the SPDY protocol.



It introduces the concept of a server push where the server anticipates the resources that will be required by the client and pushes them prior to the client making requests. The client retains the authority to deny the server push; however, in most cases, this feature adds a lot of efficiency to the process.

Based on the priority the web pushes the requests, which is called prioritization.

❖ WHAT IS PRIORITIZATION?

- In the context of web performance, prioritization refers to the order in which pieces of content are loaded. Suppose a user visits a news website and navigates to an article. Should the photo at the top of the article load first? Should the text of the article load first? Should the banner ads load first?
- Prioritization affects a webpage's load time. For example, certain resources, like large JavaScript files, may block the rest of the page from loading if they have to load first. More of the page can load at once if these render-blocking resources load last.

❖ OTHER DIFFERENCES BETWEEN HTTP1.1 AND HTTP2

- MULTIPLEXING: HTTP/1.1 loads resources one after the other, so if one resource cannot be loaded, it blocks all the other resources behind it. In contrast, HTTP/2 is able to use a single TCP connection to send multiple streams of data at once so that no one resource blocks any other resource.
- SERVER PUSH: Typically, a server only serves content to a client device if the client asks for it. However, this approach is not always practical for modern webpages, which often involve several dozen separate resources that the client must request. HTTP/2 solves this problem by allowing a server to "push" content to a client before the client asks for it.
- HEADER COMPRESSION: Small files load more quickly than large ones. To speed up web performance, both HTTP/1.1 and HTTP/2 compress HTTP messages to make them smaller. However, HTTP/2 uses a more advanced compression method called HPACK that eliminates redundant information in HTTP header packets.