HTTP/1.1 vs HTTP/2

**HTTP/1.1**

Hypertext transfer protocol 1.1 is the enhanced version of HTTP/1. It was in development at the same time as the release of HTTP/1 and was released a year later. It has improved server connections such as allowing second requests to be sent while waiting for the response of the first request which helped reduce response time and latency. They also added new supported HTTP methods such as PUT, PATCH, DELETE ,CONNECT, TRACE and OPTION Some other features added were:

* **HOST HEADER:**
* **USER-AGENT:**
* **ACCEPT-LANGUAGE;**
* **ACCEPT-ENCODING:**
* **CONTENT-TYPE:**
* **DATE:**
* **LAST-MODIFIED:**
* **SERVER:**
* **VARY:**

**HTTP/2**

This was the improved version of HTTP/1.1 which allowed for more efficient data transmission. This was made to improve the performance from the previous version. Some of the improved features are:

**Multiplex connection:** server and client are able to send multiple requests at the same time. Further reducing response time and latency

**Compress header :** resolves header duplication when massive headers are sent. Which improves the efficiency of the overall size of HTTP requests and responses.

**Client Cache Mechanism:** Allowing to store cache in client cache without waiting for client request.

Here are some more improved feature:

* **Stream Prioritization**
* **Binary protocol**

| **HTTP/1.1** | **HTTP/2** |
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| Reused Connection(Pipelining) - send 2nd request as 1st request is being processed | Multiplex connection: able to send multiple requests at the same time |
| Cache mechanism: requests need to be sent from client for obtaining client cache | Server Push: allows to send client cache without needing for client to send request |
| Doesn’t have header compression | Has header compression |
| Needs more TCP connections | Needs less number of TCP connection due to multiplex connection |