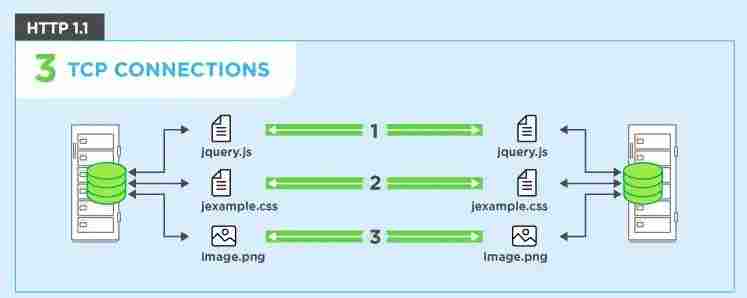
**Title: Differences between HTTP/1.1 and HTTP/2**

* **What is HTTP (Hypertext transfer protocol.**

The Hypertext Transfer Protocol (HTTP) is the backbone of the internet, it enables the communication between clients and servers. Over the years, HTTP has changed significantly. the moment when the introduction of HTTP/2 became a major milestone.

In this blog which is about the HTTP/1.1 and HTTP/2, we'll see the differences between HTTP/1.1 and HTTP/2, like what are the changes and we see the improvements and benefits of the newer version of HTTP.

* **HTTP/1.1:**

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It was released in 1997, HTTP/1.1 is the predecessor to HTTP/2. It introduced several features and it was first defined in 1999 by internet Engineering Task Force (IETF)and has been used for two decades,

**The feature it was including:**

Stateless: Each request is executed independently, without knowledge of previous requests.

Persistent connections: The connection between the client and server only exists during the request and response time

- Pipelining: Allows multiple HTTP requests to be sent in order over a single connection

- Chunked transfer encoding: Break data into smaller chunks, or blocks, that are sent independently

- Cache control: allows website owners to specify when cached versions of pages expire.

**HTTP/1.1 also has limitations, such as:**

- Head-of-line blocking: Requests are processed in sequence, leading to delays

- Multiple connections: Clients open multiple connections to overcome limitations, increasing overhead

* HTTP/2(HTTP/2.0):



HTTP/2 was developed by the HTTP Working Group (also called “httpbis”, where "[bis](https://en.wiktionary.org/wiki/bis)" means "twice")

It is the advance version of HTTP/1 and faster one too. It was Released in 2015, HTTP/2 addresses the limitations of HTTP/1.1,

It introduced some new and enhance feature which make it faster which means less time consuming. And the feature is.

- Binary encoding: Efficient, compact representation

- Multiplexing: Multiple requests over a single connection

- Streaming: Requests and responses sent in parallel

- Header compression: Reduced overhead

- Server push: Proactive resource delivery

* Benefits of HTTP/2:

- Improved performance

- Reduced latency

- Increased efficiency

- Better resource utilization

* **Key differences of http/1 and http/2 are**

- Multiplexing vs. Multiple connections

- Streaming vs. Pipelining

- Header compression vs. Verbose headers

- Server push vs. Client-initiated requests

**Conclusion:**

HTTP/2 is a significant upgrade to HTTP/1.1, offering improved performance, efficiency, and features. As the web continues to evolve, adopting HTTP/2 is essential for providing a better user experience. Understanding the differences between these two protocols is crucial for developers, administrators, and anyone involved in web development.

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