

## 1. Write a blog on Difference between HTTP1.1 vs HTTP2

| Point                                      | HTTP/1.1  | HTTP/2  |
|--|---|---|
| <b>1. Multiplexing</b>                     | One request at a time per connection                        | Multiple requests can be sent in parallel over a single connection, improving efficiency.                                 |
| <b>2. Header Compression</b>               | Headers are sent in plain text, leading to larger overhead. | Implements header compression, reducing the size of headers and improving performance                                     |
| <b>3. Binary Framing</b>                   | Data is transmitted in plain text.                          | Adopts binary framing, which is more efficient for data transfer.   |
| <b>4. Server Push</b>                      | Does not support server push.                               | Introduces server push, allowing servers to push resources to the client without a request.                               |
| <b>5. Prioritization</b>                   | Lacks prioritization of requests.                           | Allows prioritization of resources, ensuring critical elements are loaded faster.   |
| <b>6. Connection Reuse</b>                 | Requires multiple connections for parallelism.              | Facilitates connection reuse, reducing latency by using a single connection for multiple requests.                        |
| <b>7. Stream Dependency</b>                | Does not support stream dependencies.                       | Allows expressing dependencies between different resources, optimizing loading sequences.                                 |
| <b>8. Round-Trip Reduction</b>             | Inefficient handling of round-trip requests.                | Reduces the number of round-trip requests, improving overall responsiveness.  |
| <b>9. Backward Compatibility</b>           | Not designed with backward compatibility in mind.           | Designed for backward compatibility, ensuring smooth integration with existing systems.                                   |
| <b>10. Resource Optimization Practices</b> | Developers often use techniques like file concatenation.    | Encourages a revaluation of resource optimization practices due to improved handling of multiplexing and reduced latency. |

**Conclusion:** The transition from HTTP/1.1 to HTTP/2 represents a significant leap in optimizing web communication. With features like multiplexing, header compression, and server push, HTTP/2 offers a more efficient and responsive framework for handling resources.