

HTTP Request Lifecycle

1. Entering a URL:

- * The user enters a URL into the browser.
- * The browser breaks down the URL into parts to obtain information about the protocol, domain name, port, path, and parameters.

2. Resolving the IP address:

- * The browser checks the DNS cache to find the IP address associated with the domain name.
- * If the IP address is not found in the cache, the browser sends a request to the DNS server.
- * The DNS server responds with the IP address associated with the domain name.

3. Establishing a connection:

- * The browser uses the IP address and port to establish a TCP connection with the web server.

4. Sending an HTTP request:

- * The browser sends an HTTP request to the web server.
- * The request contains a method (GET, POST, PUT, etc.), the path to the resource, the HTTP version, and other headers.

5. Receiving an HTTP response:

- * The web server processes the request and sends an HTTP response.
- * The response contains a status code, headers, and the response body.

6. Closing the connection:

- * The browser closes the TCP connection with the web server.

7. Displaying the result:

- * The browser processes the response body and displays the result to the user.