

# Setting up HTTP Server



# Content

1. Client Server Architecture
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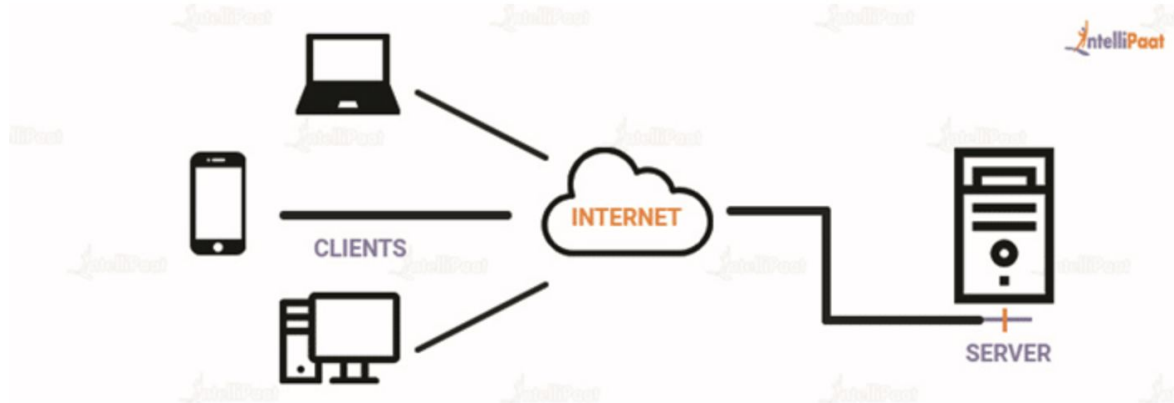
# Ever wondered How you are able to view live score on internet ?

The screenshot displays the Cricbuzz website interface. At the top, there's a navigation bar with links for Live Scores, Schedule, Archives, News, Series, Teams, Videos, Rankings, and more. Below this, a 'FEATURED MATCHES' section shows scores for AUS vs ENG (473-9 & 45-1), CD vs OTG (180-4 & 127), CLS vs KDW (180-6 & 124), and GGD vs JKS (129-4 & 109). The 'LATEST NEWS' section includes articles about quarantine issues, KL Rahul's appointment, and Gautam Gambhir's role. A prominent article titled 'Australia dominant after bagging massive lead' features a photo of the Australian team celebrating. To the right, there's an advertisement for Airtel Broadband and a 'FEATURED VIDEOS' section with a video titled 'Cricbuzz Chatter: Australia take a lead of 282 on Day 3! Michael Hussey reviews'.

# Backbone of all the interactions on internet is a simple architecture!

CLIENT-SERVER Architecture

Imagine Client as your interface  
and Server where the actual  
information resides



# Client

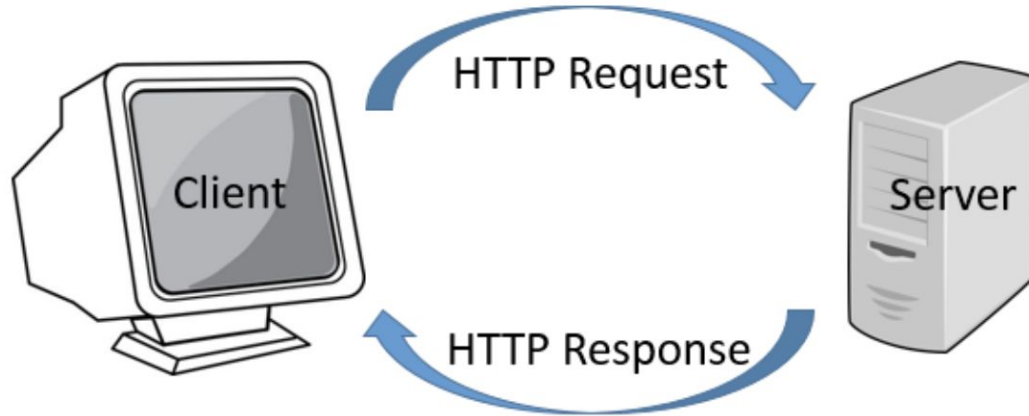
1. Requests Information
2. Depends upon server
3. Holds no additional resources

# Server

1. Responsible for Hosting and managing resources which compute results for client
2. Abstracts out the implementation
3. Responds to whatever client asks for

# How does the communication between Client and Server actually hap

HTTP to the rescue !!!!





# Types of HTTP Requests

1. GET
2. POST
3. PUT
4. DELETE
5. HEAD
6. TRACE
7. OPTIONS
8. PATCH

# Sample HTTP Request

1. GET /test HTTP/1.1

User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)

Host: www.tutorialspoint.com

Accept-Language: en-us

Accept-Encoding: gzip, deflate

Connection: Keep-Alive

# HTTP Response

The screenshot shows a web browser's developer tools with the Network tab selected. A list of requests is on the left, with 'admin-ajax.php' highlighted. The main panel shows the details of this request:

- General:**
  - Request URL: `https://gavilan.blog/wp-admin/admin-ajax.php`
  - Request Method: `POST`
  - Status Code: `200`
  - Remote Address: `192.0.78.25:443`
  - Referrer Policy: `strict-origin-when-cross-origin`
- Response Headers:**
  - `access-control-allow-credentials: true`
  - `access-control-allow-origin: https://gavilan.blog`
  - `cache-control: no-cache, must-revalidate, max-age=0`
  - `content-encoding: br`
  - `content-type: text/html; charset=UTF-8`
  - `date: Thu, 16 Dec 2021 07:56:38 GMT`
  - `expires: Wed, 11 Jan 1984 05:00:00 GMT`
  - `host-header: WordPress.com`
  - `referrer-policy: strict-origin-when-cross-origin`
  - `server: nginx`
  - `strict-transport-security: max-age=31536000`
  - `vary: Accept-Encoding`
  - `vary: Origin`
  - `x-ac: 3.bom_dca`
  - `x-content-type-options: nosniff`
  - `x-frame-options: SAMEORIGIN`
  - `x-hacker: If you're reading this, you should visit automattic.com/jobs and apply to join the fun, mention this header.`
  - `x-robots-tag: noindex`
- Request Headers:**
  - `:authority: gavilan.blog`
  - `:method: POST`
  - `:path: /wp-admin/admin-ajax.php`
  - `:scheme: https`
  - `accept: */*`

At the bottom left, it says '4 / 49 requests' and '2.0 kB / 211 kB'.

# HTTP Response codes

1. 100's
2. 200's
3. 300's
4. 400's
5. 500's

# GET VS POST METHOD

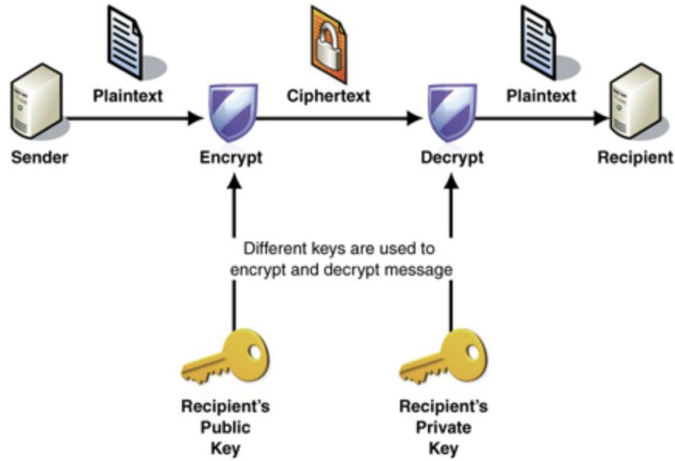
## Discuss

1. Reloading
2. Bookmarking
3. Caching
4. Security
5. Size

# Is HTTP Secure?

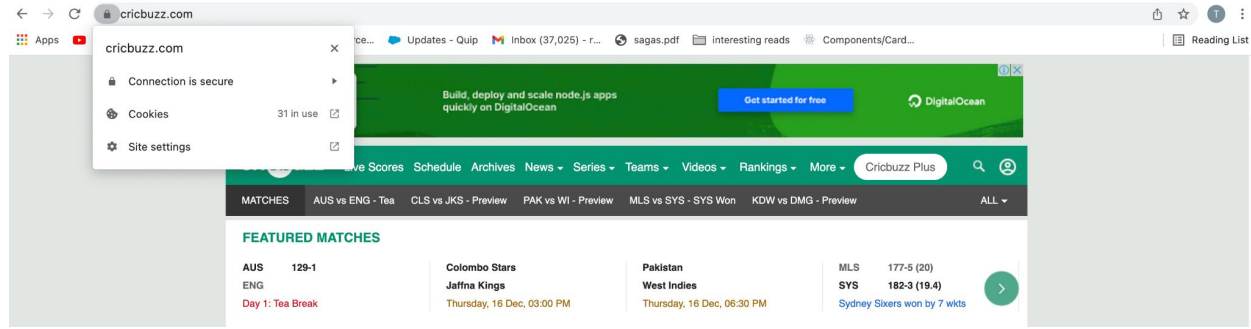
## Intro to HTTPS (Hypertext Transfer Protocol Secure)

# Encryption at work!!!



Example of asymmetric encryption system

# Is your current web page Secure ?





# REST (Representational state transfer)

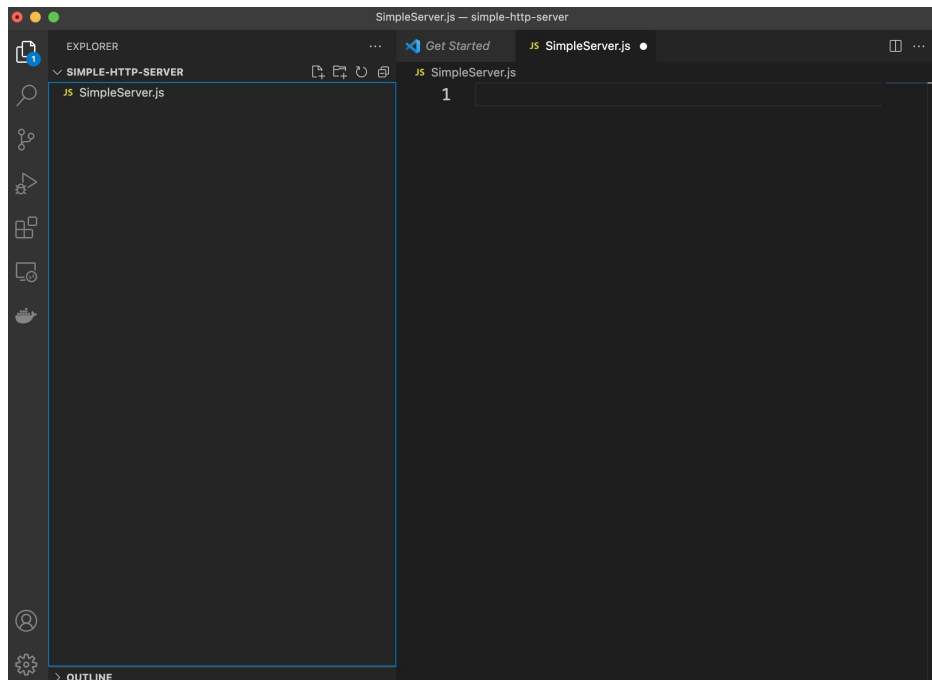
1. Client-Server architecture
2. Cacheability
3. Layered-System
4. Stateless
5. Uniform Interface

# Lets Build our own HTTP Server Now!!!

## Pre-Req

- Code editor
- Git (Optional)
- Node js installed

# Set up Root directory



# Create HTTP Server

← → ↻ ⓘ localhost:8080

Our first http server

# Create HTTP Server with json response0

← → ↻ ⓘ localhost:8080

```
{"message": "This is a JSON response from our json Server "}
```

## Create HTTP Server with CSV response

details

name	rollNumber	school
Tushar raina	34	Thapar

# MCQs

1. If we have to update our password, what HTTP method should we use ?

- A. GET
- B. PUT
- C. POST
- D. UPDATE

**Answer: B**

2. If there is a Null pointer exception in server code, what response should it return?

- A. 404
- B. 302
- C. 500
- D. 201

**Answer: C**

3. Which of the following methods has no message body?

- A. POST
- B. GET
- C. PUT
- D. DELETE

**Answer: B**

**4. Find incorrect mapping.**

- A. 200 OK
- B. 400 Bad Request
- C. 402 Not Found
- D. 301 Moved Permanently

**Answer: C**

**5. If we have to configure a RESTFull url, for searching a book given its id, what will the request look like.**

- A. GET /{id}/books/
- B. GET /{Id}
- C. GET /Books/{id}
- D. GET /Books?id={id1}

**Answer: C**



# Homework!

1. Let us change the port to 8448
2. Let us return error 400 error code

**Thank You!**