

Cloud Server Project Documentation

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Website: studyuae.online

IP Address: 13.60.35.197

Cloud Provider: AWS EC2

OS: Ubuntu Linux

Web Server: Apache2

SSL/TLS: Configured

GitHub Repository: Yes

Submitted to: Hena Iqbal

1. Setting up the AWS EC2 Instance

1. Launch EC2 Instance:

- Log in to AWS Management Console.
- Go to **EC2 Dashboard** → Click **Launch Instance**.
- Select **Ubuntu 22.04 LTS** as the OS.
- Choose **t2.micro (Free Tier Eligible)**.
- Configure security group to allow ports **22 (SSH)**, **80 (HTTP)**, and **443 (HTTPS)**.
- Assign an **Elastic IP** to the instance.

2. Connect to the Server via SSH:

EC2 > Instances > i-03c157072875c23ba > Connect to instance

Connect to instance Info

Connect to your instance i-03c157072875c23ba (studyhub) using any of these options

EC2 Instance Connect | Session Manager | SSH client | EC2 serial console

Instance ID
i-03c157072875c23ba (studyhub)

Connection Type

☒ **Connect using EC2 Instance Connect**
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 or IPv6 address.

☐ **Connect using EC2 Instance Connect Endpoint**
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IPv4 address
13.60.35.197

☐ **IPv6 address**
-

Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ubuntu.

ubuntu

Note: In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel **Connect**

2. Installing and Configuring Apache2 Web Server

Step 1: Update System Packages

```
ubuntu@ip-172-31-43-183:~$ sudo apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
ubuntu@ip-172-31-43-183:~$
```

Step 2: Install Apache2

```
ubuntu@ip-172-31-43-183:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.58-1ubuntu8.6).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
ubuntu@ip-172-31-43-183:~$
```

Step 3: Verify Apache2 Installation

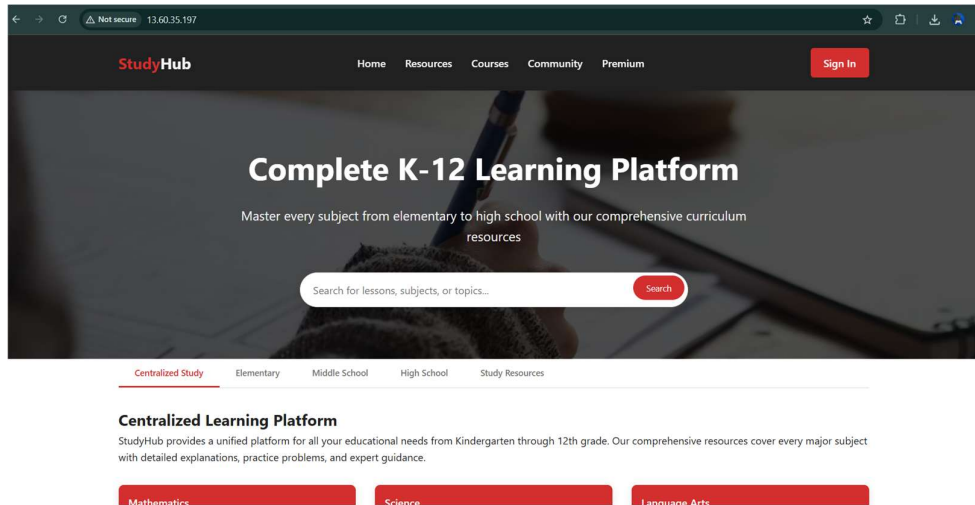
```
ubuntu@ip-172-31-43-183:~$ sudo service apache2 status
• apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Thu 2025-04-10 22:10:07 UTC; 33min ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 20896 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
  Main PID: 20923 (apache2)
    Tasks: 55 (limit: 1077)
   Memory: 10.8M (peak: 11.2M)
      CPU: 180ms
   CGroup: /system.slice/apache2.service
           └─20923 /usr/sbin/apache2 -k start
             └─20926 /usr/sbin/apache2 -k start
               └─20927 /usr/sbin/apache2 -k start

Apr 10 22:10:07 ip-172-31-43-183 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Apr 10 22:10:07 ip-172-31-43-183 systemd[1]: Started apache2.service - The Apache HTTP Server.
ubuntu@ip-172-31-43-183:~$
```

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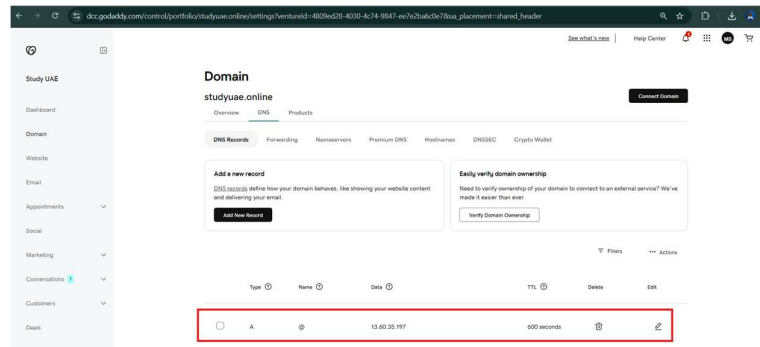
Syed Murtajiz Ali shah

Step 4: Test Web Server

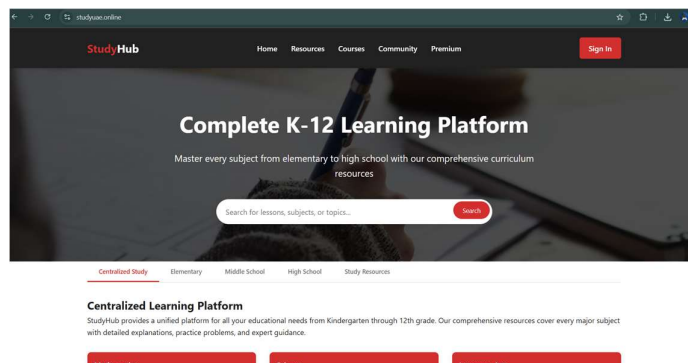


3. Linking Domain Name (DNS Setup)

1. Go to Your Domain Registrar (e.g., Namecheap, GoDaddy).
2. Update the A Record:



3. Verify DNS Setup:



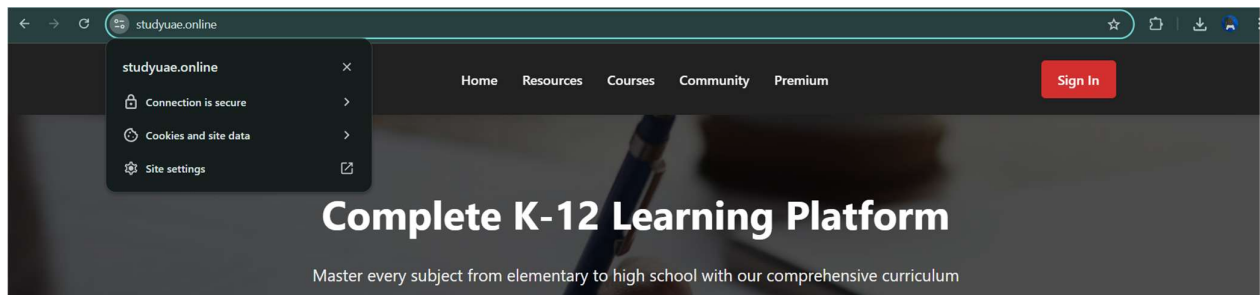
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4. Configuring SSL/TLS with Let's Encrypt and Obtain SSL Certificate

Step 1: Install Certbot

```
sudo apt install certbot python3-certbot-apache -y
```



yes, my website has a secure connection.