VPS

1.Backend VPS Deployment :

The first step is to log in to the VPS via SSH using PuTTY software on Windows.

* Vps ip: 91.108.105.113
* Port:22
* Connection type:SSH

Enter in virtual ubantu os :

* Login as: root
* Password:ASGlobal@12345

2. Installing Apache server:

* sudo apt install apache2.
* sudo ufw enable.
* sudo ufw allow 'Apache'

3.Installing python certbot:

* sudo apt install certbot python3-certbot-apache

4.Pm2 installation:

* sudo apt install nodejs npm
* sudo npm install pm2@latest -g

5.Allow FireWall:

* sudo ufw allow 80/tcp
* sudo ufw allow 443/tcp
* sudo ufw allow 'Apache Full'

6.Run Backend code

* Navigate www folder
* Cd /var/www
* Clone the backend use of githhub(without node modules)
* Next navigate to cloned folder.
* Install node modules.
* Npm install
* Check database connection and running port.
* Npm start or node server.

8.PM2 steps:

* Start pm2 In backend code
* Pm2 start server.js
* Pm2 save.

9.Certtificate Download Steps:

* Navigate to apache sites-available folder
* cd /etc/apache2/sites-available
* create config file
* sudo nano filename-le-ssh.conf

10.File Save bellow code(<VirtualHost \*:80>)

<VirtualHost \*:80>

ServerName backend.dreampublicschoolorg.online

DocumentRoot /var/www/html

# Redirect all HTTP requests to HTTPS

Redirect permanent / https://backend.dreampublicschoolorg.online/

# Proxy settings for forwarding requests to localhost:2001

ProxyPass / http://localhost:2001/

ProxyPassReverse / http://localhost:2001/

# Logging

ErrorLog ${APACHE\_LOG\_DIR}/error.log

CustomLog ${APACHE\_LOG\_DIR}/access.log combined

<Directory /var/www/html>

Options Indexes FollowSymLinks

AllowOverride All

Require all granted

# Serve index.html for all routes

RewriteEngine On

RewriteCond %{REQUEST\_FILENAME} !-f

RewriteCond %{REQUEST\_FILENAME} !-d

RewriteRule ^ /index.html [L]

</Directory>

</VirtualHost>

Save the above code.Fill the backend domain and I set as backend running port.

After saved file sudo a2enite Filename-le-ssl.conf

11.Installing Certificate

* sudo certbot –apche
* select the shown domain
* successfully downloaded certificate.

12. File Save bellow code(<VirtualHost \*:443>)

* go to the config file folder.
* see new file is created that folder
* open it.
* Copy that <virtualhost\*443> taged code and paste it
* Paste it below </virtualhost\*80> filename-le-ssh.conf
* Code like

<VirtualHost \*:443>

ServerName backend.dreampublicschoolorg.online

DocumentRoot /var/www/html

# SSL Configuration

SSLEngine on

SSLCertificateFile /etc/letsencrypt/live/backend.dreampublicschoolorg.online/fullchain.pem

SSLCertificateKeyFile /etc/letsencrypt/live/backend.dreampublicschoolorg.online/privkey.pem

# Additional SSL Settings

SSLProtocol all -SSLv2 -SSLv3

SSLCipherSuite EECDH+AESGCM:EDH+AESGCM:AES256+EECDH:AES256+EDH

# Disable SSL stapling (if needed)

SSLUseStapling off

# Proxy settings for forwarding requests to localhost:2001

ProxyPass / http://localhost:2001/

ProxyPassReverse / http://localhost:2001/

# Directory settings

<Directory /var/www/html>

Options Indexes FollowSymLinks

AllowOverride All

Require all granted

# Serve index.html for all routes

RewriteEngine On

RewriteCond %{REQUEST\_FILENAME} !-f

RewriteCond %{REQUEST\_FILENAME} !-d

RewriteRule ^ /index.html [L]

</Directory>

</VirtualHost>

13.Strat Apache server:

* Sudo systemctl start apache2.

14.Conculation

* Now running backend with https.