

## Linux Based Apache Server Hosting Guide (MERN Stack)

### **If hosting server is running on IP Address**

- ❖ To serve React build on hosting server using only IP address and specific port.
  - Example: <http://93.127.195.119:3000/>

#### **Step 1:**

- Ensure Required Modules are enabled.
- You need to have proxy and proxy\_http modules enabled.
- Run the following commands to enable them.

##### **Ex:**

```
sudo a2enmod proxy
sudo a2enmod proxy_http
sudo systemctl restart apache2
```

```
sudo a2enmod rewrite (Enable this for solving React Routing Issue)
```

#### **Step 2:**

- Set Up a Virtual Host for React.
- Create a virtual host configuration for your React app.
- Create a file named react-app.conf in /etc/apache2/sites-available/

```
sudo nano /etc/apache2/sites-available/react-app.conf
```

##### **Ex:**

```
<VirtualHost *:3000>
    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/html/client

    <Directory /var/www/html/client>
        Options Indexes FollowSymLinks
        AllowOverride All
        Require all granted
    </Directory>

    ErrorLog ${APACHE_LOG_DIR}/react-app-error.log
    CustomLog ${APACHE_LOG_DIR}/react-app-access.log combined
</VirtualHost>
```

#### **Step 3:**

- Enable the New Virtual Host.

##### **Ex:**

```
sudo a2ensite react-app.conf
```

```
sudo systemctl reload apache2
```

**Step 4:**

- Listen on Port 3001.
- Ensure that Apache is configured to listen on port 3000. Open the ports configuration file

```
sudo nano /etc/apache2/ports.conf
```

**Ex:**

```
Listen 3000
```

**Step 5:**

- Restart Apache

**Ex:**

```
sudo systemctl restart apache2
```

**Step 6:**

- Ensure that your firewall allows traffic on port 3000. For example, if you are using **ufw**.

**Ex:**

```
sudo ufw allow 3000/tcp
```

**Step 7:**

- Upload your build files to /var/www/html/client folder and create .htaccess file in the client folder.
- Write the below configuration in .htaccess file.

**Ex:**

```
<IfModule mod_rewrite.c>
```

```
RewriteEngine On
```

```
RewriteBase /
```

```
RewriteRule ^index\.html$ - [L]
```

```
RewriteCond %{REQUEST_FILENAME} !-f
```

```
RewriteCond %{REQUEST_FILENAME} !-d
```

```
RewriteRule ^/index.html [L]
```

```
</IfModule>
```

- ❖ To serve React Admin build on hosting server using only IP address and specific port.
  - Example: <http://93.127.195.119:3001/>

**Step 1:**

- Ensure Required Modules are enabled.
- You need to have proxy and proxy\_http modules enabled.

- Run the following commands to enable them.

**Ex:**

```
sudo a2enmod proxy
sudo a2enmod proxy_http
sudo systemctl restart apache2
```

### Step 2:

- Set Up a Virtual Host for React.
- Create a virtual host configuration for your React app.
- Create a file named admin.conf in /etc/apache2/sites-available/

```
sudo nano /etc/apache2/sites-available/admin.conf
```

**Ex:**

```
<VirtualHost *:3001>
    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/html/admin

    <Directory /var/www/html/admin>
        Options Indexes FollowSymLinks
        AllowOverride All
        Require all granted
    </Directory>

    ErrorLog ${APACHE_LOG_DIR}/admin-error.log
    CustomLog ${APACHE_LOG_DIR}/admin-access.log combined
</VirtualHost>
```

### Step 3:

- Enable the New Virtual Host.

**Ex:**

```
sudo a2ensite react-app.conf
sudo systemctl reload apache2
```

### Step 4:

- Listen on Port 3001.
- Ensure that Apache is configured to listen on port 3000. Open the ports configuration file

```
sudo nano /etc/apache2/ports.conf
```

**Ex:**

```
Listen 3001
```

### Step 5:

- Restart Apache

**Ex:**

```
sudo systemctl restart apache2
```

**Step 6:**

- Ensure that your firewall allows traffic on port 3001. For example, if you are using `ufw`.

**Ex:**

```
sudo ufw allow 3001/tcp
```

**Step 7:**

- Upload your build files to `/var/www/html/admin` folder and create `.htaccess` file in the admin folder.
- Write the below configuration in `.htaccess` file.

**Ex:**

```
<IfModule mod_rewrite.c>
  RewriteEngine On
  RewriteBase /

  RewriteRule ^index\.html$ - [L]
  RewriteCond %{REQUEST_FILENAME} !-f
  RewriteCond %{REQUEST_FILENAME} !-d
  RewriteRule ^/index.html [L]
</IfModule>
```

- ❖ To Host Node backend server code on Linux based Apache Server using pm2

**Step 1:**

- Upload all your backend code of files on `/var/www/html/server` folder

**Step 2:**

- Install pm2 globally on server

**Ex:**

```
npm i pm2 -g
```

**Step 3:**

- Start main file i.e `index.js` or `app.js` with specific pm2 service name and port

**Ex:**

```
pm2 start index.js or app.js --name "server_name" --env PORT=8080
```