

Please set up a server for our **MERN stack website**, which consists of:

- **Frontend:** Next.js (React.js)
- **Backend:** Node.js with Express
- **Database:** MongoDB
- **Tool:** Github needs to be installed.

1. Server Specifications

- **Operating System:** Ubuntu 20.04+ (or latest stable version)
- **RAM:** Minimum 4GB (for smooth operation)
- **Storage:** At least 50GB SSD
- **Processor:** Minimum 2 vCPUs
- **Node.js Version:** Latest LTS version
- **MongoDB Version:** Latest stable version

Note: If we need any increment in RAM, storage will let u know.

2. Required Installations

- **Node.js & npm/yarn**
- **PM2** (to manage backend process)
- **MongoDB** (if using a self-hosted database, otherwise configure MongoDB Atlas)
- **Nginx or Apache** (as a reverse proxy)
- **Certbot** (for SSL if using Let's Encrypt)

3. Server Setup & Configurations

A. Backend (Node.js + Express)

- Setup a directory for the **backend**
- Install dependencies (`npm install`)
- Configure **.env file** for database connection and secrets
- Use **PM2** to run the backend (`pm2 start server.js --name backend`)

B. Database (MongoDB)

- If using a self-hosted database, configure MongoDB with authentication and enable remote access.
- If using **MongoDB Atlas**, ensure the **IP whitelist** includes the server's IP.

C. Frontend (Next.js)

- Setup a directory for the **frontend**
- Install dependencies (`npm install`)
- Build the project (`npm run build`)
- Run Next.js in production mode (`npm start`)

- Optionally, use **PM2** to manage the frontend process

D. Reverse Proxy (Nginx)

- Configure **Nginx** as a reverse proxy to forward frontend requests to Next.js and API requests to Node.js
- Enable **HTTPS** using Let's Encrypt

Example Nginx Config:

Like i want to host there is two domain kind of:

1. sdmh.in

2. admin.sdmh.in

So please done nginx config accordingly:

Nginx server dummy config for example:

```
server {  
    listen 80;  
    server_name yourdomain.com;  
  
    location / {  
        proxy_pass http://localhost:3000;  
        proxy_http_version 1.1;  
        proxy_set_header Upgrade $http_upgrade;  
        proxy_set_header Connection 'upgrade';  
        proxy_set_header Host $host;  
        proxy_cache_bypass $http_upgrade;  
    }  
  
    location /api/ {  
        proxy_pass http://localhost:5000/;  
        proxy_http_version 1.1;  
        proxy_set_header Upgrade $http_upgrade;  
        proxy_set_header Connection 'upgrade';  
        proxy_set_header Host $host;  
        proxy_cache_bypass $http_upgrade;  
    }  
  
    listen 443 ssl;  
    ssl_certificate  
/etc/letsencrypt/live/yourdomain.com/fullchain.pem;
```

```
    ssl_certificate_key
/etc/letsencrypt/live/yourdomain.com/privkey.pem;
}
```

4. Environment Variables Required

(Provide these in `.env` file or server environment)

Env dummy:

`NODE_ENV=production`

`PORT=5000`

`MONGO_URI=mongodb+srv://<username>:<password>@cluster.mongodb.net/my
Database`

`JWT_SECRET=your_secret_key`

`NEXT_PUBLIC_API_URL=https://yourdomain.com/api`