

Configure and deploy below application on linux server (3 tier application)

Frontend server(apache webserver) -> backend application (Node app) - database (mongo)

Create .env file in you project to pass environment =>

MONGODB_URL=mongodb://localhost:27017/demo

PORT=3000

Application source - <https://github.com/BL-AniketChile/NodeJs-API>

1. Mongodb installation

(<https://www.mongodb.com/docs/manual/tutorial/install-mongodb-on-ubuntu/>)

Step 1:- Import the public key

```
sudo apt-get install gnupg curl
```

Step 2:- GPG key

```
curl -fsSL https://www.mongodb.org/static/pgp/server-8.0.asc | \  
sudo gpg -o /usr/share/keyrings/mongodb-server-8.0.gpg \  
--dearmor
```

Step 3:- Create the list file

```
echo "deb [ arch=amd64,arm64 signed-by=/usr/share/keyrings/mongodb-server-8.0.gpg ] \  
https://repo.mongodb.org/apt/ubuntu noble/mongodb-org/8.0 multiverse" | sudo tee \  
/etc/apt/sources.list.d/mongodb-org-8.0.list
```

Step 4:- Reload the package

```
sudo apt-get update
```

step 5:- install the MongoDB community server

```
sudo apt-get install -y mongodb-org
```

Note:- to enter into a data base and to perform CRUD operations

Step 1 :- sudo mongosh

2.Nodejs installation (purpose to run JavaScript applications on server)

Step 1:- colne the repo/app to your system

Git clone <https://github.com/BL-AniketChile/NodeJs-API>

Step 2:- change the directory to NodeJs-API

cd NodeJs-API

Note:- why do we install nodejs inside a project because when do npm install it installs the required packages and libraries for that project

Step 3:- sudo apt-get install -y nodejs npm

Step 4:- install the dependencies

Sudo npm install

Step 5:- create a (.) file

touch .env

step 6:- add the URL of mongodb inside the .env file

sudo nano .env

add this URL :- MONGODB_URL=mongodb://localhost:27017/demo

PORT=3000

(save & exit)

Step 7 :- start the node js application

node server.js or npm start

step 8:- while using the previous command the application runs in the foreground to run it in the background

```
sudo npm install -g pm2
```

```
pm2 start server.js --name node-app
```

```
pm2 -v
```

pm2 commands :- pm2 lsit ,pm2 start , pm2 stop

IMP:- To access or to use the application of node.js or to check whether its running or not

We have to change the AWS instance security group inbound rules

Add a new rule custom tcp , port 3000 ,0.0.0.0/0 (or ip address)

Add one more rule for apache Http default everthing and 0.0.0.0/0

3.apache installation and connection

Step 1:- sudo apt update

Step2 :- sudo apt install apace2

Enable the proxy modules to forward request from apache to the Nodejs application

Step 3:- sudo a2enmod proxy

Step 4:- sudo a2enmod proxy_http

Step5:- sudo systemctl restart apache2

Service file (To continue running create a service file in **/etc/systemd/system**)

[Unit]

Description=Node.js Application Service

After=network.target

[Service]

User=ubuntu

Group=ubuntu

WorkingDirectory=/home/ubuntu/NodeJs-API

ExecStart=/usr/bin/node server.js

Restart=always

RestartSec=10

[Install]

WantedBy=multi-user.target

NOTE:- sometimes after running the app in web your stop your instance and start it again please follow this steps if it wont work again

- Update your ip in `sudo nano /etc/apache2/sites-available/nodeapp.conf`
- Do enable apache proxy again to forward request
- Make sure that both mongodb & nodejs status are active and enabled
- To run without changing ip we need to have our own DOMAIN NAME (dns)