

"Automated Deployment and Service Management on EC2: Pulling Code from GitHub and Setting Up Daemon Processes"

Switch to root user

sudo su -

Change to root directory

cd /

Step 1: Install NodeJS and NPM using nvm

1. Install Node Version Manager (nvm)

curl -o- https://raw.githubusercontent.com/nvm-sh/nvm/v0.34.0/install.sh | bash

2. Activate nvm

. ~/.nvm/nvm.sh

3. Install the latest version of Node.js

nvm install node

Step 2: Clone repository from GitHub

1. Clone the repository

git clone https://github.com/HrushikeshB-1121/funDoNotes-deployment.git

2. Navigate to the project directory and install packages

cd /AllFundooNotes/fundooNotesProject

npm install

Step 3: Install MongoDB

1. Install prerequisite packages

sudo apt install software-properties-common gnupg apt-transport-https ca-certificates -y

2. Import MongoDB public key

curl -fsSL https://pgp.mongodb.com/server-7.0.asc | sudo gpg -o /usr/share/keyrings/mongodb-server-7.0.gpg --dearmor

3. Refresh the list of available packages and their versions from the repositories.

sudo apt update

4. Install MongoDB

sudo apt install mongodb-org -y

5. Start MongoDB service

sudo systemctl start mongod

6. Confirm MongoDB service status

sudo systemctl status mongod

7. Enable MongoDB to start on boot

sudo systemctl enable mongod

Step 4: Install Redis

1. Install Redis

sudo apt install redis-server -y

2. Update Redis configuration

sudo nano /etc/redis/redis.conf

Change: **supervised no** to **supervised systemd**

3. Restart Redis server

sudo systemctl restart redis

4. Check Redis service status

sudo systemctl status redis

5. Enable Redis to start on boot

sudo systemctl enable --now redis-server

Step 5: Install Kafka (optional)

1. Install Java

sudo apt install default-jdk -y

2. Download and extract Apache Kafka

wget https://downloads.apache.org/kafka/3.7.0/kafka_2.13-3.7.0.tgz

tar -xzf kafka_2.13-3.7.0.tgz

sudo mv kafka_2.13-3.7.0 /opt/kafka

3. Update .bashrc to include Kafka path and reload

nano ~/.bashrc

export PATH=/opt/kafka/bin:\$PATH

source ~/.bashrc

4. Changes has to be made in: nano /opt/kafka/kafka-server-start.sh

```
if [ "x$KAFKA_HEAP_OPTS" = "x" ]; then
    export KAFKA_HEAP_OPTS="-Xmx1G -Xms1G"
fi
change it to
if [ "x$KAFKA_HEAP_OPTS" = "x" ]; then
    export KAFKA_HEAP_OPTS="-Xmx256M
-Xms128M"
fi
```

5. Start ZooKeeper and Kafka server

**/opt/kafka/bin/zookeeper-server-start.sh /opt/kafka/config/zookeeper.properties &
/opt/kafka/bin/kafka-server-start.sh /opt/kafka/config/server.properties &**

Step 6: Run the application manually

1. Navigate to the project directory and start the application

**cd /AllFundooNotes/fundooNotesProject
npm run dev**

Step 7: Run the application as a daemon process

1. Create a service file

nano fundoo.service

Write:

```
[Unit]
Description=Note Service
After=network.target

[Service]
User=ubuntu
Group=ubuntu
ExecStart=/bin/bash -c "cd /AllFundooNotes/fundooNotesProject/ &&
npm run dev"
WorkingDirectory=/AllFundooNotes/fundooNotesProject

[Install]
WantedBy=multi-user.target
```

EOL

2. Reload systemd, enable and start the service

**sudo systemctl daemon-reload
sudo systemctl enable fundoo.service
sudo systemctl start fundoo.service
sudo systemctl status fundoo.service**