Installation of MongoDB

Installation of MongoDB Community Edition with LTS using the apt package manager.

Steps :

1. create free tier ubuntu-22.04 instance
2. login to the server using key pem file.
3. update the server packages to the latest available:
   sudo apt update
   sudo apt dist-upgrade -y

4. install gnupg"
   sudo apt install gnupg

5. install libssl1 to install MongoDb on Ubuntu 22.04:
   echo "deb http://security.ubuntu.com/ubuntu impish-security main" | sudo tee /etc/apt/sources.list.d/impish-security.list
   sudo apt update
   sudo apt install libssl1.1

6. Import the public key using the following command:

   wget -qO - https://www.mongodb.org/static/pgp/server-5.0.asc | sudo apt-key add -

7. Add the MongoDB repository to the sources list:
   echo "deb [arch=amd64,arm64] https://repo.mongodb.org/apt/ubuntu focal/mongodb-org/5.0 multiverse" | sudo tee /etc/apt/sources.list.d/mongodb-org-5.0.list

8. Update the packages and install MongoDB:
   sudo apt update
   sudo apt install -y mongodb-org

9. Once the installation is completed enable MongoDB to start at system startup:
   sudo systemctl enable mongod

   To Start MongoDB server : sudo service mongod start
   You can view the status using the following command : sudo service mongod status.

Configure MongoDB :

Now we can secure MongoDB, configure MongoDB to accept remote connections and also create a new database.

1. To **Secure** MongoDB, edit MongoDB config file.

sudo vim /etc/mongod.conf

Uncomment the security section #security and enable authorization.

```
security:
  authorization: enabled
```

2. To **enable remote connections** , edit the same file and add your internal or private IP to the network interfaces. Your configuration should look like the one below.

net:
  port: 27017
  bindIp: 127.0.0.1,<private ip>

Restart MongoDB for the changes to take effect:

sudo systemctl restart mongod

Confirm if MongoDB is allowing remote connections using the following command:

sudo lsof -i | grep mongo

You should receive an output similar to the one below.

```
ubuntu@ip-172-31-46-239:~$ sudo lsof -i | grep mongo
mongod    17727         mongodb   11u  IPv4  53908      0t0  TCP localhost:27017 (LISTEN)
mongod    17727         mongodb   12u  IPv4  53909      0t0  TCP ip-172-31-46-239.ap-south-1.compute.internal:27017 (LISTEN)
```

3. **Create MongoDB Admin User**

Connect to MongoDB shell using mongosh command:

mongosh

```
ubuntu@ip-172-31-46-239:~$ mongosh
Current Mongosh Log ID: 62f3922a80b23ae9cc95f456
Connecting to:          mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+1.5.4
Using MongoDB:          5.0.10
Using Mongosh:          1.5.4

For mongosh info see: https://docs.mongodb.com/mongodb-shell/


To help improve our products, anonymous usage data is collected and sent to MongoDB periodically (https://www.mongodb.com/legal/privacy-policy).
You can opt-out by running the disableTelemetry() command.

test>
```

Change to admin database :

use admin

```
test> use admin
switched to db admin
admin>
```

Create admin user with all privileges and setup password:

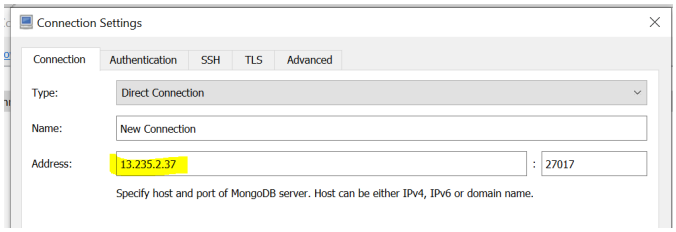
db.createUser({user: "soundarya" , pwd: passwordPrompt() , roles: [{ role: "userAdminAnyDatabase" , db: "admin"}]})

Enter password when prompted and enter exit to exit the shell.

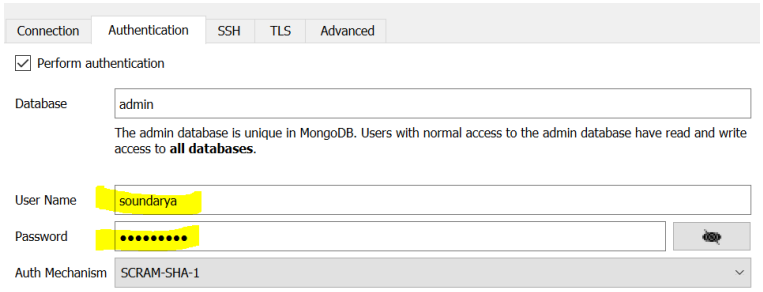
```
admin> db.createUser({user: "soundarya" , pwd: passwordPrompt() , roles: [{ role: "userAdminAnyDatabase" , db: "admin"}]})
Enter password
*********{ ok: 1 }
admin> exit
ubuntu@ip-172-31-46-239:~$
```

Now you can use the following connection string to connect to MongoDB:
mongodb://admin:password@External-IP:27017/database

4. enable 27017 port
   Ensure to add port 27017 in inbound rules of your instance.
5. Install Robo 3T
   Install Robo 3T or Studio 3T software to connect to your mongo db locally.
   Robo 3T (formerly Robomongo) is a popular desktop graphical user interface (GUI) for your MongoDB hosting deployments that allows you to interact with your data through visual indicators instead of a text-based interface.
6. Open Robo3T and select create connection.
7. Give your Instance public IP in connection address



8. In Authentication, provide the admin user and pwd created



   Save the new connection and select connect to connect the DB.

Note:
libssl1 instalation is required to install MongoDb on Ubuntu 22.04 otherwise you will receive an error similar to the one below.

```
The following packages have unmet dependencies:
 mongodb-org-mongos : Depends: libssl1.1 (>= 1.1.1) but it is not installable
 mongodb-org-server : Depends: libssl1.1 (>= 1.1.1) but it is not installable
 mongodb-org-shell : Depends: libssl1.1 (>= 1.1.1) but it is not installable
```

References :
https://www.cloudbooklet.com/how-to-install-mongodb-on-ubuntu-22-04/
https://askubuntu.com/questions/1385440/ubuntu-sudo-apt-get-update-404-not-found-problem