

MongoDB

Installing MongoDB

Before we begin we need to update your system. For this let's use the following commands.

```
sudo apt-get update  
sudo apt-get upgrade
```

Usually, ubuntu's official package repositories holds the up-to-date version of the MongoDB. So we can install the necessary packages using **apt** itself. The following command actually installs several packages of the stable version of MongoDB, along with some management tools for the MongoDB server.

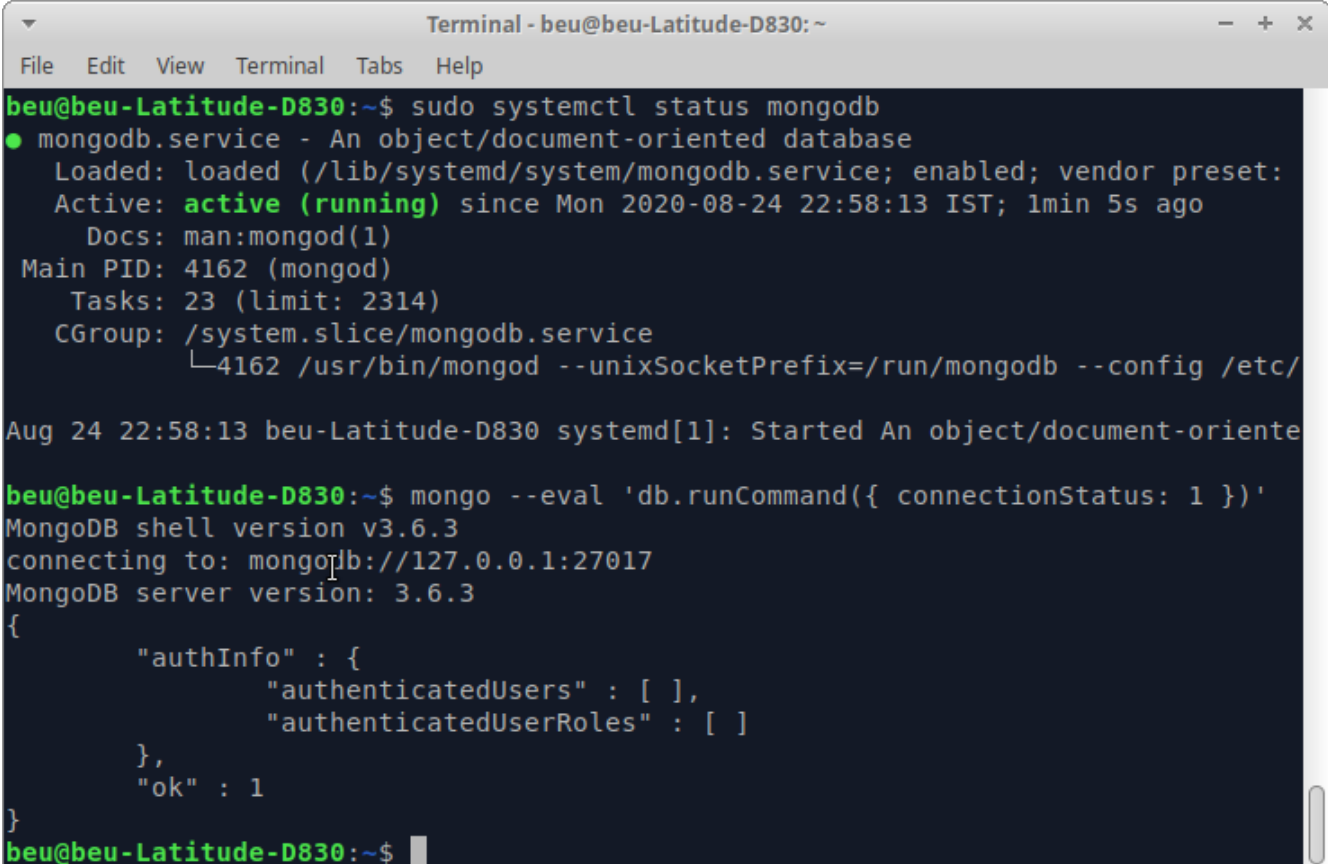
```
sudo apt install -y mongodb
```

The mongoDb has installed successfully. Let's verify whether the service has started. The following command is used to check the service's status.

```
sudo systemctl status mongod
```

We can also verify this further by actually connecting it to the database server and executing a diagnostic command. For this let's use the following command.

```
mongo --eval 'db.runCommand({ connectionStatus: 1 })'
```

A terminal window titled "Terminal - beu@beu-Latitude-D830: ~" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The terminal shows the output of 'sudo systemctl status mongod' and 'mongo --eval 'db.runCommand({ connectionStatus: 1 })''. The first command shows that the mongod service is active and running. The second command shows the MongoDB shell version v3.6.3 and the connection status, which is 'ok' with a value of 1.

```
beu@beu-Latitude-D830:~$ sudo systemctl status mongod
● mongod.service - An object/document-oriented database
   Loaded: loaded (/lib/systemd/system/mongod.service; enabled; vendor preset:
   Active: active (running) since Mon 2020-08-24 22:58:13 IST; 1min 5s ago
     Docs: man:mongod(1)
  Main PID: 4162 (mongod)
    Tasks: 23 (limit: 2314)
   CGroup: /system.slice/mongod.service
           └─4162 /usr/bin/mongod --unixSocketPrefix=/run/mongod --config /etc/

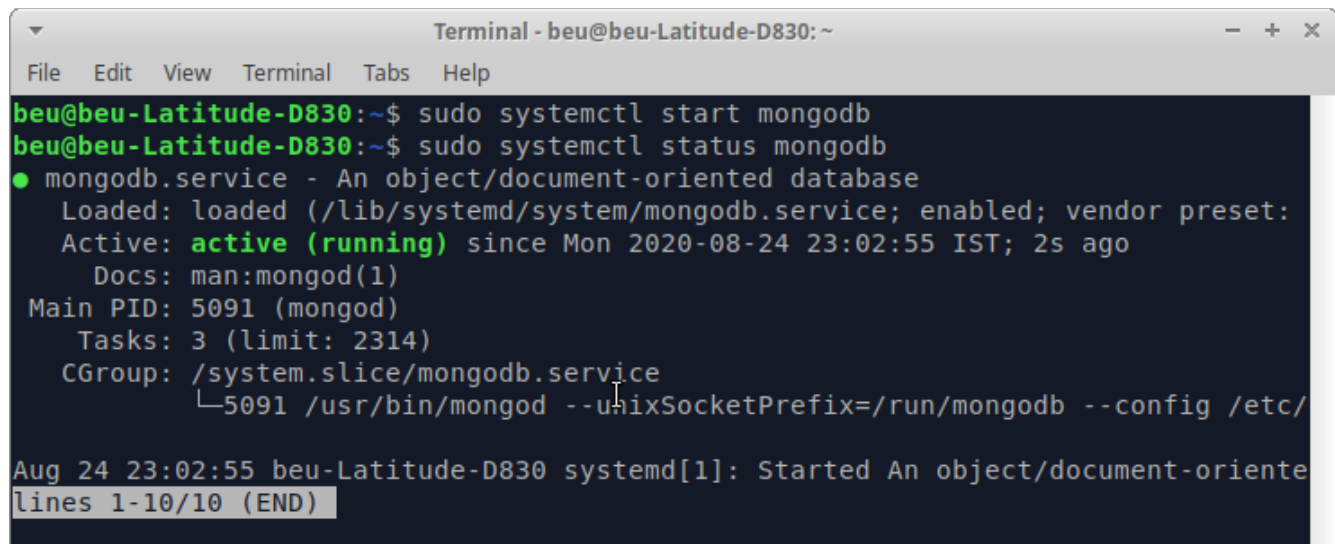
Aug 24 22:58:13 beu-Latitude-D830 systemd[1]: Started An object/document-oriente

beu@beu-Latitude-D830:~$ mongo --eval 'db.runCommand({ connectionStatus: 1 })'
MongoDB shell version v3.6.3
connecting to: mongodb://127.0.0.1:27017
MongoDB server version: 3.6.3
{
  "authInfo" : {
    "authenticatedUsers" : [ ],
    "authenticatedUserRoles" : [ ]
  },
  "ok" : 1
}
beu@beu-Latitude-D830:~$
```

From the above output, the MongoDB server is up and running according to the *systemd*. Also, the command which connected the database outputs **the current database version, the server address and port, and also the output of the status command**.

Since MongoDB has installed as a systemd service, we can actually manage it using standard systemd commands even along all the other system services in Ubuntu.

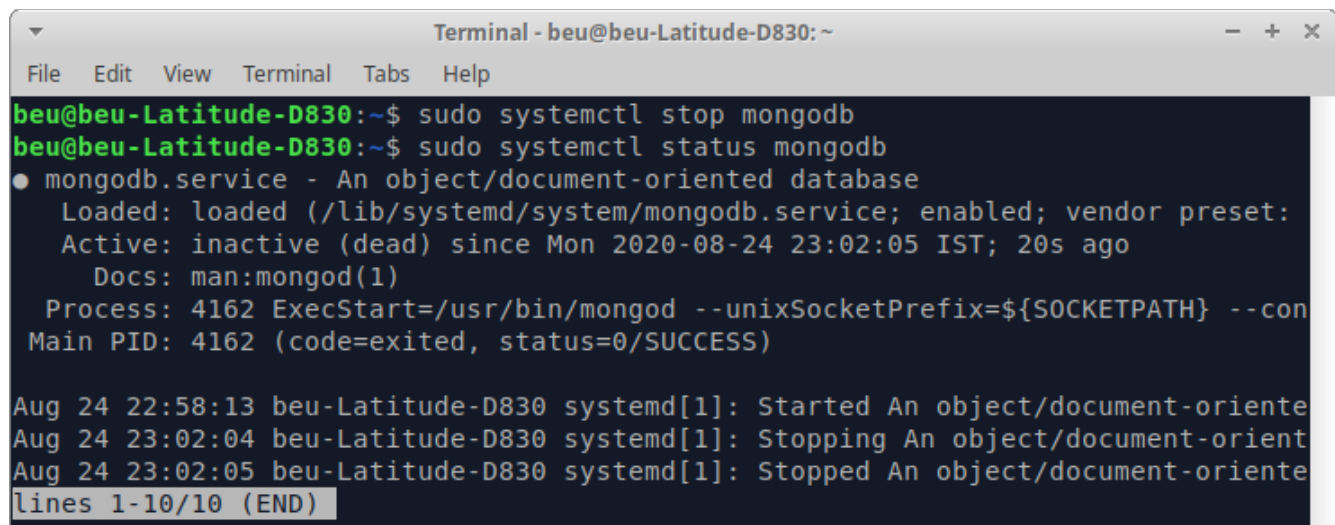
To start the server, let's use *sudo systemctl start mongod* command.

A terminal window titled "Terminal - beu@beu-Latitude-D830: ~" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The terminal shows the following commands and output:

```
beu@beu-Latitude-D830:~$ sudo systemctl start mongod
beu@beu-Latitude-D830:~$ sudo systemctl status mongod
● mongod.service - An object/document-oriented database
   Loaded: loaded (/lib/systemd/system/mongod.service; enabled; vendor preset:
   Active: active (running) since Mon 2020-08-24 23:02:55 IST; 2s ago
     Docs: man:mongod(1)
  Main PID: 5091 (mongod)
    Tasks: 3 (limit: 2314)
   CGroup: /system.slice/mongod.service
           └─5091 /usr/bin/mongod --unixSocketPrefix=/run/mongod --config /etc/

Aug 24 23:02:55 beu-Latitude-D830 systemd[1]: Started An object/document-orient
lines 1-10/10 (END)
```

Similarly, to stop the server, let's use *sudo systemctl stop mongod* command.

A terminal window titled "Terminal - beu@beu-Latitude-D830: ~" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The terminal shows the following commands and output:

```
beu@beu-Latitude-D830:~$ sudo systemctl stop mongod
beu@beu-Latitude-D830:~$ sudo systemctl status mongod
● mongod.service - An object/document-oriented database
   Loaded: loaded (/lib/systemd/system/mongod.service; enabled; vendor preset:
   Active: inactive (dead) since Mon 2020-08-24 23:02:05 IST; 20s ago
     Docs: man:mongod(1)
  Process: 4162 ExecStart=/usr/bin/mongod --unixSocketPrefix=${SOCKETPATH} --con
 Main PID: 4162 (code=exited, status=0/SUCCESS)

Aug 24 22:58:13 beu-Latitude-D830 systemd[1]: Started An object/document-orient
Aug 24 23:02:04 beu-Latitude-D830 systemd[1]: Stopping An object/document-orient
Aug 24 23:02:05 beu-Latitude-D830 systemd[1]: Stopped An object/document-orient
lines 1-10/10 (END)
```

We can also restart the server using a command, *sudo systemctl restart mongod*.

To verify the status of the service: *sudo systemctl status mongod*

Creating a MongoDB Database

Lets open the MongoDB shell in a terminal window using the **mongo** command.

```
Terminal - beu@beu-Latitude-D830: ~
File Edit View Terminal Tabs Help
beu@beu-Latitude-D830:~$ mongo
MongoDB shell version v3.6.3
connecting to: mongodb://127.0.0.1:27017
MongoDB server version: 3.6.3
Server has startup warnings:
2020-08-24T23:02:55.320+0530 I STORAGE [initandlisten]
2020-08-24T23:02:55.320+0530 I STORAGE [initandlisten] ** WARNING: Using the XFS
S filesystem is strongly recommended with the WiredTiger storage engine
2020-08-24T23:02:55.320+0530 I STORAGE [initandlisten] ** See http://d
ochub.mongodb.org/core/prodnotes-filesystem
2020-08-24T23:03:03.470+0530 I CONTROL [initandlisten]
2020-08-24T23:03:03.470+0530 I CONTROL [initandlisten] ** WARNING: Access contr
ol is not enabled for the database.
2020-08-24T23:03:03.470+0530 I CONTROL [initandlisten] ** Read and wri
te access to data and configuration is unrestricted.
2020-08-24T23:03:03.470+0530 I CONTROL [initandlisten]
>
```

MongoDB **use** command is used to create database. The command will actually creates a new database if it doesn't exist, else it will simply return the existing database.

- use myDatabase** - creating the database
- db** - to check the currently connected database
- show dbs** - to list down all the databases

```
Terminal - beu@beu-Latitude-D830: ~
File Edit View Terminal Tabs Help
> use myDatabase
switched to db myDatabase
> db
myDatabase
> show dbs
admin    0.000GB
config  0.000GB
local    0.000GB
>
```

Deleting the MongoDB Database

MongoDB **db.dropDatabase()** command is used to drop a existing selected current database.

```
Terminal - beu@beu-Latitude-D830: ~
File Edit View Terminal Tabs Help
> db.dropDatabase()
{ "ok" : 1 }
> show dbs
admin    0.000GB
config  0.000GB
local    0.000GB
>
```

