How to Install and Configure MongoDB on Ubuntu 16.04

MongoDB is a NoSQL database that offers a high performance, high availability, and automatic scaling enterprise database. MongoDB is a NoSQL database, so you can't use SQL (Structured Query Language) to insert and retrieve data, and it does not store data in tables like MySQL or Postgres. Data is stored in a "document" structure in JSON format (in MongoDB called BSON). MongoDB was first introduced in 2009 and is currently developed by the company MongoDB Inc.

"MongoDB only provides packages for 64-bit LTS (long-term support) Ubuntu releases. For example, 12.04 LTS (precise), 14.04 LTS (trusty), 16.04 LTS (xenial), and so on." mongodb site.

This tutorial exists for these OS versions

- **Ubuntu 16.04 (Xenial Xerus)**
- Ubuntu 14.04 LTS (Trusty Tahr)

On this page

Prerequisites

- Ubuntu Server 16.04 - 64 bit
- Root privileges

What we will do in this tutorial:

- Install MongoDB
- Configure MongoDB
- Conclusion

Install MongoDB on Ubuntu 16.04

Step 1 - Importing the Public Key

GPG keys of the software distributor are required by the Ubuntu package manager apt (Advanced Package Tool) to ensure package consistency and authenticity. Run this command to import MongoDB keys to your server.

```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv EA312927
```

Step 2 - Create source list file MongoDB

Create a MongoDB list file in `/etc/apt/sources.list.d/` with this command:

```
echo "deb http://repo.mongodb.org/apt/ubuntu "$(lsb_release -sc)"/mongodb-org/3.2 multiverse" | sudo tee
/etc/apt/sources.list.d/mongodb-org-3.2.list
```

Step 3 - Update the repository

update the repository with the apt command:

```
sudo apt-get update
```

Step 4 - Install MongoDB

Now you can install MongoDB by typing this command:

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

We have to create a new mongodb systemd service file in the '/lib/systemd/system' directory. Go to that directory and create the new mongodb service file 'mongod.service' with vim.

```
cd /lib/systemd/system/
vim mongod.service
```

Paste script below:

```
[Unit]
Description=High-performance, schema-free document-oriented database
After=network.target
Documentation=https://docs.mongodb.org/manual

[Service]
User=mongodb
Group=mongodb
ExecStart=/usr/bin/mongod --quiet --config /etc/mongod.conf

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

Save the file and exit.

Now update the systemd service with command below:

```
systemctl daemon-reload
```

Start mongodb and add it as service to be started at boot time:

```
systemctl start mongod
systemctl enable mongod
```

Now check that mongodb has been started on port 27017 with the netstat command.

```
netstat -plntu
```

Configure MongoDB username and password

When the MongoDB packages are installed you can configure username and password for the database server:

Step 1 - Open mongo shell

Before you set up a username and password for MongoDB, you need to open the mongodb shell on your server. You can login by typing:

```
mongo
```

If you get error *Failed global initialization: BadValue Invalid or no user locale set. Please ensure LANG and/or LC_* environment variables are set correctly*, try the command:

```
export LC_ALL=C
mongo
```

Step 2 - Switch to the database admin

Once you`re in the MongoDB shell, switch to the database named admin:

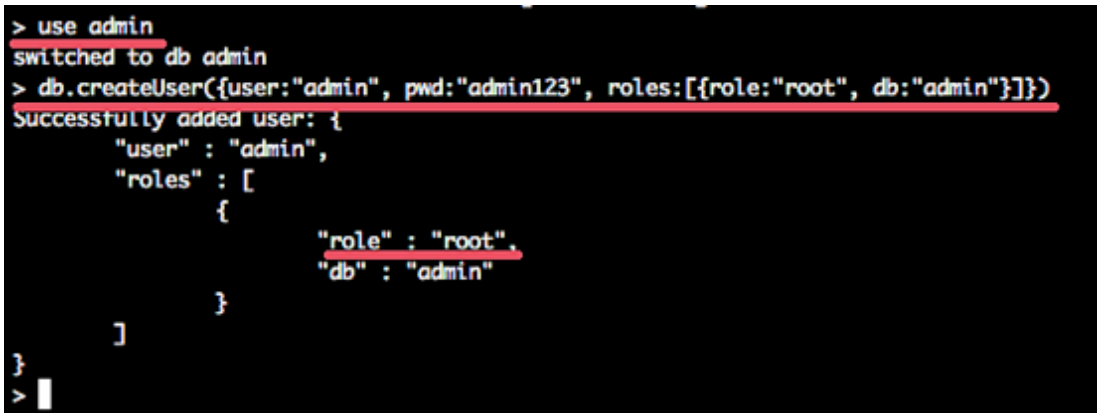
```
use admin
```

Step 3 - Create the root user

Create the root user with this command :

```
db.createUser({user:"admin", pwd:"admin123", roles:[{role:"root", db:"admin"}]})
```

Desc: Create user *admin* with password *admin123* and have the permission/role as root and the database is admin.



Now type *exit* to exit from MongoDB shell.

Step 4 - Enable mongodb authentication

Edit the mongodb service file *'/lib/systemd/system/mongod.service'* with your editor.

```
vim /lib/systemd/system/mongod.service
```

On the 'ExecStart' line 9, add the new option '--auth'.

```
ExecStart=/usr/bin/mongod --quiet --auth --config /etc/mongod.conf
```

Save and exit.

Reload the systemd service:

```
systemd daemon-reload
```

Step 5 - Restart MongoDB and try to connect

Now restart MongoDB and connect with the user created.

```
sudo service mongod restart
```

and connect to the mongodb shell with this command:

```
mongo -u admin -p admin123 --authenticationDatabase admin
```

and you will see the output like this:

Conclusion

A well-known NoSQL database that offers high performance, high availability, and automatic scaling is **MongoDB**. It is different from the RDBMS such as MySQL, PostgreSQL, and SQLite as it does not use SQL to set and retrieve data. MongoDB stores data in **`documents`** called **BSON** (binary representation of JSON with additional types of information). MongoDB is only available for **64-bit** Long Term Support Ubuntu Release.

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Comments

From: Mr. Geek Reply

Seems to be interesting for the researching tasks of our institute! What about the stability of this release?

From: End User Reply

Thank you for the instructions, worked like a charm - note in step-4 to reload it should be "systemctl daemon-reload" rather than "systemd daemon-reload"

From: Jessiree De Vera Reply

Thank you!

From: Antonio Reply

best guide!

From: lumazi Reply

I ran through the install but I am expernecing an issue at step #3. I run the createUser command but I receive the following error:
Error: couldn't add user: not authorized on admin to execute command
I am connected to the admin database but cannot execute the command. I do not see the --auth flag in the mongod.service file so I don't think I'm connecting with auth enabled.

From: Peter Carter Reply

If anyone has problems getting systemd daemon-reload to work, you can probably use systemctl daemon-reload. Worked for me, anyway.

From: Oliver Reply

Could you also make a HowToForge on how to compile the c++ driver easily? Today this is a mess and a pain. Thanks

From: swapnaja Reply

Thank You for Instructions This is work for me.

From: raju prasad Reply

thanks for this tutorial.

From: Guy Holtzman Reply

Thanks,
I am getting Excess arguments as output just before step 5.
I continued and it seems to work, but I do not know what is the affect of this error and how to solve it, any ideas?
Guy

From: BrucklynBoy Reply

Chapter 'Configure MongoDB username and password', 'Step 4 - Enable mongodb authentication':
Reload the systemd service says 'systemd daemon-reload', but should instead be 'systemctl daemon-reload'

From: matt Reply

thanks!

From: invalid user Reply

another method if error in : mongo -u admin -p admin123 --authenticationDatabase admin
with : mongo -u "admin" -p "admin123" --authenticationDatabase admin
works to me on linux MINT 18 (sarah)

From: selva Reply

This is work for me. thank you.

From: Chien Reply

Thank for share!

From: Jonathan Reply

In step 4 I had to use systemctl daemon-reload vice systemd daemon-reload.

From: Motiur Rehman Reply

Thank You very much for your support through this tutorial(manual),
Awsome implementation and installation without any error, great and great job.
May Allah give you more knowledge to help us like this.
Thank You

From: freeelectron Reply

sudo apt-get install -y mongodb-org did not work for me I had to do sudo apt-get install -y mongodb

From: Manoj Reply

instead of 'systemd daemon-reload'

please use:
systemctl daemon-reload

From: CircuitBender Reply

db.createUser({user:"admin", pwd:"admin123", roles:[{role:"root", db:"admin"}]})
should be :db.createUser(user:"admin", pwd:"admin123", role:"root", db:"admin")

From: Nagy Reply

Great Job... had problems before with installing mongo but this worked well.

From: alireza ahmadi from iram Reply

hi
tanks for this tutorial
good luck

From: Reda Reply

At step 4 you should replace systemd daemon-reload with : systemctl daemon-reload
The rest is great

Thanks by the way you saved me a lot of time :)

From: MK Shah Reply

Its a great help to me. Thanks a lot for providing such polish steps.

Tutorials **How to Install and Configure MongoDB on Ubuntu 16.04**

Tutorial Info

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