

**Title**

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| Complete Title | Database Installation and Configuration on Ubuntu System |
| Brief Title | Mongo Database Installation |

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### **Objective**

The main goal of this document is to provide a detailed guide for installing MongoDB on an Ubuntu 22.04.2 LTS system. It outlines the hardware requirements, step-by-step installation procedures, configuration settings, and user creation processes necessary for setting up a secure and efficient MongoDB environment.

It provides detailed steps to Install mongodb on ubuntu environment. It should be used as a reference for both Installation and configuration Best Practices.

### **Scope of this Document**

This document provides comprehensive instructions for installing and configuring MongoDB on an Ubuntu 22.04.2 LTS system. It includes the following key sections:

**Introduction:** An overview of the document's purpose and the context of the MongoDB installation.

**Hardware Requirements:** Detailed specifications for the minimum and recommended hardware configurations to ensure optimal performance of MongoDB.

**Installation Steps:** Step-by-step procedures for installing MongoDB, including setting up the repository, installing the software, and configuring data and log directories.

### **General Description**

This document serves as a comprehensive guide for installing and configuring MongoDB on an Ubuntu 22.04.2 LTS system. It outlines the necessary steps to ensure a secure and efficient MongoDB environment, including hardware requirements, installation procedures, uninstallation.

### **Hardware Requirements**

Minimum Hardware Requirements

1. **bit Architecture** :MongoDB requires a 64-bit processor (Intel x86\_64 or AMD x86\_64).

**RAM** : At least 8 GB of RAM.

**CPU** : A minimum of 4 cores.

**Storage** : 20 GB of disk space. It's recommended to use SSDs for better performance2.

**Operating System** : MongoDB supports various Linux distributions924.04 LTS ("Noble"),22.04 LTS ("Jammy"),20.04 LTS ("Focal") , mac-OS, and Windows.

**Note :** MongoDB only supports the 64-bit versions of these platforms

Recommended Hardware for Production

**RAM** : 32 GB or more, depending on workload.

**CPU** : 8 cores or more.

**Storage** : SSDs with high IOPS (Input/Output Operations Per Second) for faster data access.

**Network** : Gigabit Ethernet or faster for better network performance.

Additional Considerations

**Platform Support** : MongoDB 8.0 Community Edition supports the following 64-bit Ubuntu LTS (long-term support) releases on x86\_64 architecture:

24.04 LTS ("Noble"),22.04 LTS ("Jammy"),20.04 LTS ("Focal")

**Working Set** : Ensure your working set (indexes and frequently accessed data) fits in RAM for optimal performance.

**Multiple CPU Cores** : MongoDB's WiredTiger storage engine efficiently uses multiple CPU cores.

**Dedicated Server** : For best performance, run one mongod process per host

### **Installation**

### **Step 1** : To determine which Ubuntu release your host is running, run the following command on the host's terminal

venkata@krv-dev-mongo:~# sudo cat /etc/lsb-release

**Step 2** : Import the Public GPG Key

Note : if gnupg not avialable install it with

venkata@krv-dev-mongo:~# sudo apt-get install gnupg curl

**Step 3** :Importing the MongoDB public GPG key

venkata@krv-dev-mongo:~# 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 4** : Create the list file for Ubuntu 22.04 (Jammy)

venkata@krv-dev-mongo:~# echo "deb [ arch=amd64,arm64 signed-by=/usr/share/keyrings/mongodb-server-8.0.gpg ] https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/8.0 multiverse" | sudo tee /etc/apt/sources.list.d/mongodb-org-8.0.list

**Step 5**  : Update the Package Database

venkata@krv-dev-mongo:~# sudo apt-get update

**Step 6**  : Install MongoDB

venkata@krv-dev-mongo:~# sudo apt-get install -y mongodb-org

### **Configuration Changes**

To update any configuration changes like port bindip or replication etc… edit config file and update the parameter which we want to and save

venkata@krv-dev-mongo:~# sudo vi /etc/mongod.conf

Note : Default mongodb config file is located as /etc/mongod.conf

### **Manage mongod Process**

To run and manage your [mongod](https://www.mongodb.com/docs/manual/reference/program/mongod/" \l "mongodb-binary-bin.mongod) process, you will be using your operating system's built-in [init system](https://www.mongodb.com/docs/manual/reference/glossary/" \l "std-term-init-system). Recent versions of Linux tend to use systemd (which uses the systemctl command), while older versions of Linux tend to use System V init (which uses the service command).

If you are unsure which init system your platform uses, run the following command:

venkata@krv-dev-mongo:~# ps --no-headers -o comm 1

### **Start mongod Service**

venkata@krv-dev-mongo:~# sudo systemctl start mongod

### **Verify mongod Service**

venkata@krv-dev-mongo:~# sudo systemctl status mongod

### **Stop mongod Service**

venkata@krv-dev-mongo:~# sudo systemctl stop mongod

### **Connect to mongo Shell**

venkata@krv-dev-mongo:~# mongosh

**Uninstall MongoDB Community Edition**

## **Step 1 :** Stop the mongod process

venkata@krv-dev-mongo:~# sudo service mongod stop

**Step 2 :** Remove any MongoDB packages that you had previously installed.

venkata@krv-dev-mongo:~# sudo apt-get purge mongodb-org\*

**Step 3 :** Remove MongoDB databases and log files.

venkata@krv-dev-mongo:~# sudo rm -r /var/log/mongodb

venkata@krv-dev-mongo:~# sudo rm -r /var/lib/mongodb

### **Conclusion**

By following these steps, we should have the latest version of MongoDB community edition installed on our Ubuntu 22.04.2 LTS system with default data and log directories(var/lib/mongodb & /var/log/mongodb/) and also uninstall the existing package.

### **References**

* <https://www.mongodb.com/docs/manual/tutorial/install-mongodb-on-ubuntu/>
* <https://www.mongodb.com/community/forums/t/installing-mongodb-over-ubuntu-22-04/159931>
* <https://github.com/subrahmanyeswaraokrv/mongodb-handbook/commit/39814ef224d04126453993fadb2a5986b5369e8e>