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Install MongoDB Community Edition on Ubuntu

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Overview

Use this tutorial to install MongoDB Community Edition on LTS Ubuntu Linux systems using `.deb` packages.

IMPORTANT:

The unofficial `mongodb` package provided by Ubuntu is **not** maintained by MongoDB. You should always use the official MongoDB `mongodb-org` packages, which are kept up-to-date with the most recent major and minor MongoDB releases.

PLATFORM SUPPORT:

MongoDB only provides packages for 64-bit LTS (long-term support) Ubuntu releases; for example, 14.04 LTS (trusty) and 16.04 LTS (xenial). See Supported Platforms for more information.

These packages may work with other Ubuntu releases; however, they are not supported.

PACKAGE UPDATES REQUIRED ON UBUNTU 16.04 FOR IBM POWER SYSTEMS:

Due to a lock elision bug present in older versions of the `glibc` package on Ubuntu 16.04 for POWER, you must upgrade the `glibc` package to at least `glibc 2.23-0ubuntu5` before running MongoDB. Systems with older versions of the `glibc` package will experience database server crashes and misbehavior due to random memory corruption, and are unsuitable for production deployments of MongoDB

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MongoDB provides officially supported packages in their own repository. This repository contains the following packages:

Package Name	Description
`mongodb-org`	A `metapackage` that will automatically install the four component packages listed below.
`mongodb-org-server`	Contains the `mongod` daemon and associated configuration and init scripts.
`mongodb-org-mongos`	Contains the `mongos` daemon.
`mongodb-org-shell`	Contains the `mongo` shell.
`mongodb-org-tools`	Contains the following MongoDB tools: `mongoimport` `bsondump`, `mongodump`, `mongoexport`, `mongofiles`, `mongorestore`, `mongostat`, and `mongotop`.

The `mongodb-org-server` package provides an initialization script that starts `mongod` with the `/etc/mongod.conf` configuration file.

See Run MongoDB Community Edition for details on using this initialization script.

These packages conflict with the `mongodb`, `mongodb-server`, and `mongodb-clients` packages provided by Ubuntu.

The default `/etc/mongod.conf` configuration file supplied by the packages have `bind_ip` set to `127.0.0.1` by default. Modify this setting as needed for your environment before initializing a replica set.

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> **NOTE:**
> To install a different version of MongoDB, please refer to that version's documentation. To install the previous version, see the tutorial for version 3.6.

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These packages may work with other Ubuntu releases; however, they are not supported.

Using `.deb` Packages (Recommended)

1 **Import the public key used by the package management system.**

The Ubuntu package management tools (i.e. `dpkg` and `apt`) ensure package consistency and authenticity by requiring that distributors sign packages with GPG keys. Issue the following command to import the MongoDB public GPG Key:

```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv 9DA31620334BD75D9D(
```

2 **Create a list file for MongoDB.**

Create the `/etc/apt/sources.list.d/mongodb-org-4.0.list` list file using the command appropriate for your version of Ubuntu:

Ubuntu 14.04

```
echo "deb [ arch=amd64 ] https://repo.mongodb.org/apt/ubuntu trusty/mongodb-org/4
```

Ubuntu 16.04

```
echo "deb [ arch=amd64,arm64 ] https://repo.mongodb.org/apt/ubuntu xenial/mongodb
```

Ubuntu 18.04

```
echo "deb [ arch=amd64 ] https://repo.mongodb.org/apt/ubuntu bionic/mongodb-org/4
```

3 **Reload local package database.**

Issue the following command to reload the local package database:

```
sudo apt-get update
```

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Install the latest version of MongoDB.

Issue the following command:

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

Install a specific release of MongoDB.

To install a specific release, you must specify each component package individually along with the version number, as in the following example:

```
sudo apt-get install -y mongodb-org=4.0.1 mongodb-org-server=4.0.1 mongodb-org-shell=
```

If you only install `mongodb-org=4.0.1` and do not include the component packages, the latest version of each MongoDB package will be installed regardless of what version you specified.

Pin a specific version of MongoDB.

Although you can specify any available version of MongoDB, `apt-get` will upgrade the packages when a newer version becomes available. To prevent unintended upgrades, pin the package. To pin the version of MongoDB at the currently installed version, issue the following command sequence:

```
echo "mongodb-org hold" | sudo dpkg --set-selections
echo "mongodb-org-server hold" | sudo dpkg --set-selections
echo "mongodb-org-shell hold" | sudo dpkg --set-selections
echo "mongodb-org-mongos hold" | sudo dpkg --set-selections
echo "mongodb-org-tools hold" | sudo dpkg --set-selections
```

Using `.tgz` Tarballs

Prerequisites

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```
sudo apt-get install libcurl3 openssl
```

Procedure

1. **Download the MongoDB `.tar.gz` tarball.**
   Download the tarball for your system from the MongoDB Download Center.

2. **Extract the files from the downloaded archive.**
   For example, from a system shell, you can extract using the `tar` command:

   ```
   tar -zxvf mongodb-linux-*-4.0.1.tgz
   ```

3. **Ensure the binaries are in a directory listed in your `PATH` environment variable.**
   The MongoDB binaries are in the `bin/` directory of the tarball. You must either:

   - Copy these binaries into a directory listed in your `PATH` variable such as `/usr/local/bin`,
   - Create symbolic links to each of these binaries from a directory listed in your `PATH` variable, or
   - Modify your user's `PATH` environment variable to include this directory.

   For example, you can add the following line to your shell's initialization script (e.g. `~/.bashrc`):

   ```
   export PATH=<mongodb-install-directory>/bin:$PATH
   ```

   Replace `<mongodb-install-directory>` with the path to the extracted MongoDB archive.

Run MongoDB Community Edition

Most Unix-like operating systems limit the system resources that a session may use. These limits may negatively impact MongoDB operation. See UNIX ulimit Settings for more information.

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/etc/mongod.conf. See systemLog.path and storage.dbPath for additional information.

If you change the user that runs the MongoDB process, you **must** modify the access control rights to the /var/lib/mongodb and /var/log/mongodb directories to give this user access to these directories.

1 Start MongoDB.

Issue the following command to start mongod:

```
sudo service mongod start
```

2 Verify that MongoDB has started successfully

Verify that the mongod process has started successfully by checking the contents of the log file at /var/log/mongodb/mongod.log for a line reading

```
[initandlisten] waiting for connections on port 27017
```

<port> is the port the mongod listens on. If you modified the net.port setting in the /etc/mongod.conf configuration file, the port may differ.

If you modified the systemLog.path configuration file option, look for the log file at the location you specified to that setting.

You may see non-critical warnings in the mongod output. As long as you see the log line shown above, you can safely ignore these warnings during your initial evaluation of MongoDB.

3 Stop MongoDB.

As needed, you can stop the mongod process by issuing the following command:

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4 Restart MongoDB.

Issue the following command to restart `mongod`:

```
sudo service mongod restart
```

5 Begin using MongoDB.

Start a `mongo` shell on the same host machine as the `mongod`. Use the `--host` command line option to specify the localhost address (in this case `127.0.0.1`) and port that the `mongod` listens on:

```
mongo --host 127.0.0.1:27017
```

Later, to stop MongoDB, press `Control+C` in the terminal where the `mongod` instance is running.

Uninstall MongoDB Community Edition

To completely remove MongoDB from a system, you must remove the MongoDB applications themselves, the configuration files, and any directories containing data and logs. The following section guides you through the necessary steps.

WARNING:
This process will *completely* remove MongoDB, its configuration, and *all* databases. This process is not reversible, so ensure that all of your configuration and data is backed up before proceeding.

1 Stop MongoDB.

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```
sudo service mongod stop
```

2 Remove Packages.

Remove any MongoDB packages that you had previously installed.

```
sudo apt-get purge mongodb-org*
```

3 Remove Data Directories.

Remove MongoDB databases and log files.

```
sudo rm -r /var/log/mongodb
sudo rm -r /var/lib/mongodb
```