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#####  
##### D-codE #####  
##### Frappe-bench installation guide #####  
#####
```

Pre-requisites

| | |
|--|---|
| Python 3.6+ | |
| Node.js 12 | |
| Redis 5 | (caching and real time updates) |
| MariaDB 10.3.x / Postgres 9.5.x | (to run database driven apps) |
| yarn 1.12+ | (js dependency manager) |
| pip 20+ | (py dependency manager) |
| wkhtmltopdf (version 0.12.5 with patched qt) | (for pdf generation) |
| cron | (bench's scheduled jobs: automated certificate renewal, scheduled backups) |
| NGINX | (proxying multitenant sites in production) |

STEP 1 Install git

sudo apt-get install git

STEP 2 install python-dev

python-dev is the package that contains the header files for the Python C API, which is used by lxml because it includes Python C extensions for high performance.

install Python 2.7.X dev package

sudo apt-get install python-dev

OR

install Python 3.X dev package

sudo apt-get install python3-dev

STEP 3 Install setuptools and pip (Python's Package Manager).

Setuptools is a collection of enhancements to the Python distutils that allow developers to more easily build and distribute Python packages, especially ones that have dependencies on other packages. Packages built and distributed using setuptools look to the user like ordinary Python packages based on the distutils .

pip is a package manager for Python. It's a tool that allows you to install and manage additional libraries and dependencies that are not distributed as part of the standard library.

install Python 2.7.X

sudo apt-get install python-setuptools python-pip

OR

install Python 3.X

sudo apt-get install python3-setuptools python3-pip

STEP 4 Install virtualenv

virtualenv is a tool for creating isolated Python environments containing their own copy of python , pip , and their own place to keep libraries installed from PyPI. It's designed to allow you to work on multiple projects with different dependencies at the same time on the same machine.

sudo apt-get install virtualenv

STEP 5 Create an alias for pip and python to enforce use of python 3

alias python=python3
alias pip=pip3

STEP 6 Install MariaDB 10.3 stable package

MariaDB is developed as open source software and as a relational database it provides an SQL interface for accessing data.

From repository please click on this link

<https://downloads.mariadb.org/mariadb/repositories/#mirror=piconets>

IMPORTANT :During this installation you'll be prompted to set the MySQL root password.If you are not prompted for the same You can initialize the MySQL server setup by executing the following command

sudo mysql_secure_installation

STEP 7 MySQL database development files

sudo apt-get install libmysqlclient-dev

STEP 8 Edit the mariadb configuration

```
sudo nano /etc/mysql/my.cnf
```

add this to the my.cnf file

```
[mysqld]  
character-set-client-handshake = FALSE  
character-set-server = utf8mb4  
collation-server = utf8mb4_unicode_ci
```

```
[mysql]  
default-character-set = utf8mb4
```

Now press (Ctrl-X) to exit

```
sudo service mysql restart
```

STEP 9 install Redis

Redis is an open source (BSD licensed), in-memory data structure store, used as a database, cache, and message broker.

```
sudo apt-get install redis-server
```

STEP 10 install Node.js 12.X package

Node.js is an open source, cross-platform runtime environment for developing server-side and networking applications. Node.js applications are written in JavaScript, and can be run within the Node.js runtime on OS X, Microsoft Windows, and Linux.

```
sudo apt-get install curl  
curl -sL https://deb.nodesource.com/setup_12.x | sudo -E bash -  
sudo apt-get install -y nodejs
```

STEP 11 install Yarn

Yarn is a JavaScript package manager that aims to be speedy, deterministic, and secure. See how easy it is to drop yarn in where you were using npm before, and get faster, more reliable installs. Yarn is a package manager for JavaScript.

```
sudo npm install -g yarn
```

STEP 12 install wkhtmltopdf

Wkhtmltopdf is an open source simple and much effective command-line shell utility that enables user to convert any given HTML (Web Page) to PDF document or an image (jpg, png, etc)

```
wget
https://github.com/wkhtmltopdf/packaging/releases/download/0.12.6-1/wkhtmltox_0.12.6-1.bionic_amd64.deb
sudo apt install ./wkhtmltox_0.12.6-1.bionic_amd64.deb
rm wkhtmltox_0.12.6-1.bionic_amd64.deb
```

STEP 13 Create a user

```
adduser DcodE_frappe
usermod -aG sudo DcodE_frappe
su - DcodE_frappe
```

STEP 14 install frappe-bench

```
pip3 install frappe-bench
```

IMPORTANT: you may wish to log out and log back into your terminal before next step and You must login / "**su - DcodE_frappe**"

```
bench --version
```