Setting Up Development Environment on Linux

Last updated by | mboise16 | 30. okt. 2020 at 22.48 CET

This article describes how to setup the development environment for SAEF on Linux (Ubuntu).

Python 3.7.6

Python 3.7.6 including Pip https://www.python.org/downloads/release/python-376/

RabbitMQ Server

RabbitMQ https://www.rabbitmq.com/download.html
In Ubuntu, use the following command to install rabbitmq server

```
sudo apt-get install rabbitmq-server -y
```

PostgreSQL V12

PostgreSQL (ver 12 or latest) https://www.enterprisedb.com/downloads/postgres-postgresql-downloads

Note that the default Postgres on Ubuntu is not Postgres12. In order to use SAEF, one must have Postgres 12 installed.

As we experienced in several Ubuntu systems, the preinstlaled package lsb-release is incompatible with the Postgres 12 installation. One must reinstall the lsb-release before installing Postgres 12.
use the command below to reinstall lsb-release.

```
sudo apt-get purge lsb-release -y
sudo apt-get install lsb-release -y
sudo apt autoremove -y
```

After this, use the following command to install Postgres 12

```
sudo apt update

sudo apt -y install vim bash-completion wget
sudo apt -y upgrade

wget --quiet -O - https://www.postgresql.org/media/keys/ACCC4CF8.asc | sudo apt-key add -

sudo sh -c 'echo "deb http://apt.postgresql.org/pub/repos/apt $(lsb_release -cs)-pgdg main" > /etc/apt/sources

sudo apt-get update

sudo apt-get install postgresql-12 -y
sudo apt-get install postgresql-client-12 -y
```

With Postgresql installed, it is possible to install the SAEF Project with the default user 'postgres' to the Postgresql server.

Alternatively, you can create a separater database user with the following command.
Note that you need to replace <username> and <password> with the actual username and password chosen for the database. This username and password will also be added to the configuration in the Django settings for the database. You also need to replace <djangodb> with the actual database name that will be used for the Django project.

```
sudo apt-get install unixodbc-dev -y

sudo -u postgres bash -c "psql -c \"CREATE USER <username> WITH PASSWORD '<password>' '' ;\""

sudo -u postgres bash -c "psql -c \"ALTER USER <username> CREATEDB;\""

sudo -u postgres bash -c "psql -c \"ALTER USER <username> WITH SUPERUSER;\""

sudo -u postgres bash -c "createdb -O <username> <djangodb>"
```

Git

Git https://git-scm.com/
Use the following command to sintall Git

```
sudo apt-get install git
```

Visual Studio Code or an alternative

Other tools on Linux

Based on previous experiences with Ubuntu, a set of tools and libraries must also be installed to ensure that the libraries used for the SAEF project work. You can se the following commands to install all these necessary tools.

```
sudo apt update

sudo apt-get -qq -y update && \
    DEBIAN_FRONTEND=noninteractive sudo apt-get -qq -y install \
        gcc \
        g++ \
        zlibc \
        zlib1g-dev \
        libssl-dev \
        libbz2-dev \
        libsqlite3-dev \
        libncurses5-dev \
        libgdbm-dev \
        libgdbm-compat-dev \
        liblzma-dev \
        libreadline-dev \
        uuid-dev \
        libffi-dev \
        tk-dev \
        wget \
        curl \
        make \
        sudo \
        bash-completion \
        tree \
        unzip \
        zip \
        vim \
        software-properties-common && \
    sudo mv /usr/bin/lsb_release /usr/bin/lsb_release.bak && \
    sudo apt-get -y autoclean && \
    sudo apt-get -y autoremove && \
    sudo rm -rf /var/lib/apt-get/lists/*
```

Install and Activate Python Virtual Environment

Install the virtualenv for Python use the following command.

```
pip install virtualenv
```

Then create the virtualenv using the following command.

```
virtualenv saefdev
```

Next, activate the virtual environment using the following command

```
source saefdev/bin/activate
```

Download ODBC Driver for SQL Server

https://docs.microsoft.com/en-us/sql/connect/odbc/linux-mac/installing-the-microsoft-odbc-driver-for-sql-server?view=sql-server-ver15