

Setting Up Development Environment on Windows

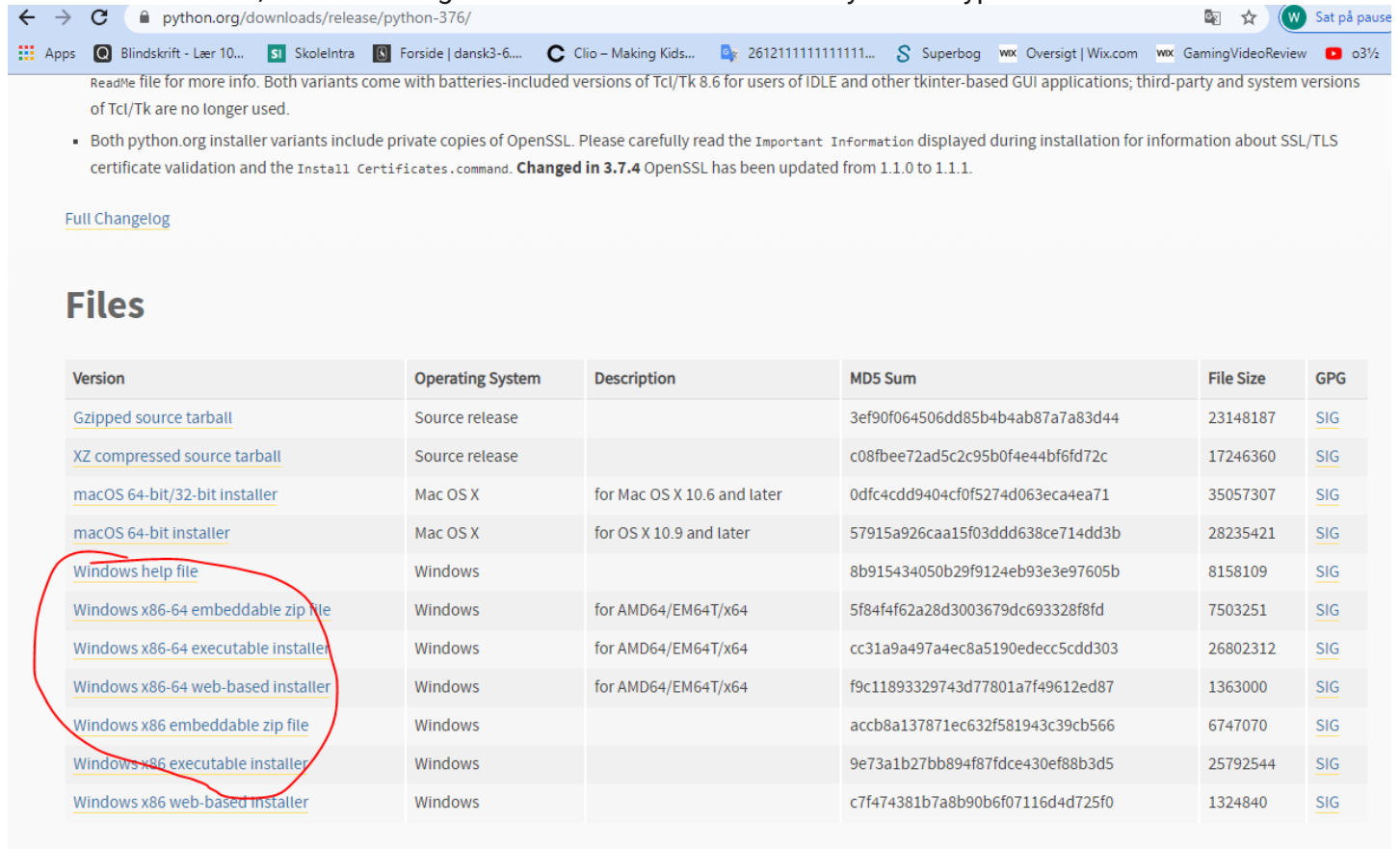
Last updated by | Sigmundur Vang | Dec 16, 2020 at 10:04 AM GMT+1

This article describes how to setup the development environment for SAEF on Windows 10.

Python 3.7.6

Install Python. Use Python 3.7.6 including Pip <https://www.python.org/downloads/release/python-376/> 

As illustrated below, choose the right installation media based on your PC type.



ReadMe file for more info. Both variants come with batteries-included versions of Tcl/Tk 8.6 for users of IDLE and other tkinter-based GUI applications; third-party and system versions of Tcl/Tk are no longer used.

- Both python.org installer variants include private copies of OpenSSL. Please carefully read the Important Information displayed during installation for information about SSL/TLS certificate validation and the Install Certificates.command. **Changed in 3.7.4** OpenSSL has been updated from 1.1.0 to 1.1.1.

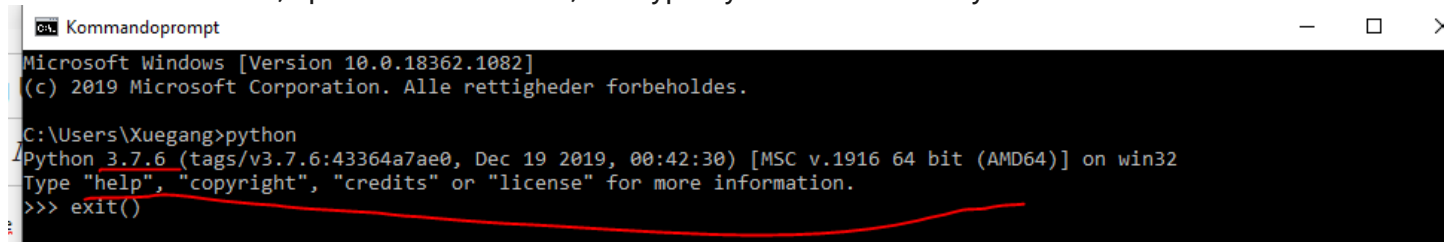
[Full Changelog](#)

Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		3ef90f064506dd85b4b4ab87a7a83d44	23148187	SIG
XZ compressed source tarball	Source release		c08fbee72ad5c2c95b0f4e44bf6fd72c	17246360	SIG
macOS 64-bit/32-bit installer	Mac OS X	for Mac OS X 10.6 and later	0dfc4cdd9404cf0f5274d063eca4ea71	35057307	SIG
macOS 64-bit installer	Mac OS X	for OS X 10.9 and later	57915a926caa15f03ddd638ce714dd3b	28235421	SIG
Windows help file	Windows		8b915434050b29f9124eb93e3e97605b	8158109	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64	5f84f4f62a28d3003679dc693328f8fd	7503251	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64	cc31a9a497a4ec8a5190edec5cdd303	26802312	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64	f9c11893329743d77801a7f49612ed87	1363000	SIG
Windows x86 embeddable zip file	Windows		accb8a137871ec632f581943c39cb566	6747070	SIG
Windows x86 executable installer	Windows		9e73a1b27bb894f87fdce430ef88b3d5	25792544	SIG
Windows x86 web-based installer	Windows		c7f474381b7a8b90b6f07116d4d725f0	1324840	SIG

In the installation proces, choose to customize the path and the installation configuration. And then choose to let the installation process to configure the environment variable for Python.

After the installation, open a commandline, and type Python to check if Python 3.7.6 is installed.





```

Kommandoprompt
Microsoft Windows [Version 10.0.18362.1082]
(c) 2019 Microsoft Corporation. Alle rettigheder forbeholdes.

C:\Users\Xuegang>python
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 00:42:30) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> exit()
  
```

RabbitMQ Server

To install RabbitMQ, you will need to first install Erlang. Find the related windows binary installation files at <https://www.erlang.org/downloads> .

After installing Erlang, go to this link to download and install RabbitMQ <https://www.rabbitmq.com/install-windows.html#installer> 

Note that Erlang must be installed using an administrative account or it won't be discoverable to the RabbitMQ Windows service.

Once a supported version of Erlang is installed, download the RabbitMQ installer, `rabbitmq-server-{version}.exe` and run it. It installs RabbitMQ as a Windows service and starts it using the default configuration.

Direct Downloads


Description	Download	Signature
Installer for Windows systems (from GitHub , recommended)	rabbitmq-server-3.8.8.exe	Signature
Alternative download location (from Bintray)	rabbitmq-server-3.8.8.exe	

Run RabbitMQ Windows Service

Once both Erlang and RabbitMQ have been installed, a RabbitMQ node can be started as a Windows service. The RabbitMQ service starts automatically. RabbitMQ Windows service can be managed from the Start menu.

As shown above, download the binary installer from GitHub and install.

PostgreSQL V12

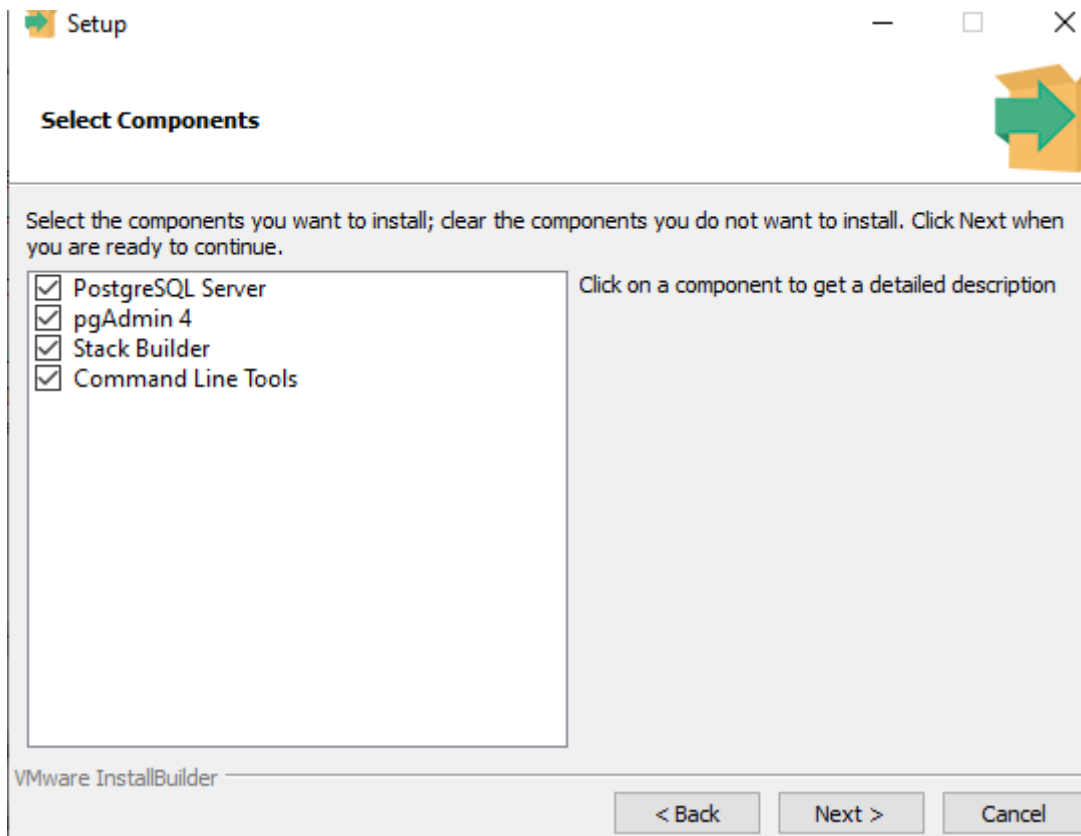
SAEF uses PostgreSQL v12. Go to this link and choose the relevant binary installation file to install. <https://www.enterprisedb.com/downloads/postgres-postgresql-downloads> 

PostgreSQL Database Download

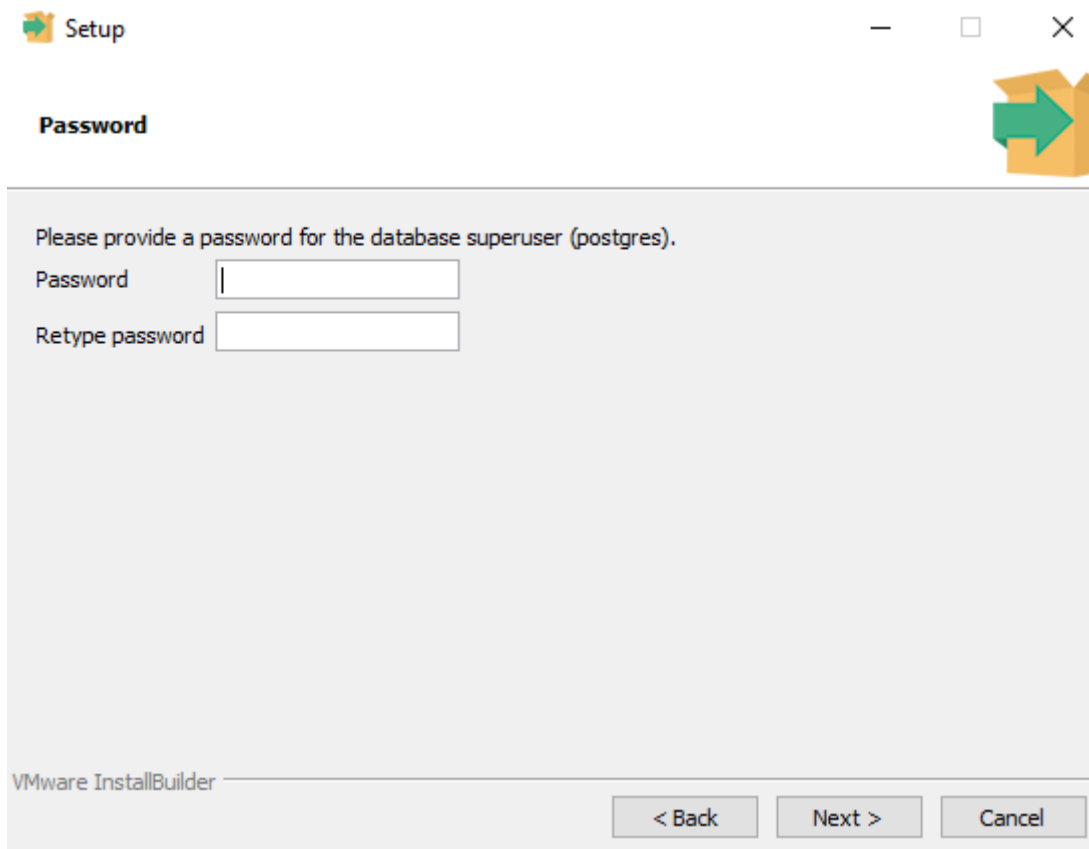
Version	Linux x86-64	Linux x86-32	Mac OS X	Windows x86-64	Windows x86-32
12.4	N/A	N/A	Download	Download	N/A
11.9	N/A	N/A	Download	Download	N/A
10.14	Download	Download	Download	Download	Download
9.6.19	Download	Download	Download	Download	Download
9.5.23	Download	Download	Download	Download	Download
9.4.26 (Not Supported)	Download	Download	Download	Download	Download
9.3.25 (Not Supported)	Download	Download	Download	Download	Download

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

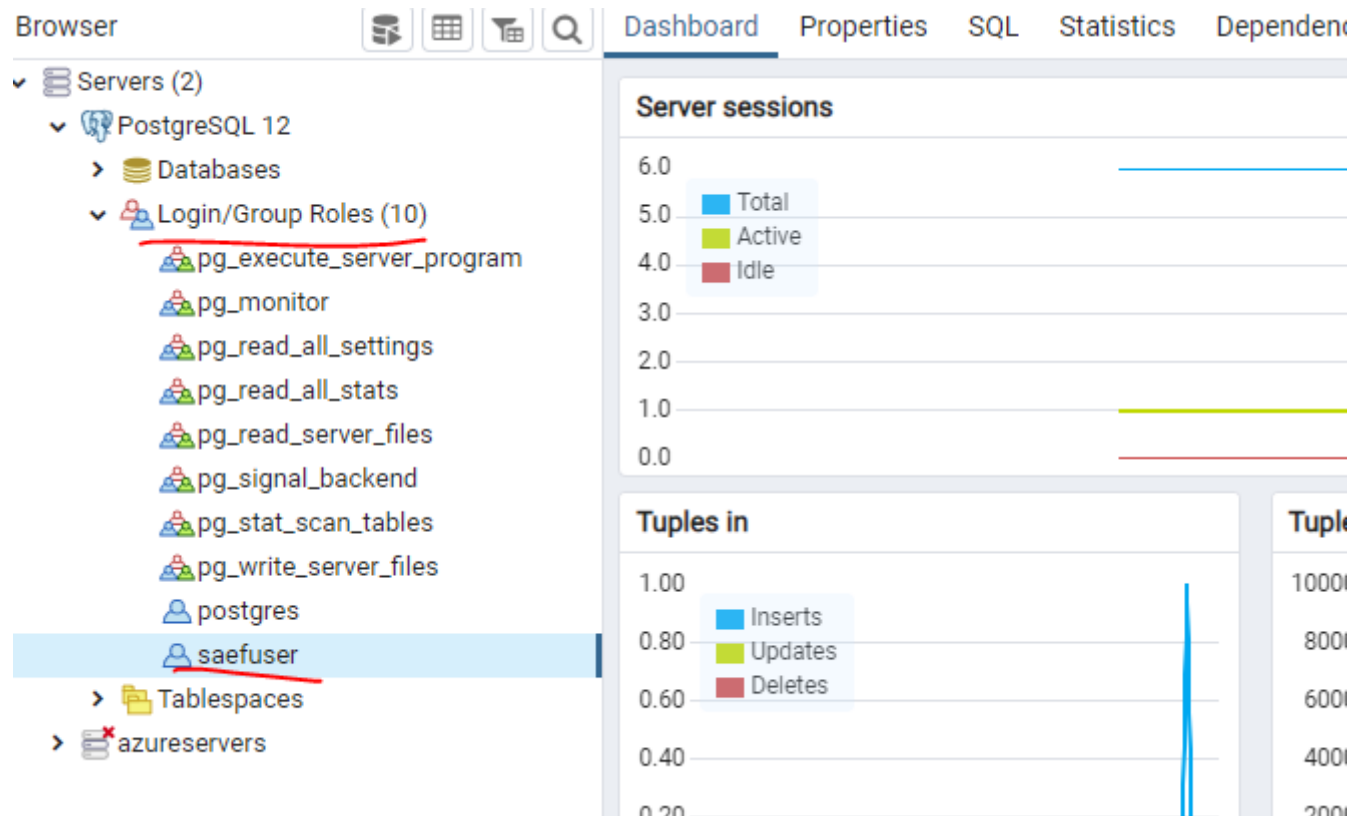
In the installation process, one can choose to include the pgadmin tool which makes it easier to manage the databases and users.



When the installation process asks about the password for the default user postgres, one must provide a password and note down this password as it will be used later during the installation of the SAEF solution.



With Postgresql installed, you need to use pgadmin and create a user called "saefuser" with the password "saefpassword". Make this user as a superuser.



Then, create a database called "saefportal".

Git

Install Git for windows using this link: <https://git-scm.com/download/win>

Visual Studio Code or an alternative

Install and Activate Python Virtual Environment

Open windows commandline, 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

```
\saefenv\Scripts\activate.bat
```

Install Project Dependencies

Go to the SAEF folder and locate the `requirements.txt` file. This file contains all relevant python libraries that should be installed. Use the following command to install.

```
pip install -r requirements.txt
```

A few libraries in the list cannot be install correctly on windows. You need to manually run the following in Command Line .

```
pip install python-decouple  
pip install pycryptodome  
pip install VerbalExpressions  
pip install pyodbc  
pip install pyspark
```

Download ODBC Driver for SQL Server

<https://docs.microsoft.com/en-us/sql/connect/odbc/download-odbc-driver-for-sql-server?view=sql-server-ver15> 