

SISH setup guide in Windows

Introduction

Windows Subsystem for Linux (WSL)

Windows Subsystem for Linux (WSL) enables users to run “Linux” natively on windows which eliminates the use of a Virtual Machine (VM).

A translator sits between the linux kernel which enables linux to run in windows.

WSL is an optional component of windows which is only available in 64-bit Windows 10 with Anniversary update (released on August 2, 2016 or later installed).

In simple terms WSL is wine for windows but instead is broad and full-fledged in comparison to wine. Linux commands such as sudo, apt etc. can be executed.

WSL has some draw backs. WSL doesn't run linux GUI applications but, users can use “X Window System” (such as Xming & VcXsrv) to run GUI applications.

The file system of WSL integrates itself into the Windows file system but can also create its own. Users can access windows directory via the linux terminal ie:- `mnt/C/Program Files`.

System Requirements for WSL

To use WSL, users must have Windows 10 (64-bit) with Anniversary Update (released on August 2, 2016) or later installed and users must be logged in the windows with a Microsoft Account in order to be able to download Linux distros from the Microsoft Store.

Besides these there are no other major requirements.

Windows specifications

Edition	Windows 10 Enterprise
Version	1809
Installed on	2/26/2019
OS build	17763.475

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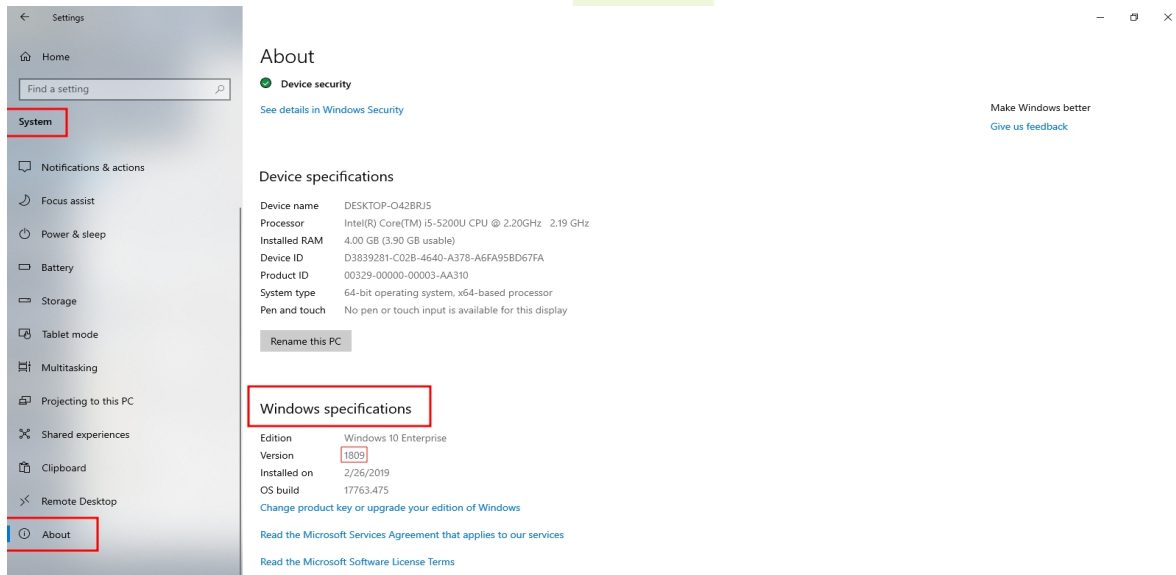
Setup Steps

Enable WSL

Requirements Check

First, we need to check Windows 10 specifications. Windows 10 needs to be of 64-bit architecture and the Windows 10 version must be 1607 or above.

To check Windows Specifications go to Settings – System – About – Windows Specifications.



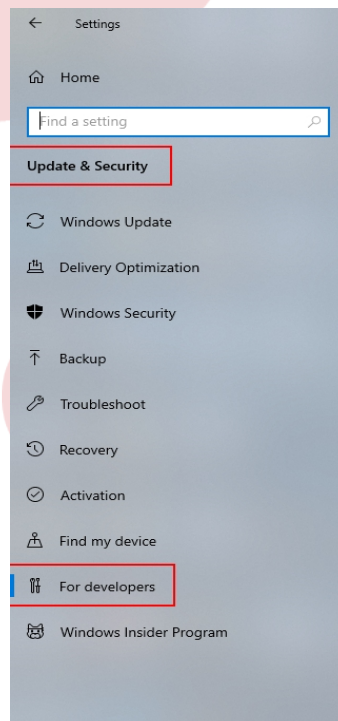
Enable Developer Mode

Now we need to activate “Developer Mode” on windows.

To enable Developer Mode on Windows 10 go to:

Settings – Update & Security – For Developer – (under developer features) enable Developer Mode

It will take sometime as windows will search and download developer package.



For developers

Use developer features

These settings are intended for development use only. [Learn more](#)

- Microsoft Store apps
Only install apps from the Microsoft Store.
- Sideload apps
Install apps from other sources that you trust, like your workplace.
- Developer mode
Install any signed and trusted app and use advanced development features.

Enable Device Portal

Turn on remote diagnostics over local area network connections.
 Off

Device discovery

Make your device visible to USB connections and your local network.
 Off

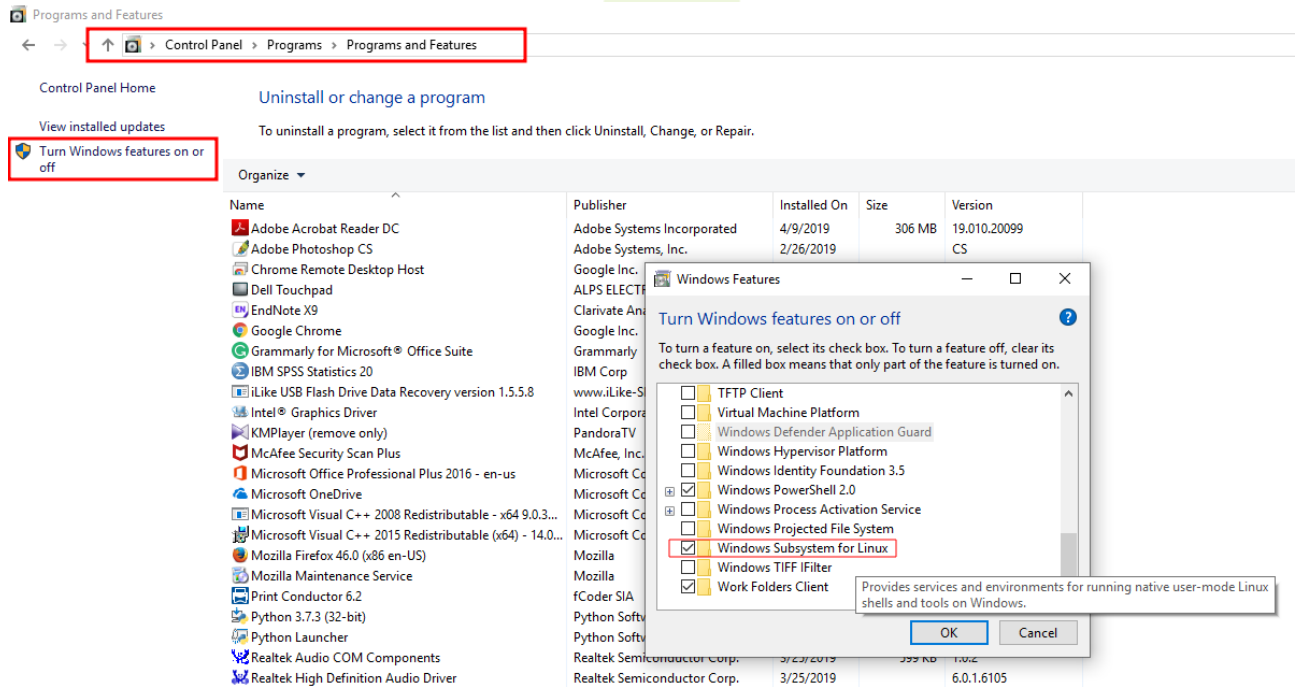
Note: This requires version 1803 of the Windows 10 SDK or later.

Enable WSL component

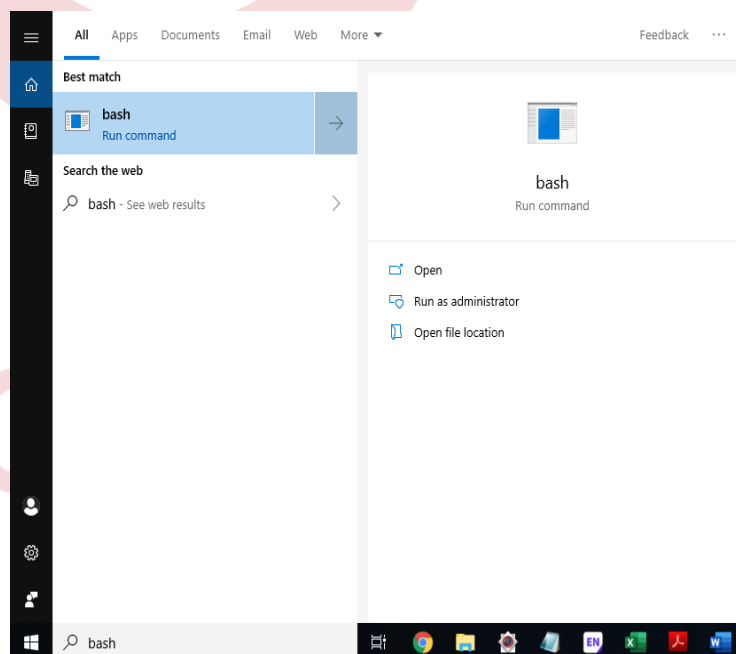
Already mentioned above, we know that WSL is an optional component of Windows.

To enable WSL go to:

Control Panel – Programs & Features – Turn Windows Features On/Off – (scroll towards bottom) enable Windows Subsystem for Linux



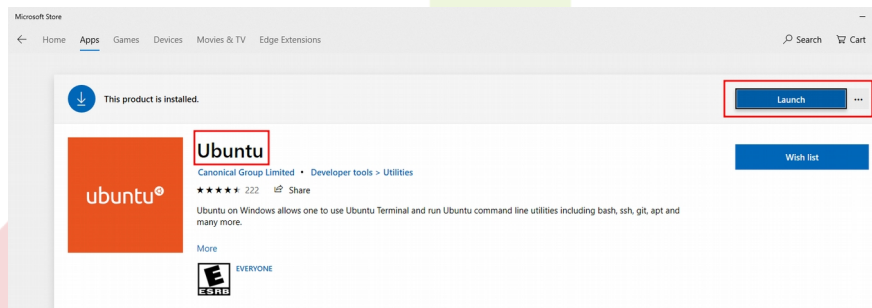
Once this is done we can now see “Bash” in Windows Start menu when we search for it. It will not run since there is no linux distros installed on the machine.



Install Linux Distro

We now need to download a Linux distro from the Microsoft Store in order to start using Linux in Windows 10. For this we need to be logged in to windows with a microsoft account. If the user hasn't logged in to windows with a microsoft account he/she won't be able to download Linux distros from Microsoft store.

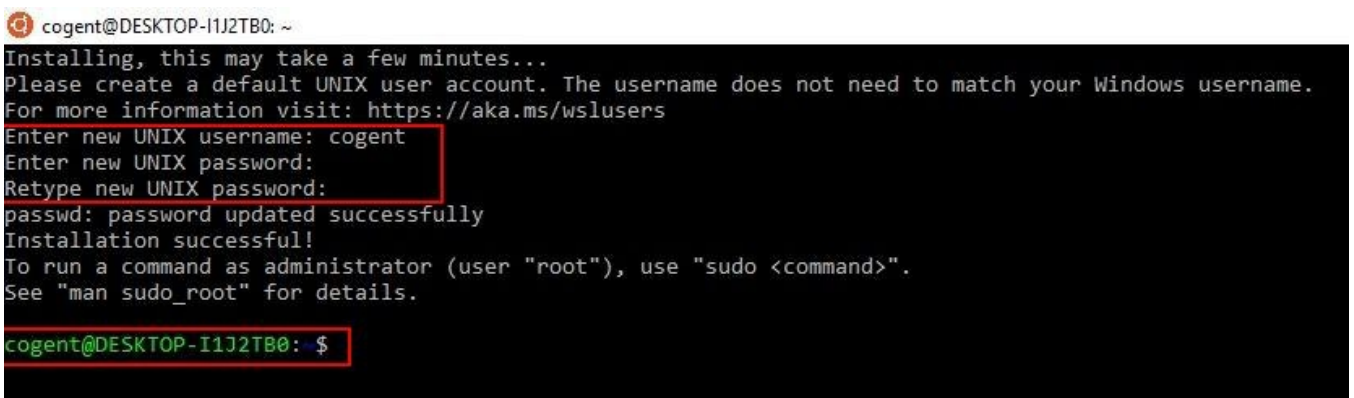
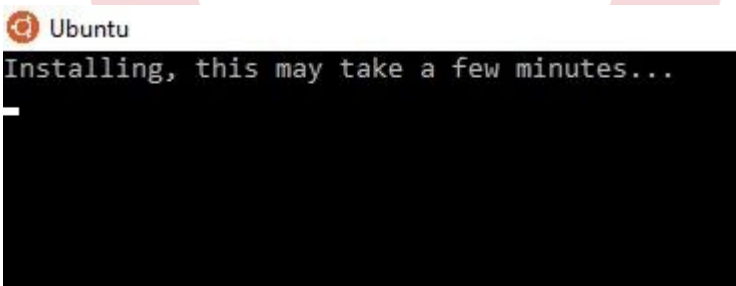
To download a Linux distro, open Microsoft store and search with the keyword "linux". Linux distros such as Kali Linux, Ubutnu and Debian.



Run Linux

The distro will download and will be available when searched for in the Start Menu. When the distro is opened, linux CLI will open and will prompt the user to enter in a user name and password.

Note: Linux User Name can't be as same as the Windows User Name.



Setting Up SISH in Windows via WSL

Since we will be needing GUI we need to download a X Windows System like Xming or VcXsrv

Download and Install Xming. <https://sourceforge.net/projects/xming/>

Download and Install VcXsrv. <https://sourceforge.net/projects/vcxsrv/reviews/>

Open Linux from start menu and download Gdebi Package Installer.

```
hello@desktop:~$ sudo apt update
```

```
hello@desktop:~$ sudo apt install gdebi
```

```
cogent@DESKTOP-I1J2TB0: ~  
cogent@DESKTOP-I1J2TB0: $ sudo apt install gdebi  
[sudo] password for cogent:
```

Download SISH package.

Then navigate to the folder where SISH package is downloaded.

(default location)

```
hello@desktop:~$ cd mnt/c/users/dell/downloads
```

```
cogent@DESKTOP-I1J2TB0: /mnt/d/downloads  
cogent@DESKTOP-I1J2TB0: /mnt/d/downloads$ sudo gdebi sishgambas_0.4.10-0ubuntu1_all.deb
```

Install SISH package.

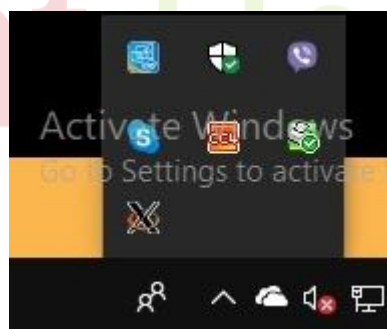
```
hello@desktop:~$ sudo apt-add-repository ppa:gambas-team/gambas3
```

```
hello@desktop:mnt/c/users/dell/downloads:~$ sudo gdebi sishgambas_0.4.10-ubuntu1_all.deb
```

Run X Server in the background

X Windows System or X server needs to be running in the background before running a Linux GUI applications.

Run Xming or VcXsrv and minimize.



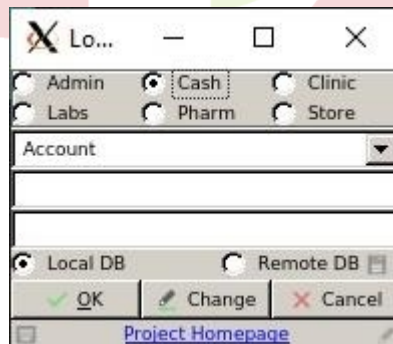
Enable X server, on Ubuntu CLI

```
hello@desktop:~$ export DISPLAY=:0
```

Open SISH,

```
hello@desktop:~$ sishgambas
```

```
cogent@DESKTOP-I1J2TB0: /mnt/d/downloads
cogent@DESKTOP-I1J2TB0: /mnt/d/downloads$ export DISPLAY=:0
cogent@DESKTOP-I1J2TB0: /mnt/d/downloads$ sishgambas
```



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