

COMPAS Windows Installation

Install Windows Subsystem for Linux (WSL)

```
# Install in Windows Terminal as an administrator:  
wsl --install  
  
# Reboot system.
```

Install Ubuntu Distribution of Linux

```
# Install in Windows Terminal as an administrator:  
wsl --install  
  
# Create new user account.
```

Install Dependencies

```
# Update all Ubuntu repository package lists:  
sudo apt-get update  
  
# Install C++ compiler, and the boost, gsl, and hdf5 library packages.  
sudo apt-get install g++ libboost-all-dev libgsl-dev libhdf5-dev
```

Clone COMPAS Code Repository

```
# Change to home directory:  
cd ~  
  
# Clone the COMPAS code repository:  
git clone https://github.com/TeamCOMPAS/COMPAS
```

Define COMPAS Environment Variable

```
# Open bash file located in home directory (~/.bashrc) with Windows Notepad.  
# Append the following:  
export COMPAS_ROOT_DIR=~/.COMPAS  
  
# Reload bash shell session:  
source ~/.bashrc  
  
# (Optional) Check if environment variable was correctly defined;  
# Returns COMPAS root directory:  
echo $COMPAS_ROOT_DIR
```

Build COMPAS

```
# (If Applicable) Open Makefile located in COMPAS source code directory  
# (~/.COMPAS/src) with Windows Notepad, and modify package directory paths.  
#  
# Most likely the only modification needed would be to the  
# HDF5LIBDIR directory path, e.g.  
# /usr/lib/x86_64-linux-gnu/hdf5/serial  
# /usr/lib/aarch64-linux-gnu/hdf5/serial  
# /usr/lib/<architecture>-linux-gnu/hdf5/serial  
#  
# (If Applicable) List the installed package directory paths:  
dpkg -L libboost-all-dev  
dpkg -L libgsl-dev  
dpkg -L libhdf5-dev  
  
# Install make command:  
sudo apt install make  
  
# Change to COMPAS source code directory:  
cd $COMPAS_ROOT_DIR/src  
  
# Clear preexisting builds of COMPAS:  
make clean
```

```
# Build (Compile & Link) COMPAS:
make

# (Recommended) Build COMPAS using (4) simultaneous threads:
make -j4

# IMPORTANT: It is not recommended to build with more than 4 CPU threads
# since the compilation has high RAM consumption.
```

Running COMPAS

```
# COMPAS is a command-line application.
#
# COMPAS does not need to be rebuilt unless changes are made to the
# installed packages, or new updates for COMPAS are installed.

# Check current version:
./COMPAS -v
./COMPAS --version

# List command-line options:
./COMPAS -h

# List command-line options w/brief descriptions:
./COMPAS --help

# Run default program with default parameters:
./COMPAS
```