

Environment Setup

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1 Environment Setup

Assume that we are in a new Ubuntu machine :

1.1 GHDL Installation

```
sudo apt-get update
sudo apt install -y git make gnat zlib1g-dev
git clone https://github.com/ghdl/ghdl
cd ghdl
./configure --prefix=/usr/local
make
sudo make install
```

1.2 GHDL Simulation

Open this file **SpaceWire/SpaceWire/SPW_ROUTER/SIMULATION/v93c/xilinxcorelib/xilinxcorelib-obj93.cf**

Replace all **/home/user/Desktop/** with the directory that contains the SpaceWire Directory, you can use ctrl+h for do that quickly.

1.3 Java and JavaFX installation

```
sudo apt install openjdk-13-jdk openjdk-13-jre
sudo apt install openjfx
```

1.4 Java and JavaFX installation

In the directory of the runnable jar excute this command to open the graphical interface

```
java -module-path /usr/share/openjfx/lib -add-modules=javafx.controls,javafx.fxml  
-jar test_jar.jar
```

1.5 ADA/XML and GPRBUILD Installation

```
git clone https://github.com/AdaCore/xmlada.git  
sudo ./configure --prefix=/usr/local/  
sudo make install
```

```
sudo apt install gprbuild
```

1.6 ADA Generation de Test Bench Code

```
export GPR_PROJECT_PATH=/usr/local/share/gpr  
gprbuild default.gpr
```

In the directory of the tb_generator there are a script to automate the execution of the ada code generator and the copy/paste of the generated files.

```
./script.sh [directory_of_xml] ../SpaceWire/SPW_ROUTER/SIMULATION/
```

```
example : ./script.sh ../demo_soutenance/generated/ ../SpaceWire/SPW_ROUTER/SIMULATION/
```

after that we should copy our cheddar.txt in the SIMULATION Directory

1.7 GHDL Simulation

In the directory of ../SpaceWire/SPW_ROUTER/SIMULATION/ :

```
make run
```