

# What is it ?

A Driver is something taking a Ware and making something useful with it (typically generating source).

A Driver may be helped by NodeDrivers?, thus having a decentralized generation of products.

## Services

Through class (ie even with no instance):

- Keeps a list of known NodeDrivers? and the associated node types. (see #Registering)

Through instances:

- Has some parameters (output directory, optional features, ...) chosen at instantiation
- Keeps silent until code generation is asked (it may never be asked)

This way, we may generate with the same driver class (eg generate !SystemC/Caba code) different Wares, with different options; or the other way around, generate the same Wares many times through different backends.

## Registering

With method `register()` a NodeDriver? can register as a generation class for a Node. API between a Driver and its associated NodeDrivers? is ad-hoc: the Driver's needs and design rules.

A base NodeDriver? valid for a given Driver should be given, with basic functionalities, doing a no-op for the code.

## Registration usage

Let's have the following class hierarchies:

```
Node
  MyWareTypeNode
    MyWareWidgetNode
    MyWareThingieNode
    MyWareOtherNode
```

Let's have the following drivers:

```
NodeDriver
  MyDriverNoopDriver
  MyWareWidgetNodeDriver
  MyWareOtherNodeDriver
```

Now, if we register in our new driver called MyDriver:

```
# default registration
MyDriver.register(MyWareTypeNode, MyWareWidgetNoopDriver)

# specialized drivers
MyDriver.register(MyWareWidgetNode, MyWareWidgetNodeDriver)
MyDriver.register(MyWareOtherNode, MyWareOtherNodeDriver)
```

MyWareThingieNode **will be driven by** MyWareWidgetNoopDriver.

This kind of walk through inherances also works with more childs and classes