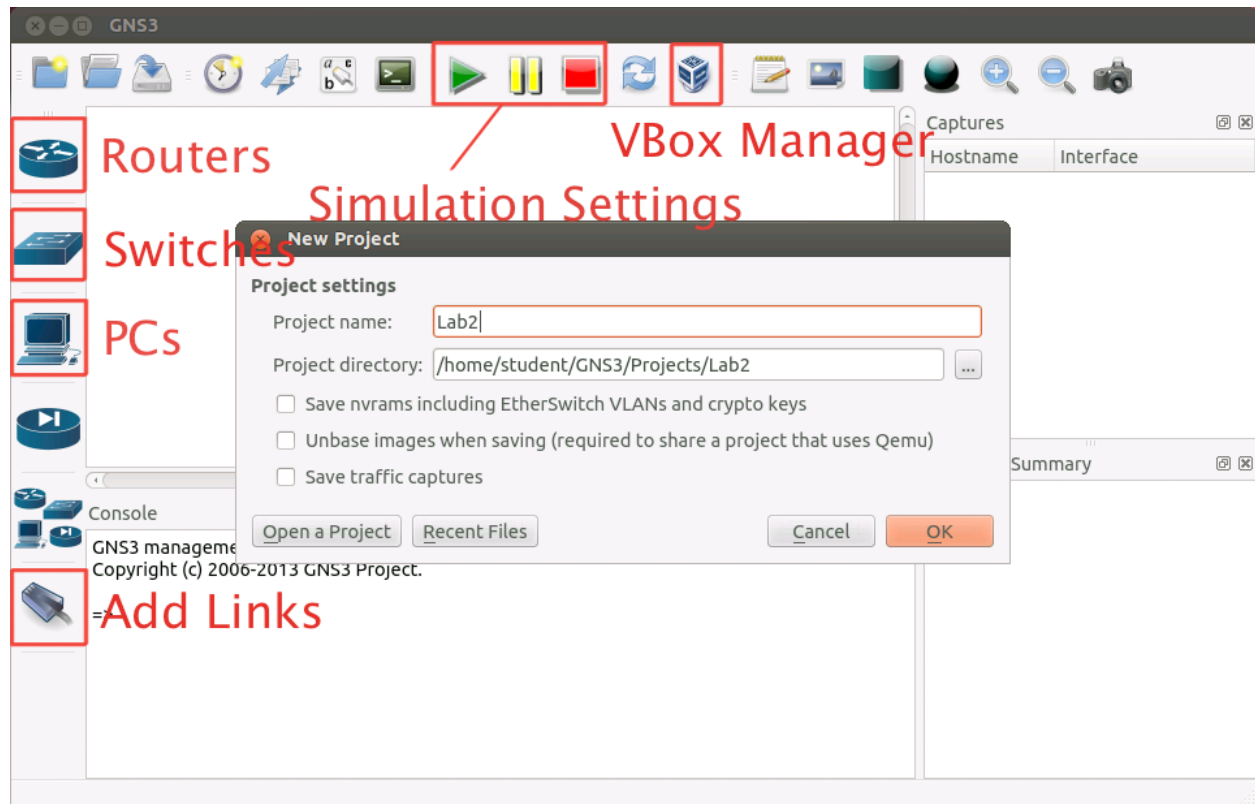


How to use GNS3



When you first open GNS3 you are given a popup about creating a new project. Projects allow you to save state and load configurations for later use.

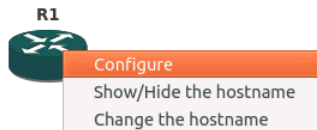
The rest of GNS3's main buttons are highlighted above.

- ❑ [Routers](#)
- ❑ [Switches](#)
- ❑ [Virtual Box and Virtual PCs](#)
 - ❑ [Virtualbox](#)
 - ❑ [Virtual PCs \(VPCS\)](#)
- ❑ [Add Links](#)

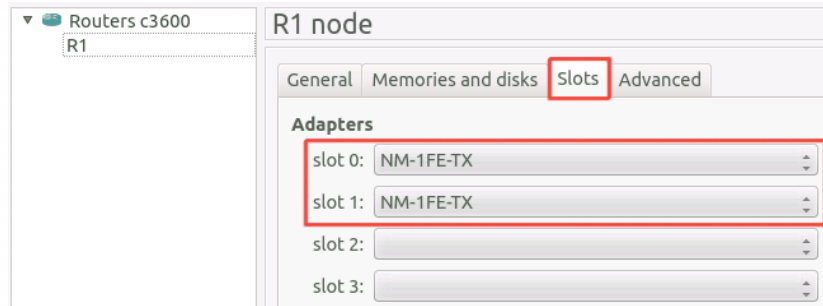
Routers:

There is only one router to choose, that is the 3600. Select the router and drag into the main simulation area. With the routers you will need to do the following to correctly setup the router:

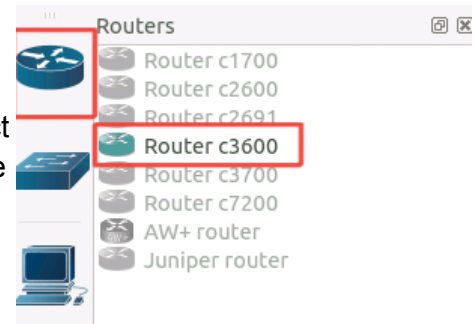
1. Right click the router and select Configure



2. Next we need to select 'Slots', this will normally have many empty slots. We need to select what type of slot hardware we would like to use. In this case we are using a single FastEthernet slot. This matter when you need to configure the interface.

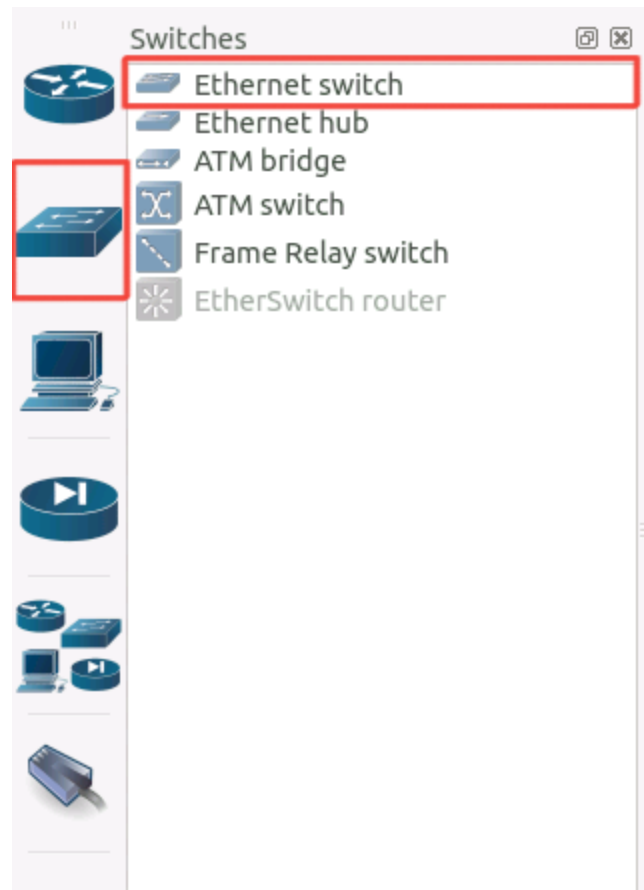


3. The router is now configured for proper use in your simulations.



Switches:

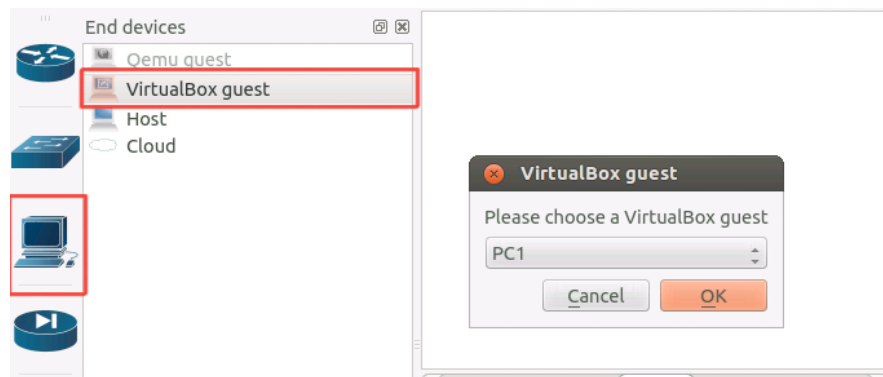
Switching is done with only “Ethernet Switch” unless specified otherwise in the lab. When connecting to a switch select unused ports for new connections.



Virtualbox and Virtual PCs:

Virtualbox:

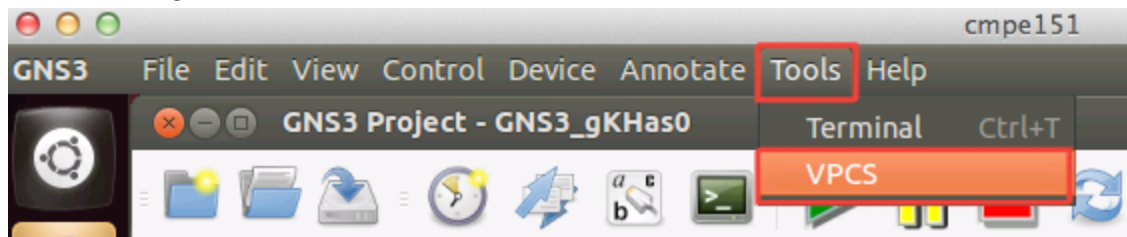
Virtualbox PCs have already been configured to allow immediate use. Select PCs on the left hand menu and drag a virtualbox guest. Each virtualbox PC has two interfaces and is running very similar software as the physical PCs that you used in CMPE 150.



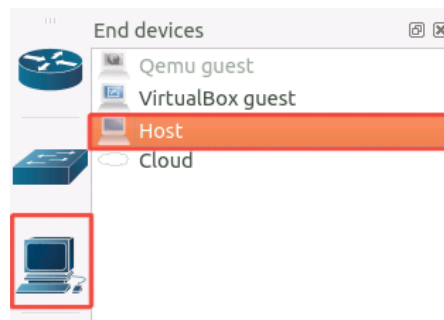
Virtual PCs (VPCS):

VPCS are lightweight linux machine emulators. Each one runs within a single process, it has many limitations such as lacking a full linux command list, as well as only having a single interface. They also have their benefits, they are very fast in comparison to the virtualbox alternative. VPCS should be used when connectivity needs to be tested. They should not be used when you need to use a PC as a router, or when you need to run commands such as reading /etc/hosts.

1. In GNS3 goto Tools, and VPCS.

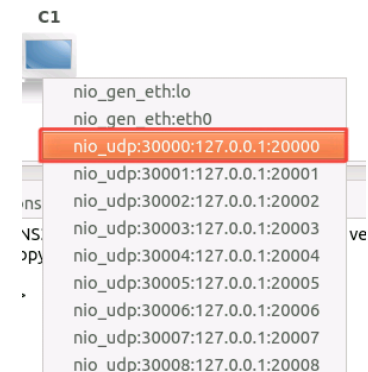


2. Next we need to move a host into the simulation area. These hosts are mapped to your VPCS.



3. Note that there is one more step, when you connect to a link to this node you will need to select the right port to connect to the host based on what your VPCS port is.

```
VPCS[1]> show ip
NAME      : VPCS[1]
IP/MASK    : 0.0.0.0/0
GATEWAY    : 0.0.0.0
DNS        :
MAC        : 00:50:79:66:68:00
I.P. PORT  : 20000
RHOST:PORT : 127.0.0.1:30000
MTU        : 0
```



Add Links:



Adding links is simple.

1. Click the icon shown to the right.
2. Click on the target and select which port to attach a virtual connection to, do the same with the next target.

[Demo for adding links](#)