TÉCNICO LISBOA

| Computer Networks — 2021/22 | | Assignment: | Lab 0 |
|---|---|---|---|
| Setup the lab environment Virtual Machine | | Issued: | 2021-11-29 |
| Laboratory Environment Setup | | Due: | |
| Authors: | João Romeiras Amado<br>Prof. Luis D. Pedrosa | Version: | 0.1 |

# 1 Virtual Machine Setup

The laboratory exercises will be executed on a virtual machine environment. A complete vm image (.ova) is provided in the link below, containing the necessary software and configuration files for all laboratory exercises.

RC.ova

The recommended software to run the .ova image is VirtualBox, which is available for Windows, MacOS and Linux. It can be downloaded from: https://www.virtualbox.org/wiki/Downloads. After the installation, you can directly import the .ova image from the VirtualBox import dialog.

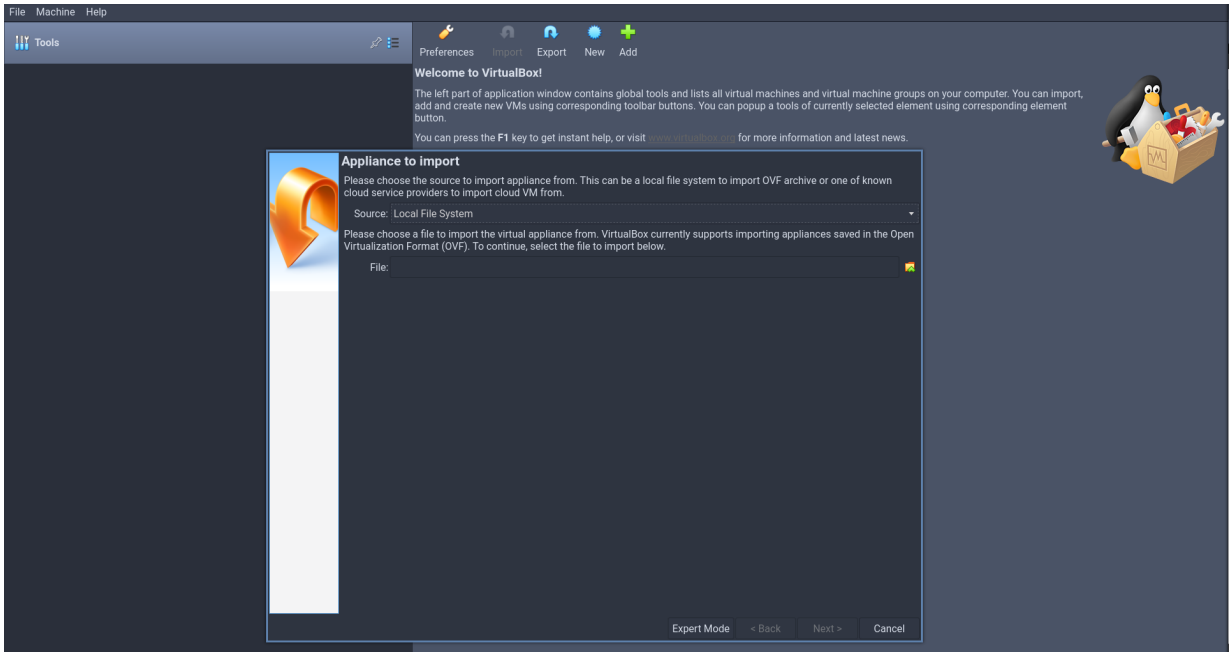


Figure 1: VirtualBox Import Dialog

**Important.** The folder `/home/rc/lab-files` in the VM contains important configuration files for each lab. Before starting each lab, execute the command `git pull origin master` inside that folder in order to make sure you have the latest files relevant for the lab. Each lab handout will remember you to execute this command in the beggining. *It is very important that you do not skip this step.*

# 2 CORE Network Emulator Test

The CORE Network Emulator is a tool to build and simulate network topologies in a virtualized environment. During the course, many laboratory exercises will be executed

within CORE. The provided .ova already contains a configured CORE emulator, along with a number of topology configuration files.

Network topologies can easily be configured and executed using CORE's GUI, which can be accessed from the program menu.

To observe and test a simple topology on the CORE emulator, open the `setup-0.imn` configuration file (`File > Open... > /home/rc/lab-files/lab-setup/setup-0.imn`). The topology should appear as in the image below.

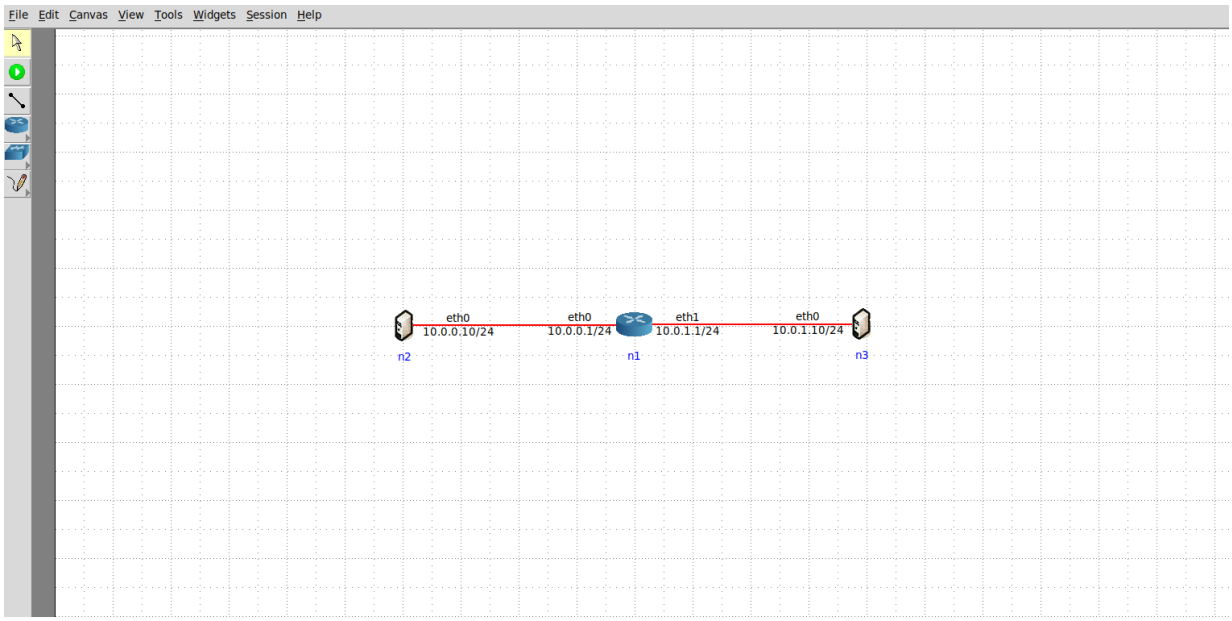


Figure 2: CORE GUI - Simple Topology

To activate the topology, select the 'start the session' button from the side bar. The various nodes in the topology should become green for a few seconds, indicating their active status in the emulated network. To deactivate the topology, simply press the session button again.

Whenever is requested that you run commands on a given host, first start a session and then double-click on the host to open the terminal related to that specific host. For example, to run the command `hostname` on host `n2`, double-click on `n2` and run `hostname`:

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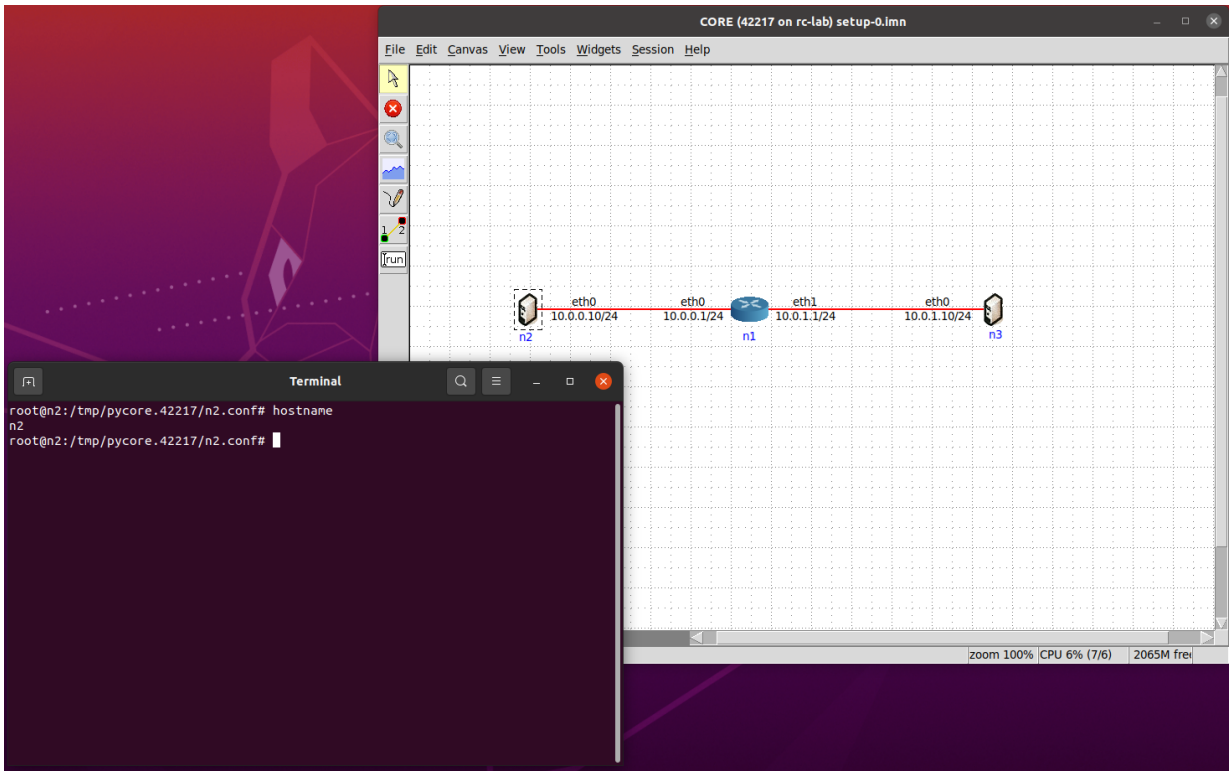


Figure 3: CORE GUI - hostname on n2