UFMG

VM Setup

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VM Download

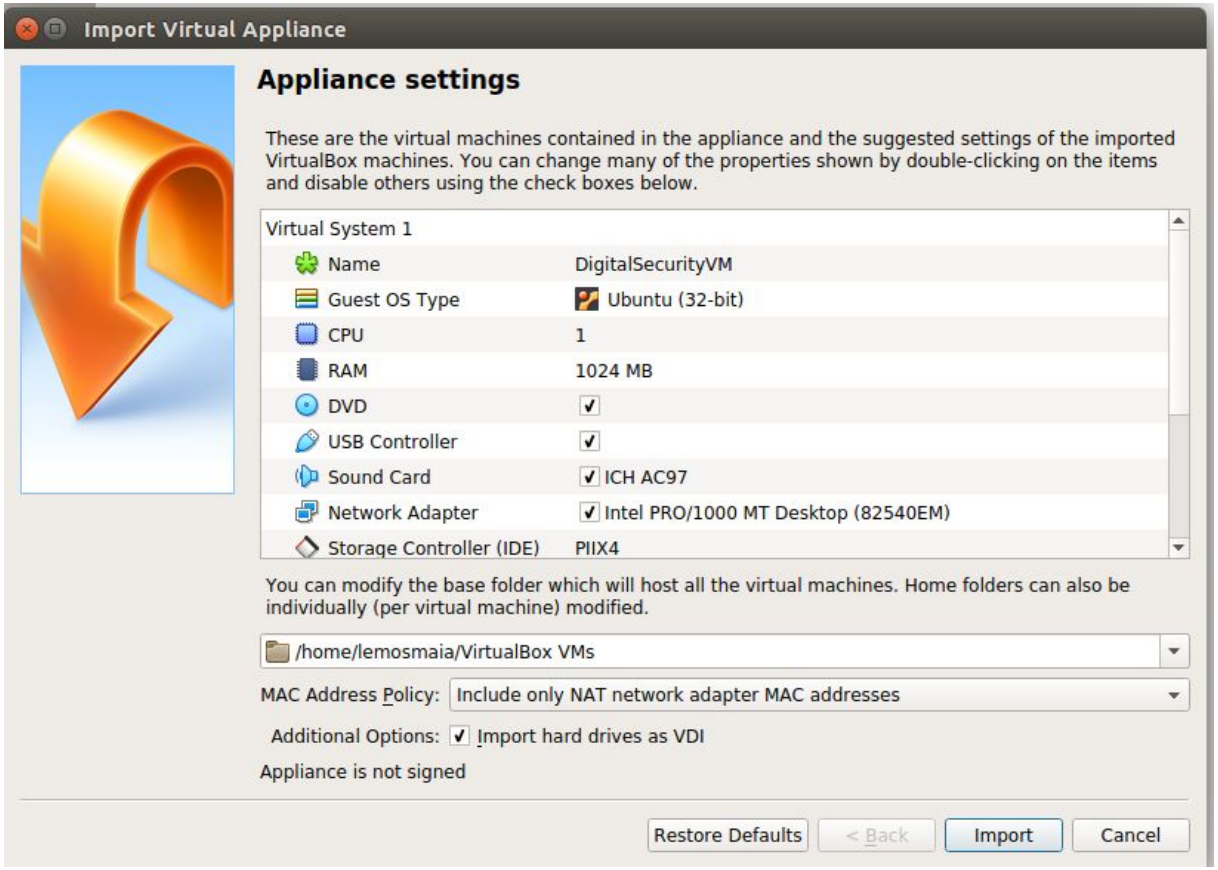
https://drive.google.com/file/d/1MaeStC5JSkLvKLyNVeAXrIA_NGiU_DBR/view

VM Setup

- Download a Virtual Machine file (DigitalSecurityVM.ova) from the course website
- Download and Install the latest VirtualBox application
- Double click the downloaded file DigitalSecurityVM.ova

VM Setup

- Click Import

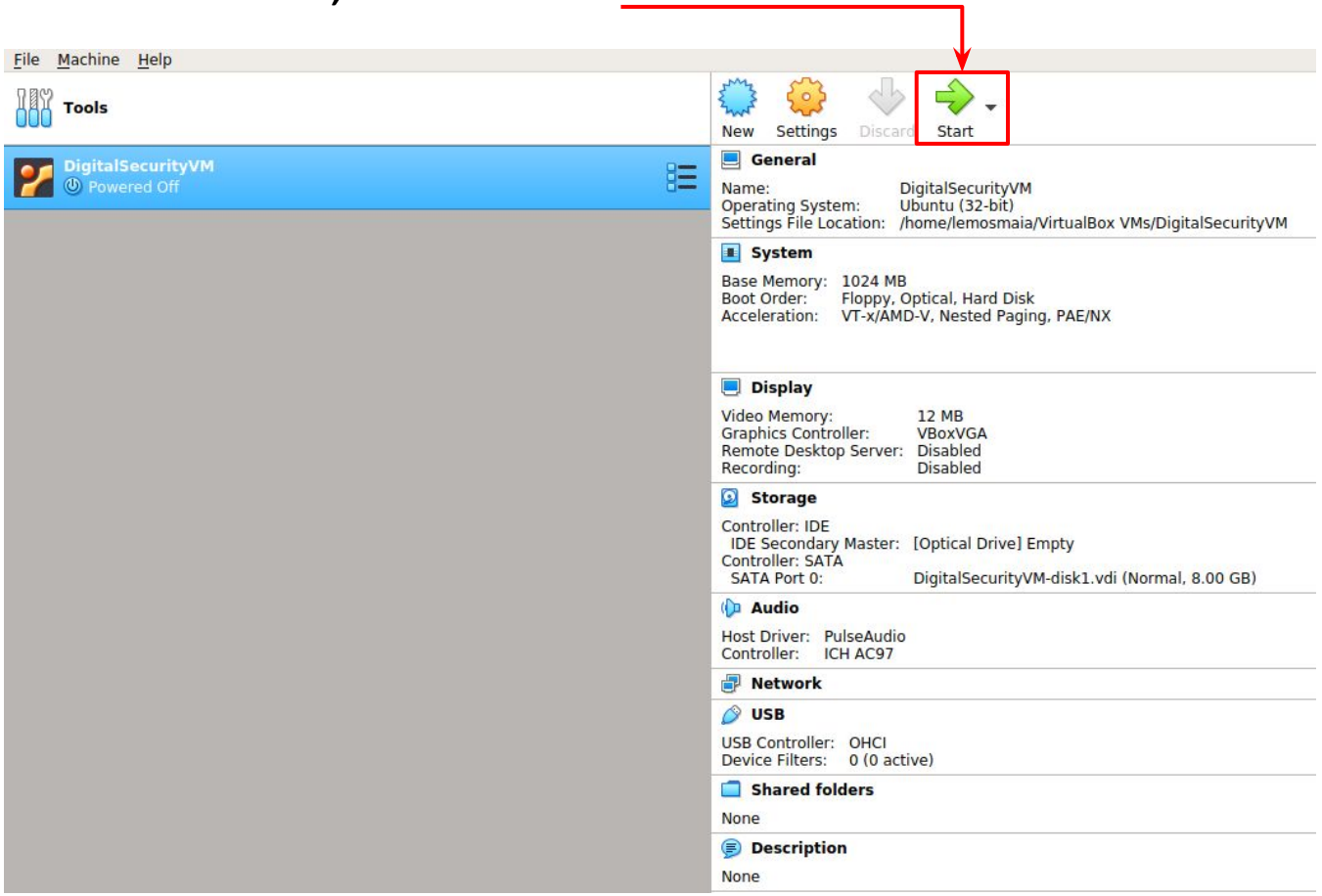


VM Setup

- Wait until the process ends

VM Setup

- The new VM will appear in VirtualBox list of VMs
- Select the new VM, then click Start



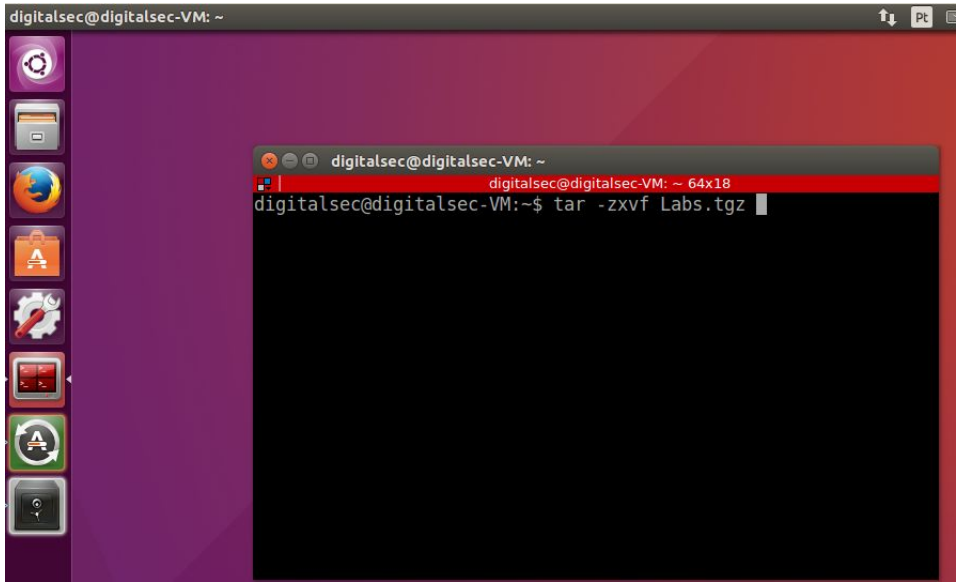
VM Setup

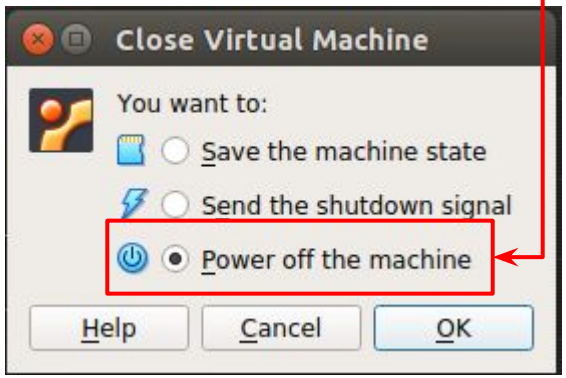
- Wait the VM to boot
- Use the credentials
  - Username: digitalSec
  - Password: digisec

VM Setup

- Open a terminal
- Extract the *Lab.tgz* file
- Command

  tar -zxvf Lab.tgz
- Power off the machine





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VM Setup - Network Labs

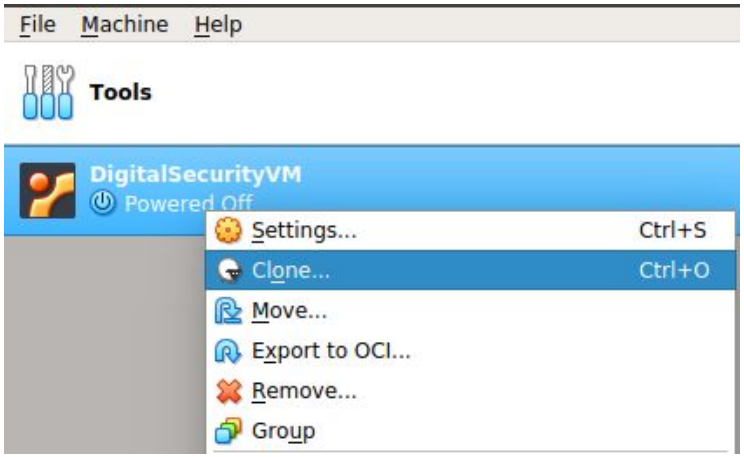
Prof. Ítalo Cunha and Prof. Leonardo B. Oliveira

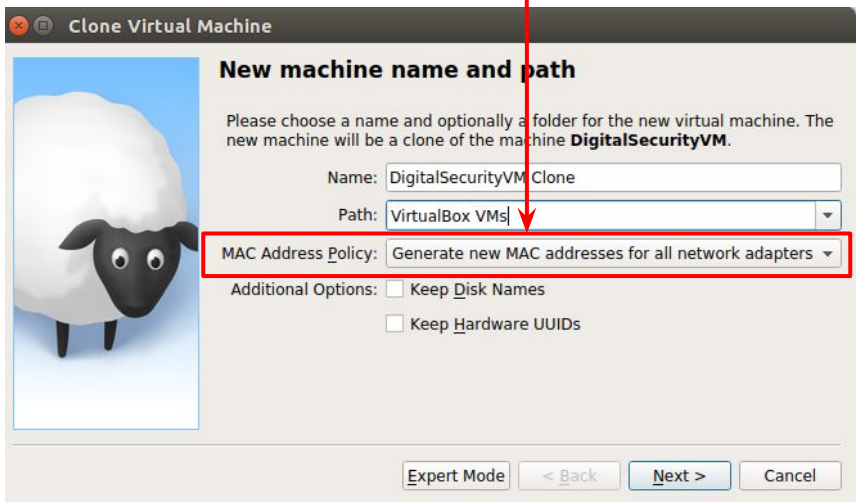
Overview

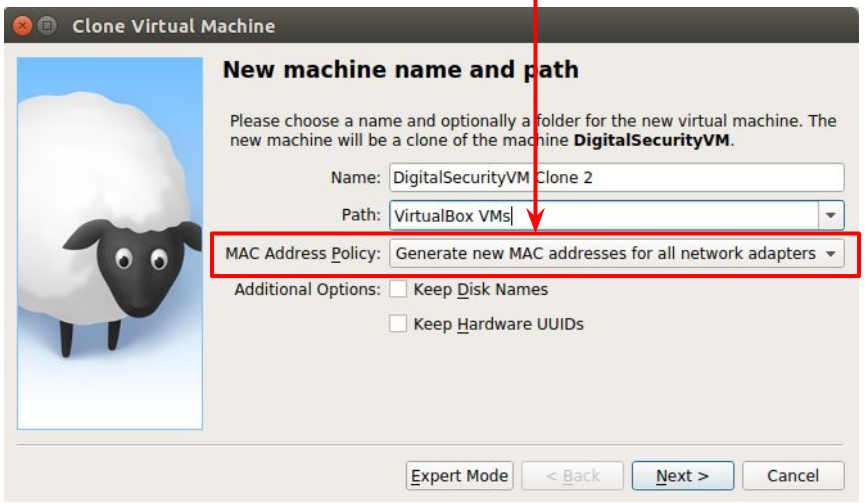
- We need at least two more VMs for the network labs
- The extra VMs can be a linked clone of the main one, but
  - MAC addresses must be reinitialized (so they're unique)
  - A host-only network interface must be enabled (in addition to NAT)
  - IP addresses must be configured
- Let's go over the steps on VirtualBox

Generate two clones of the VM

- Right click on the VM
- Click Clone
  - Make sure MAC addresses are reinitialized
- Click Next

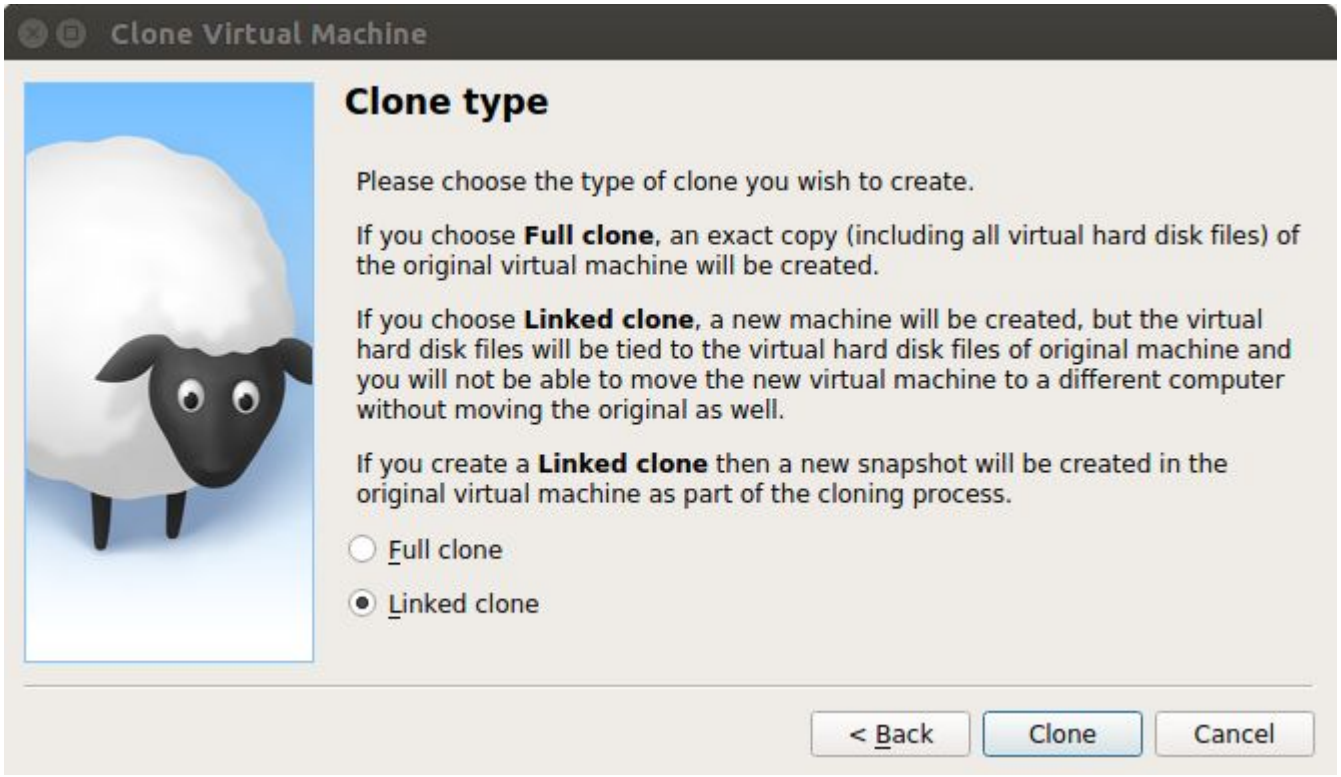






Clone the VM

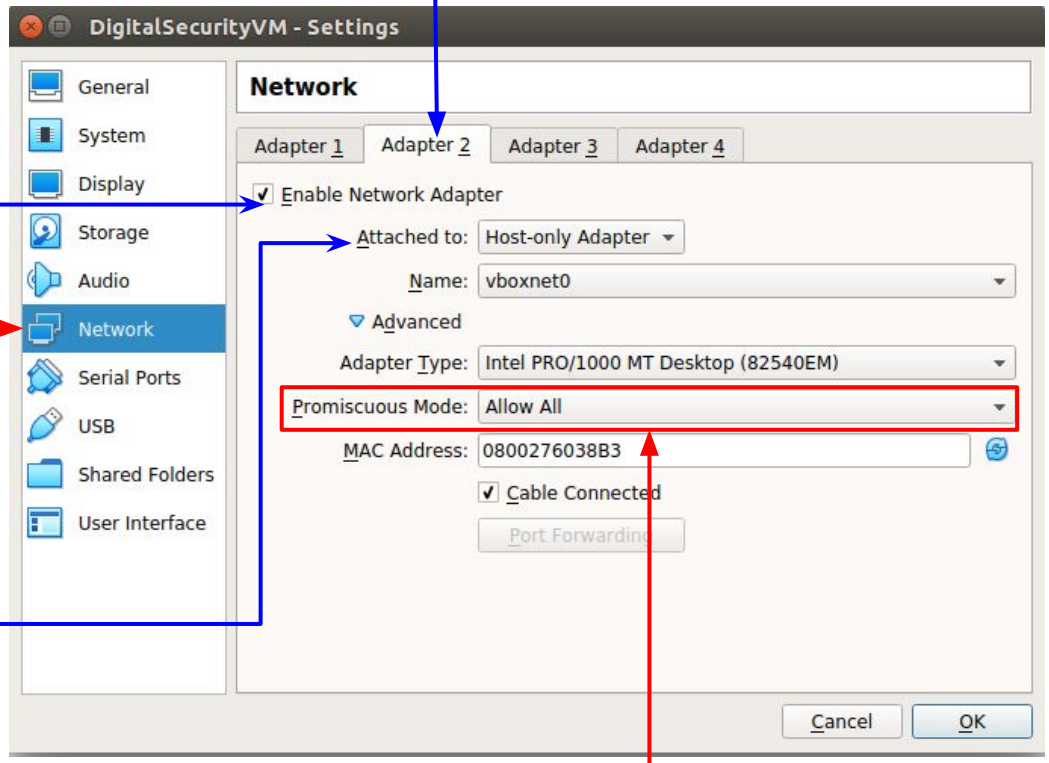
- A linked type clone is OK (and faster to complete)
- Click Clone



Enable host-only interface on VMs

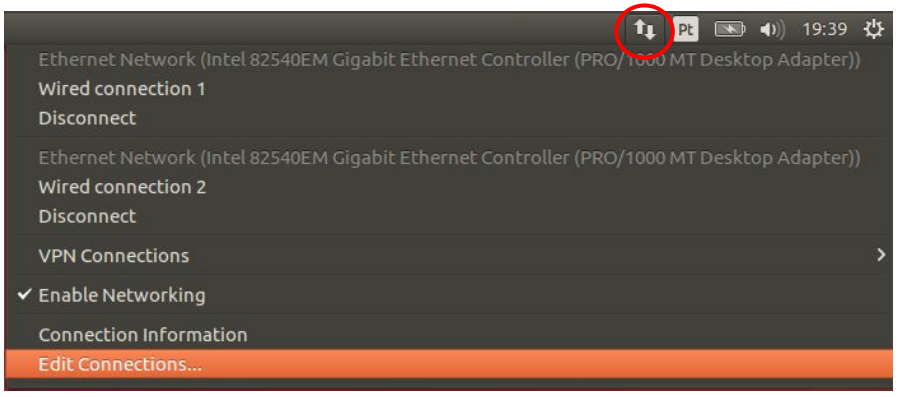
For each one of the three VMs

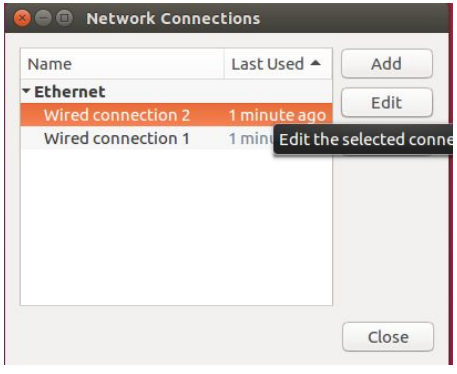
- Select the VM in the list
  (it must be powered off)
- Click Settings
- Click Network
- Choose the Adapter 2
  (first one is NAT)
- Check the Enable Network Adapter box
- Attach it to the host-only network
- Expand Advanced options
  - Make sure it's in promiscuous mode
- Click **OK**

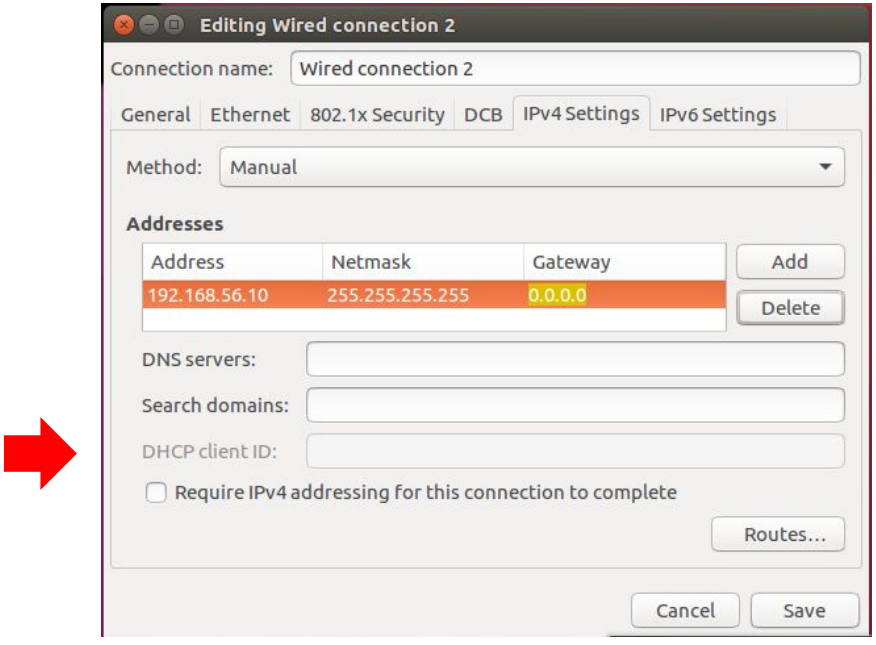


Set IP addresses and networks for VMs

- Power on the VMs and put manual IP addresses for Wired connection 2 in each one of them
  - Main : Address 192.168.56.10 Netmask 255.255.255.255 Gateway 0.0.0.0
  - clone 1: Address 192.168.56.11 Netmask 255.255.255.255 Gateway 0.0.0.0
  - clone 2: Address 192.168.56.12Netmask 255.255.255.255 Gateway 0.0.0.0





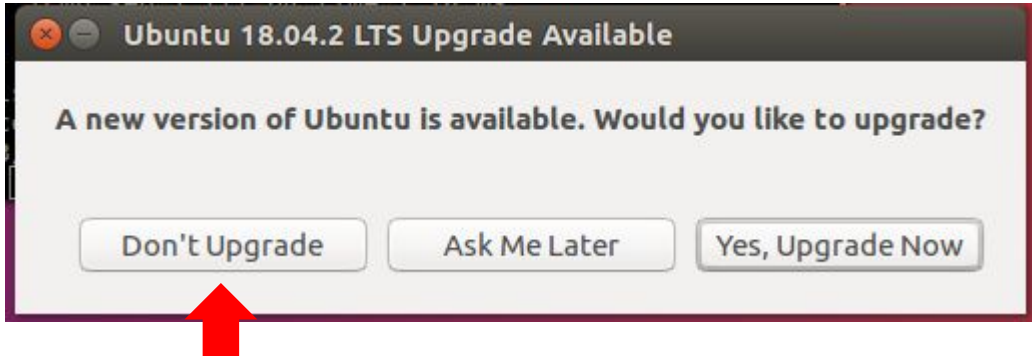


Check it out whether it works

- You could ping every VM from each other, check netstat, etc

Do not let the VM be upgraded

- If asked, do not let the VM be upgraded



Thanks

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Acknowledgment and references:

- This course has been sponsored by the **Intel Strategic Research Alliance program**.
- Security Engineering (Anderson); Computer Networks: A System Approach (Peterson/Davie); Computer Networks (Tanenbaum/Wetherall); Cryptography Engineering: Design Principles and Practical Applications (Ferguson, Schneier, Kohno); The Shellcoder's Handbook: Discovering and Exploiting Security Holes (Anley, Heasman, Lindner, Richarte); Introduction to Computer Security (Goodrich, Tamassia); SEED Project - http://www.cis.syr.edu/~wedu/seed/