# Practical session 2
# (3H)

## Around the command line

All this practical session will be realize from SSH and command line.

1) Activate from the ESXi the SSH server (not from GUI)
2) Connect you by SSH on your ESXi
3) From command line, reboot your ESXi
4) Find the correct command line to list all VM on your ESXi. Note on a paper all VM VMWare ID.
5) Start, Stop VM from the command line
6) Unregister a VM. Verify from GUI that the VM is no visible.
7) Register the VM suppress, What's happen with the VMWare ID.
8) Create a new VM (same name, same UUID), by command line, from files associated to the TinyLinux. (You must modify the VM file configuration)

9) Find the command line for list the main properties of a VM. What is the UUID ?
10) Try to start 2 VM with same name and same UUID (by directly modified the VM file configuration. Don't forget to reload the configuration)
11) Around users: Create and manage a new user for your hypervisor. Restrict to ReadOnly his permissions.

## VM machine from scratch.

12) Download the iso file :
    wget http://www.menaud.fr/Cours/Cloud/TP/ISOLinux/Core-5.4.iso
    For that you need to add a DNS server (from command line) in your ESXi.

13) Created the VM folder (Core), created the virtual hard disk for the VM with the command - vmkfstools (5Gb, lsilogic) (Core.vmdk).

14) Created a VMX file with the following text, change ??? by the correct value :

```
config.version = "8"
virtualHW.version= "7"
guestOS = " ???"
memsize = "1024"
displayname = "???"
scsi0.present = "TRUE"
scsi0.virtualDev = "lsilogic"
scsi0:0.present = "TRUE"
scsi0:0.fileName = "Core.vmdk"
ide1:0.present = "true"
ide1:0.deviceType = "cdrom-image"
ide1:0.filename = " ??"
ide1:0.startConnected = "TRUE"
ethernet0.present= "true"
ethernet0.startConnected = "true"
ethernet0.virtualDev = "e1000"
```

15) Changed the permissions on the VMX file with chmod 744 Core.vmx.

16) Add to the inventory the VM (register the VM) and power on the VM

17) At this point the VM was up and running and the last thing to do was to disconnect the CD-ROM in the VM

18) At this point we went to check IP connectivity and noticed the VM did not have an IP address. You can verified this with :

a. vim-cmd vmsvc/get.summary X

19)Edited the VMX file and added completed the below line.

a. ethernet0.networkName = " ???"

20) Reloaded the VMX file (vim-cmd vmsvc/reload X), Verified that ESXi saw the configuration change made.

21) Set the virtual NIC to a status of connected. The device.connection option requires the VMID, the deviceKey and connect setting. Connect can be set to 1 (connected) or 0 (disconnected). The deviceKey can be found from the output device.getdevices. As shown above in bold, the deviceKey for the vnic for this VM is 4000. Once the command was run the vnic in the VM connected and was able to get an IP address from a DHCP server.

```
~ # vim-cmd vmsvc/device.connection
Insufficient arguments.
Usage: device.connection vmid deviceKey connect
Connect/Disconnect the virtual device specified
~ # vim-cmd vmsvc/device.connection 16 4000 1
~ #
~ # vim-cmd vmsvc/get.summary 16 | grep ipAddress
ipAddress = "192.168.1.56",
```

22) The configuration values for VM automatic startup and shutdown is stored in the file /etc/vmware/hostd/vmAutoStart.xml. By default auto start is not enabled. Change it !