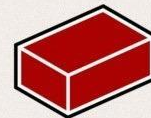


Intro to Linux

Installation and setup



Redbrick

DCU's Networking Society

Overview

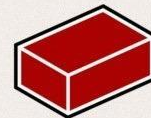
We will be using:

- Virtual machines (VMWare, on windows)
- Linux mint - <http://ftp.heanet.ie/pub/linuxmint.com//stable/17.2/linuxmint-17.2-cinnamon-32bit.iso>

What is Linux?

A Free and Open Source Operating System perfect for development

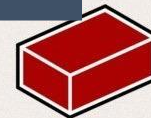
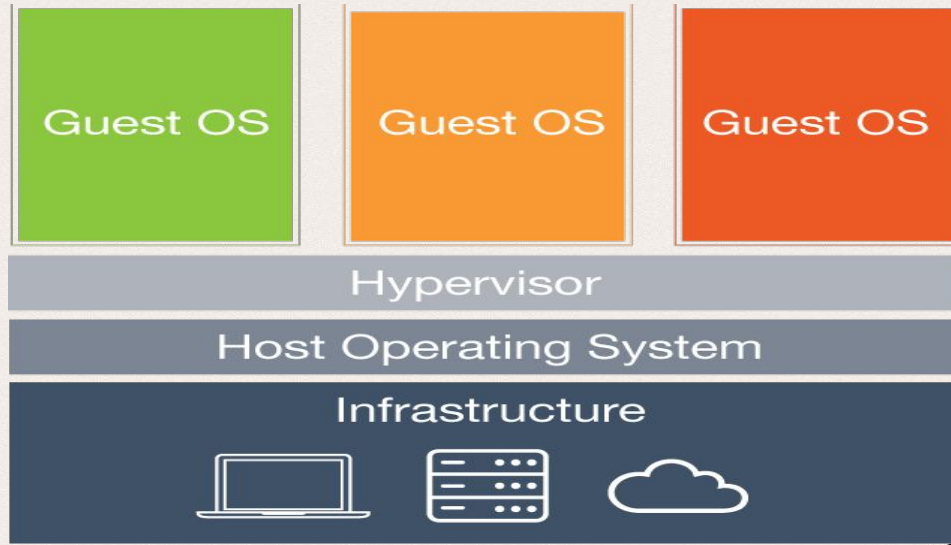
There are more linux - ubuntu, Arch, fedora, debian, gentoo



Redbrick
DCU's Networking Society

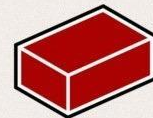
What is a Virtual Machine?

- A sandboxed, virtual computer that runs on top of a HYPERVISOR
 - VMWare, Virtualbox, Xen etc



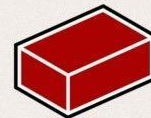
But why use a VM...?

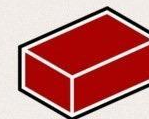
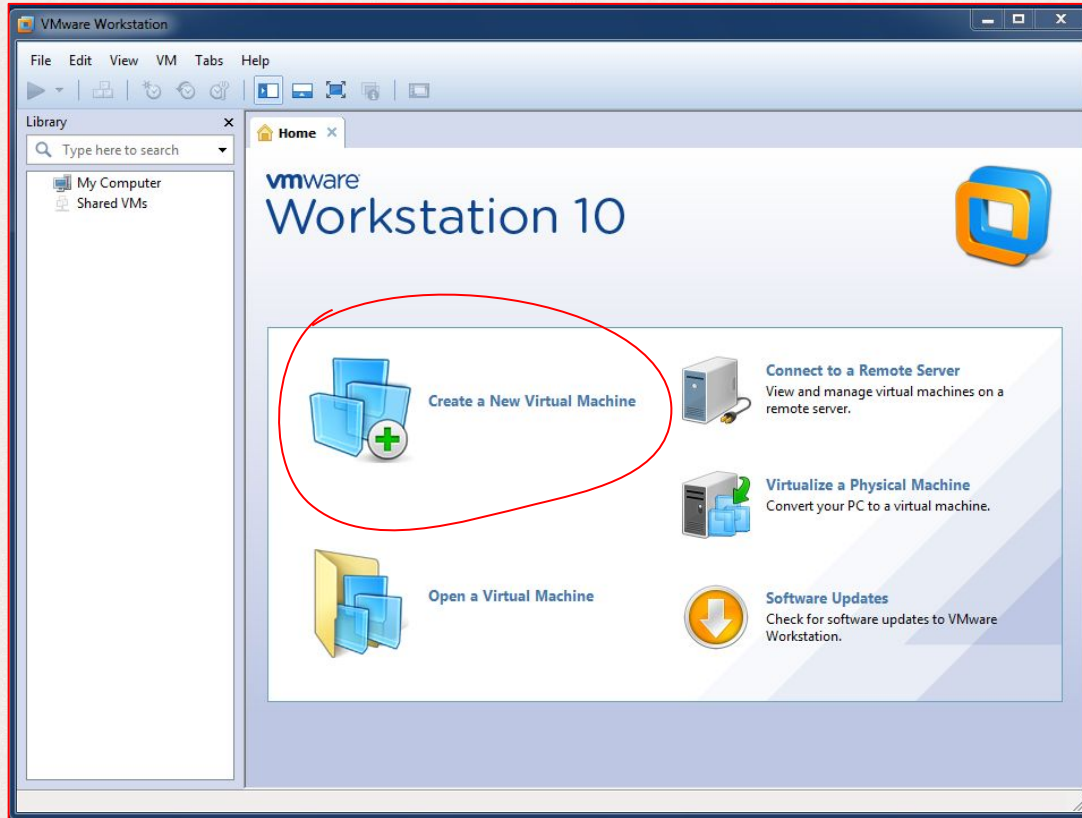
- Having access to a wide variety of Operating Systems
- Running software you don't want to install on your own computer
- Relaying network traffic to bypass restrictions
- You broke it? Just reset and try again!
- Found a good base setup for projects? Take a snapshot!
 - Snapshots are used to prevent starting from scratch every time you find yourself needing to use a VM.

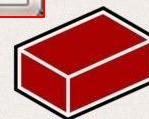
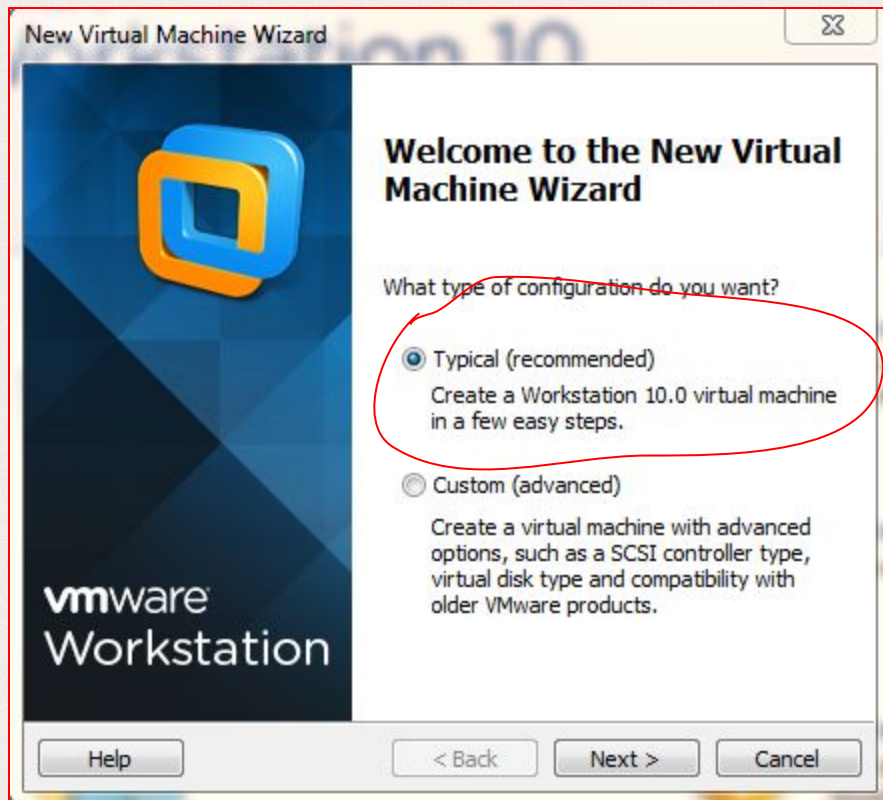


VM Setup

- Click "Create new VM"
- Choose a name
- Set OS type to: "linux"
- set version to: "linux 3.x"
- Set Memory to 1GB(can be more really depends on the machine)
- Create a new hard drive 20GB(again could be more)
- BOOT
- Choose the linux ISO as your Boot Disk







New Virtual Machine Wizard

Guest Operating System Installation

A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?


Install from:

Installer disc:

DVD RW Drive (E:)

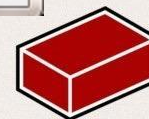
Installer disc image file (iso):

C:\Users\redbrick\Downloads\linuxmint-17.2-cinnamor

 Could not detect which operating system is in this disc image.
You will need to specify which operating system will be installed.

I will install the operating system later.

The virtual machine will be created with a blank hard disk.



New Virtual Machine Wizard

Select a Guest Operating System
Which operating system will be installed on this virtual machine?

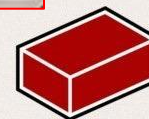
Guest operating system

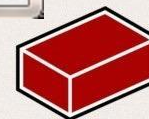
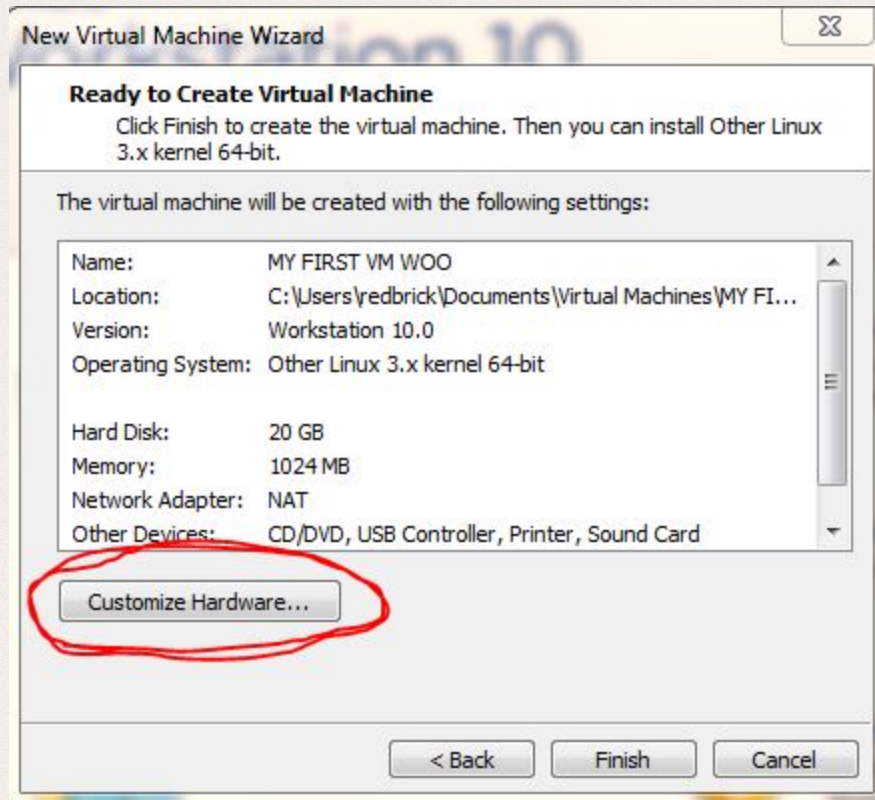
- Microsoft Windows
- Linux
- Novell NetWare
- Solaris
- VMware ESX
- Other

Version

Other Linux 3.x kernel 64-bit

Help < Back Next > Cancel





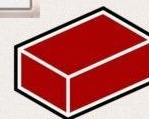
New Virtual Machine Wizard

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:

Location:

The default location can be changed at Edit > Preferences.



New Virtual Machine Wizard

Specify Disk Capacity

How large do you want this disk to be?

The virtual machine's hard disk is stored as one or more files on the host computer's physical disk. These file(s) start small and become larger as you add applications, files, and data to your virtual machine.

Maximum disk size (GB):

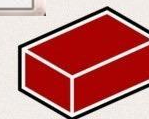
Recommended size for Other Linux 3.x kernel 64-bit: 8 GB

Store virtual disk as a single file

Split virtual disk into multiple files

Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.

Help < Back Next > Cancel



Hardware

| Device | Summary |
|------------------|---------------------------------------|
| Memory | 384 MB |
| Processors | 1 |
| New CD/DVD (...) | Using file C:\Users\redbrick\Downl... |
| Network Adapter | NAT |
| USB Controller | Present |
| Sound Card | Auto detect |
| Printer | Present |
| Display | Auto detect |

Memory

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

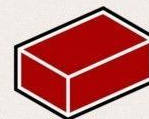
Memory for this virtual machine: 1024 MB

64 GB -
32 GB -
16 GB -
8 GB -
4 GB -
2 GB -
1 GB -
512 MB -
256 MB -
128 MB -
64 MB -
32 MB -
16 MB -
8 MB -
4 MB -

- Maximum recommended memory (Memory swapping may occur beyond this size.) 2520 MB
- Recommended memory 384 MB
- Guest OS recommended minimum 32 MB


Add... Remove


Close Help












Home x MY FIRST VM WOO x

MY FIRST VM WOO

 Power on this virtual machine


 Edit virtual machine settings

▼ Devices

| | |
|--|----------------------|
|  Memory | 1 GB |
|  Processors | 1 |
|  Hard Disk (SCSI) | 20 GB |
|  CD/DVD (IDE) | Using file C:\Use... |
|  Network Adapter | NAT |
|  USB Controller | Present |
|  Sound Card | Auto detect |
|  Printer | Present |
|  Display | Auto detect |

▼ Description

Type here to enter a description of this virtual machine.

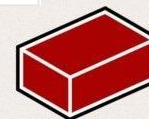


▼ Virtual Machine Details

State: Powered off

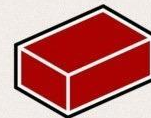
Configuration file: C:\Users\redbrick\Documents\Virtual Machines\MY FIRST VM WOO\MY FIRST VM WOO.vmx

Hardware compatibility: Workstation 10.0 virtual machine



Linux Installation

- Boot the Machine
 - It will boot a live machine
 - click on install linux on the desktop
- Select the Language
- select erase entire disk, if not on a vm select “something else” and “along side”
- Select Local and keyboard layout
- Put in a username and Password
- Sit back and wait



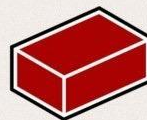
Linux

Package manager:

- Allows you to install Software
- *Sudo apt-get update & sudo apt-get install htop wine vim zsh*

Grep:

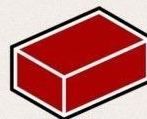
- Allows you to search for patterns in a commands output.
- | : Allows you to string commands together.
- *"cat /etc/interfaces/networking"* - long output
- *"cat /etc/interfaces/networking | grep gateway"* - only the output we want



Linux

Aliases:

- allow you to be more efficient
- You can write synonyms for commands.
- “rb” instead of “ssh [\\$username@login.redbrick.dcu.ie](https://login.redbrick.dcu.ie)”
 - *nano .bashrc*
 - put in the aliases as follows
 - *alias rb='ssh [\\$username@pyg.redbrick.dcu.ie](https://pyg.redbrick.dcu.ie)'*
 - *alias dus='du -sckx * | sort -nr' #directories sorted by size*
 - *whatdo='ps aux | grep \$username'*



Questions?

