

Desktop Virtualization

NSRC

What do we mean?

- Running VMs on your laptop or desktop machine with keyboard and screen
- Especially useful for:
 - Trying out other operating systems
 - Development and test environments (sandboxes)
 - Running foreign applications

Things we like

- Simple to use GUI
- Features
 - Represent the guest's console as a window
 - Easy use of keyboard and mouse
 - Copy-paste between the guest and the host
 - Disk image management and snapshots
- We are not worried about datacentre-grade scalability

We are going to use VirtualBox

- Pros:
 - Free* and Open Source (GPL)*
 - Available for Windows, Mac, Linux, FreeBSD
 - Good documentation
 - Easy to use and powerful
 - Can run 64-bit guests on 32-bit host (with VT-x)
- Cons:
 - It's owned by Oracle

* Except the optional Extension Pack, which is closed source, free for personal use only

Things you need to know (1)

- Click in the guest window to capture the keyboard and mouse
- ***To release the keyboard and mouse, press the "host key" which is usually Right Ctrl***
- You can get better keyboard/mouse integration by installing the "VBox Guest Additions"
 - Then you can simply move your mouse over the window and move it away again
 - Also lets you copy-paste and share files with the guest

Things you need to know (2)

- Shutting down a VM is most safely done by requesting shutdown from ~~within~~ *within* the VM
- Or you can send an "ACPI shutdown" signal from VirtualBox
 - Linux guests need "acpid" installed
- Try to avoid an "immediate power off"
 - Just like pulling the power out on the wall
 - Could result in lost data / filesystem corruption

Things you need to know (3)

- Default disk image format is "VDI" and you can choose either fixed or growable
- The default networking mode is "NAT" and you don't need to configure anything
 - Client will pick up IP address (10.0.2.15) via DHCP and can make outbound connections
- The full manual is included (Help > Contents) or you can download it separately

Practical exercise

- Install VirtualBox on your laptop
 - Check with instructors if you have <1GB RAM or <5GB free hard drive space
- Create a VM and install Ubuntu within it
- If you have time: install the VirtualBox Guest Additions and more VMs