

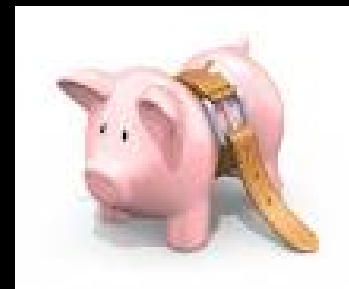
Virtual Desktop Infrastructures for Higher Education with VMware Horizon

Presentation Agenda

- The Desktop and Application Remote Access Dilemma in Higher Education
- VMware Horizon in Higher Education as a Virtual Desktop Infrastructure (VDI) Solution
- VMware Demos
- Questions

The Desktop and Application Remote Access Dilemma in Higher Education

- Limited budget to buy desktop computers and complicated IT infrastructures for remote access
- High cost in additional hardware to set secure connections to campus offices or labs desktops, such as Virtual Private Network (VPN) servers
- High cost in software applications installed and maintained in each desktop computer



The Desktop and Application Remote Access Dilemma in Higher Education

- Higher Education is facing the need of their faculty, staff and students to access their desktops and software applications remotely from anywhere
- Software applications need to be delivered in a fast and reliable way to any hardware device and data flow needs to be done in a secure way



The Desktop and Application Remote Access Dilemma in Higher Education...here at UCD...

- UCD is not that much different from some other University or Higher Education institution
- Our budgets are stretched thin while our institution is under pressure to provide high quality learning & research environments
- We have outdated desktop computers in our offices & labs
- Personal owned mobile devices are brought to campus to be used for work but are not being utilized to their full potential
- Limited resources to support off-campus computing
- We need to keep our UCD computer networks safe & secure

The Desktop and Application Remote Access Dilemma in Higher Education

- What if we could....
- Offer a **24-hour virtual** desktop environment to our PIs, lab members, staff and students that can access at any time, anywhere using any computer or mobile device for work?
- Deliver similar computing experience no matter if it's a 5-year old computer or the latest tablet on or off-campus?
- And SAVE money on buying expensive desktop computers?
- We think that it would be AWESOME!
- The solution....

VMware Horizon in Higher Education as a Virtual Desktop Solution



VMware Horizon in Higher Education as a VDI Solution

- VMware Horizon would provide a streamlined approach to delivering, protecting and managing virtual desktops (VDI) to Higher Education
- It securely delivers Windows, Ubuntu/Linux desktops and applications across virtual machines
- It provides on-demand learning and it would help academic computing at **LOWER COST** and effort compared to the way of refreshing hardware and software on regular desktop or laptop computers
- It would help IT to provide Desktop Support to users in a faster way since it would be done onsite, eliminating the need to travel to different locations for desktop maintenance

VMware Horizon in Higher Education as a VDI Solution

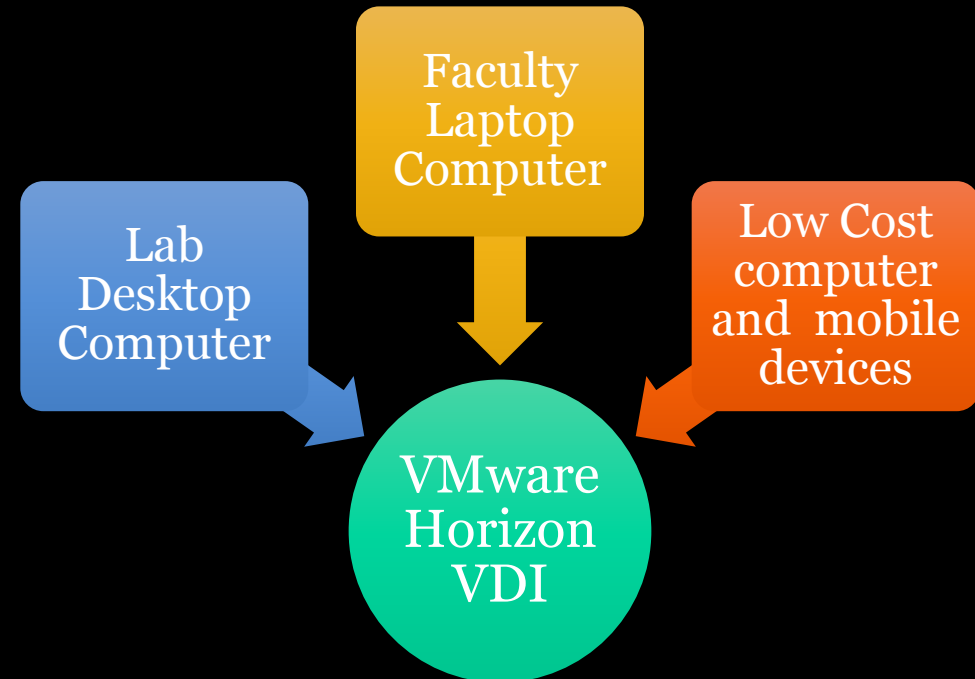
- Virtual desktop computing extends computer lab access to anytime, anyplace, supporting varied faculty, staff and student work styles and allowing them to access their computing resources whenever and wherever they need them
- With VMware Horizon, the BYOD (Bring Your Own Device) challenge for work is solved and faculty, staff and students would be able to access their desktops and run their software application, anywhere, at any time, on or off campus.
- VMware Horizon 7 Overview and What's new:
<http://www.vmware.com/products/horizon.html> (1:24 minute video)

VMware Horizon

Reinventing Desktop Virtualization
and Application Publishing

VMware Horizon in Higher Education as a VDI Solution ...and for UCD

- It will help us to **SAVE** money in hardware and software purchases
- It will create 24-hour open computer access for our office and lab computers
- Will allow our faculty, staff and students to access computing resources from anywhere using any device with Internet access
- It would help reduce IT related costs and complexity



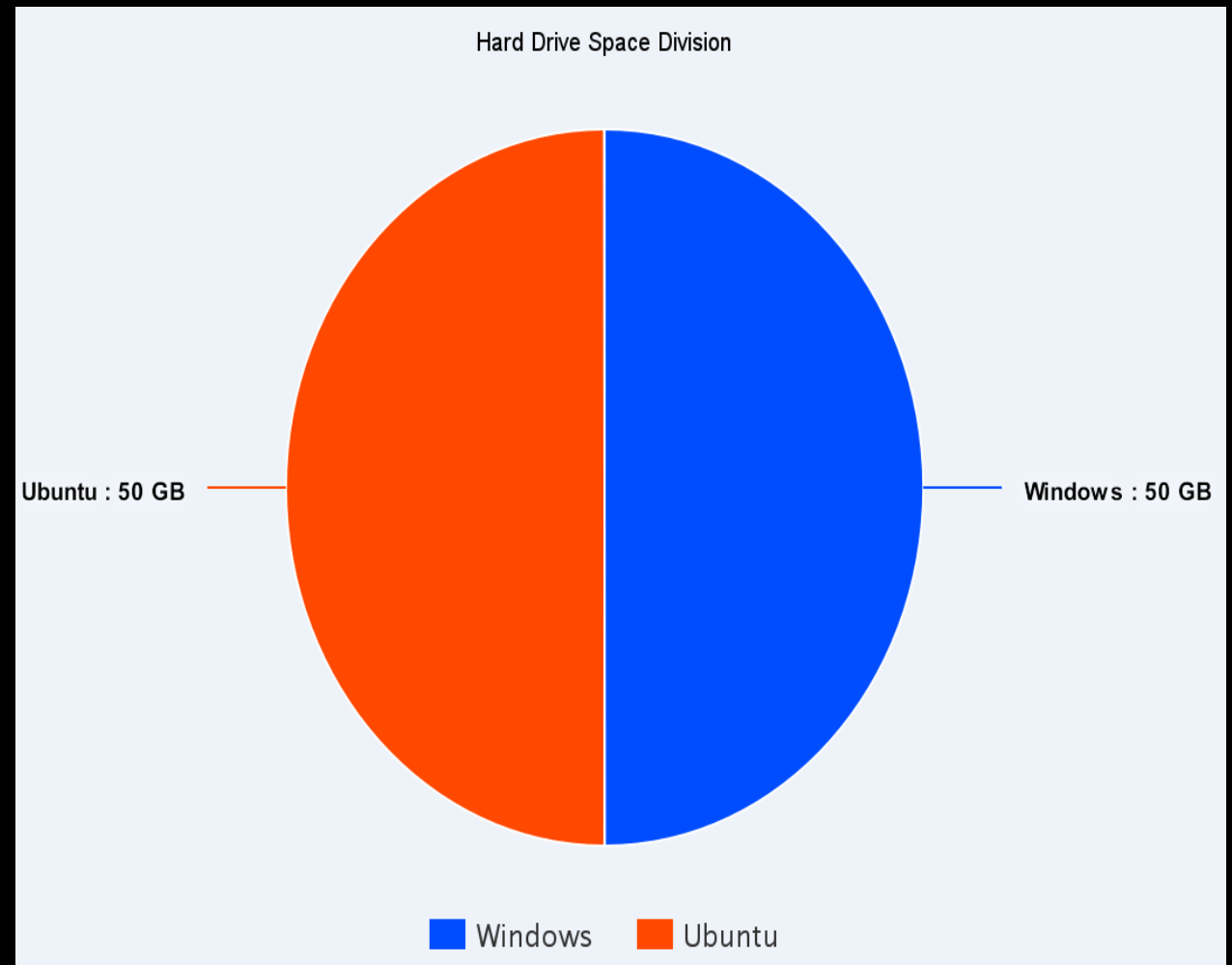
Use Cases for VDI Technology (Brian)

- Question:

How many people are using more than one operating system here?

Consider this scenario: You need to use a different operating system than what you have

- Do you:
 - Divide your main hard drive space in half so that you can fit OS #2 on it?
 - Buy a second hard drive and run a second operating system?



Case 1: Dividing the hard drive to fit the second OS

- Dual Booting Pains:
 - You need a lot of hard drive space if your dataset is large, otherwise you'll be juggling data around.
 - Working on a laptop/tablet with a small SSD? Ouch.
 - If using Virtual Machines, need enough RAM/CPU/Hard drive space to support both the host and guest operating system
 - Only one OS at a time.

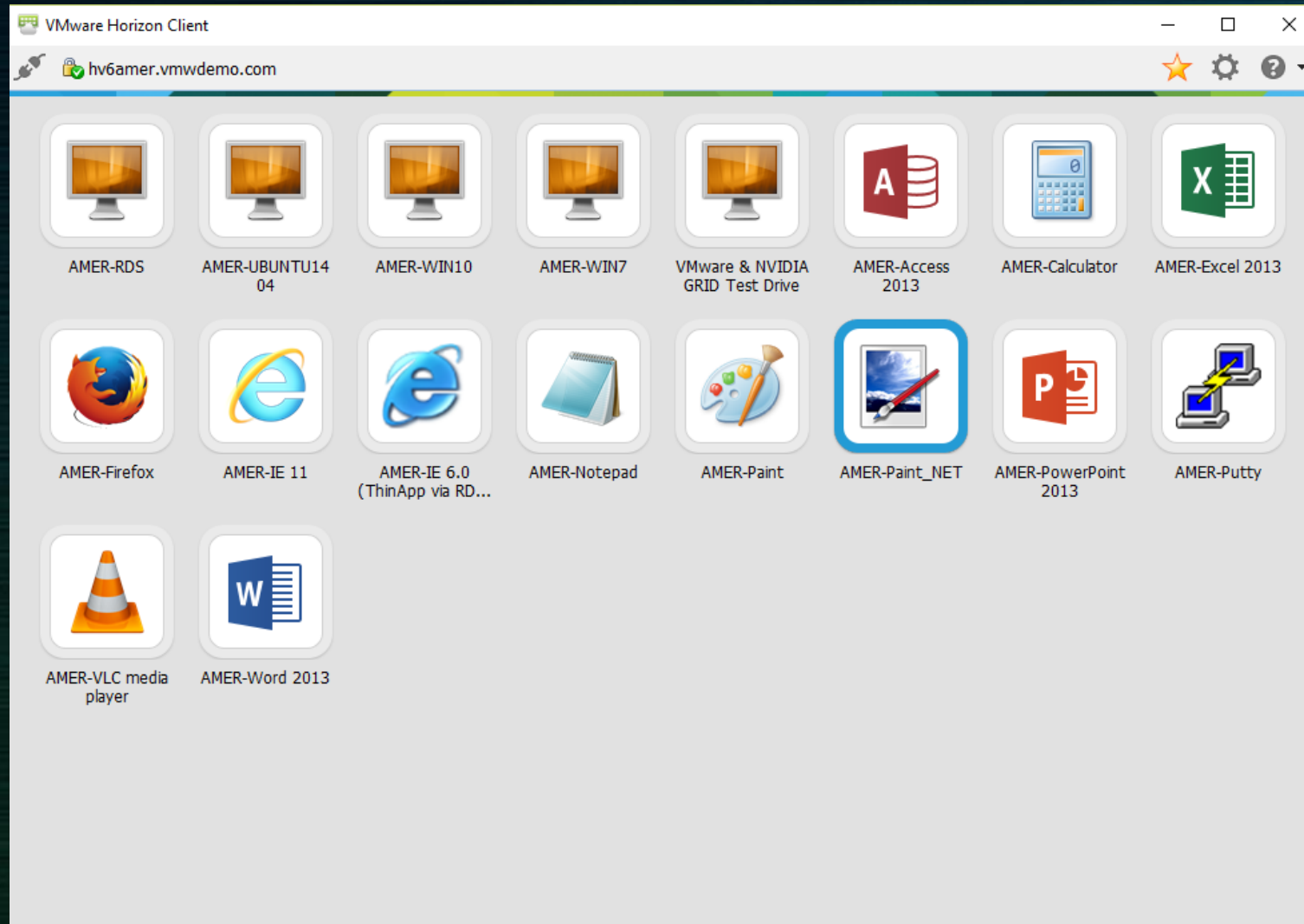
Case 2: Buying second hard drive to fit OS 2

- Most laptops/ tablets only support one hard drive and many cannot be upgraded.
- On a desktop, installing a second hard drive is often possible, but is still susceptible to local hardware failures.
- Sharing the OS with collaborators is a pain.

Bottom Line for Dual Booting and VM Usage:

- Your local machine's limits are independent of what can be done in the cloud.
- VDI Infrastructure will do the heavy lifting for you in terms of CPU/RAM/hard drive/operating system hosting.

Next up: VMware Demos



VMware DEMOS

- Windows 10 with UCD software (Julio)
- iPad Demo (George)
- VMware and NVIDIA GRID 3D demo (Julio)



Questions?