



# Welcome to the CS166 Intro Lab!

- Grab a seat and make yourselves comfortable
  
- Overview
  - CS166 specifics
  - Internet Lab
  - VMWare
  - Eclipse

# CS166 Specifics



- All coursework for CS166 **must be done** within Virtual Machines (VMs) in the Internet Lab
  - We've set up special networks so that viruses/worms/etc will only spread on the local network and won't spread out to the world
- You'll be given card access to the upper floors
  - It's never been done before for an undergrad class
  - Don't leave messes, move furniture, let other people up, etc...
  - If we screw up, you'll lose access and will only be able to come up during work hours

# Internet Lab



- You will be given access to the Internet lab
  - This is a privilege that Steve Reiss has given to us
  - He is very willing to take it away if things get out of hand
- There will be no consultant on duty
- Clean up after yourselves
  - No food, drinks, etc
  - Don't xlock for extended periods

# llab, cont



- There were almost 50 people at the first day of classes
- There are only 16 computers here that can access the virtual network...
- Things will get rough over the semester
- Try to get work done earlier when other people aren't working on things
- We'll try to get more machines in here
- We will NOT take “there were no free computers” as a valid excuse for being late



# VMWare 1

- All work will be done in VMWare so we can protect our machines as well as the rest of the department
- “VMware Workstation is powerful desktop virtualization software for software developers/testers and enterprise IT professionals that runs multiple operating systems simultaneously on a single PC.”
- Basically allows us to run malicious software without risk of damaging the actual computer

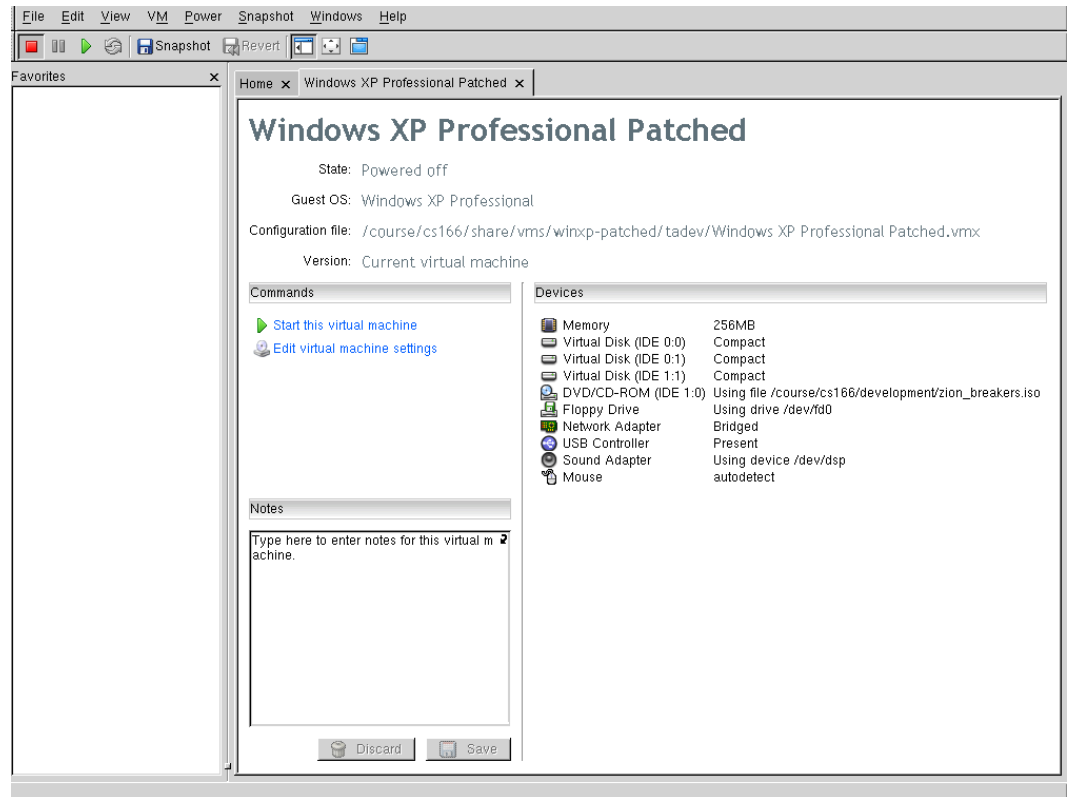
# VMWare 2



- T-Staff has set up a virtual network for us to use
- It'll prevent the VMs from accessing other computers on the network but allows access to other VMs on the network
- Only machines in the I-Lab have this vnet
- We're going to have VM images in our course folders for you to copy over and play with
- Once you get your identities, you'll be given separate storage space for your VMs

# VMWare 3

- Opening a VM:



# VMWare 4



- Go to File->Open Virtual Machine to load the VM
- Hit Start the virtual machine to run it.
- **DO NOT EDIT VIRTUAL MACHINE SETTINGS!**
  - Doing so may expose the real network to malicious code
  - The only exceptions are on the next few slides...
  - Also, **DO NOT** make your own VMs

# VMWare 5



- Your VM is basically just like a real OS
- In fact, it is a real OS
  - You can do anything you want that you can do in a real OS
  - Minus networking outside of the vlan
    - This means you can't get files into and out of the VM easily
    - However, you can get files into the VM using Shared Folders or CDs

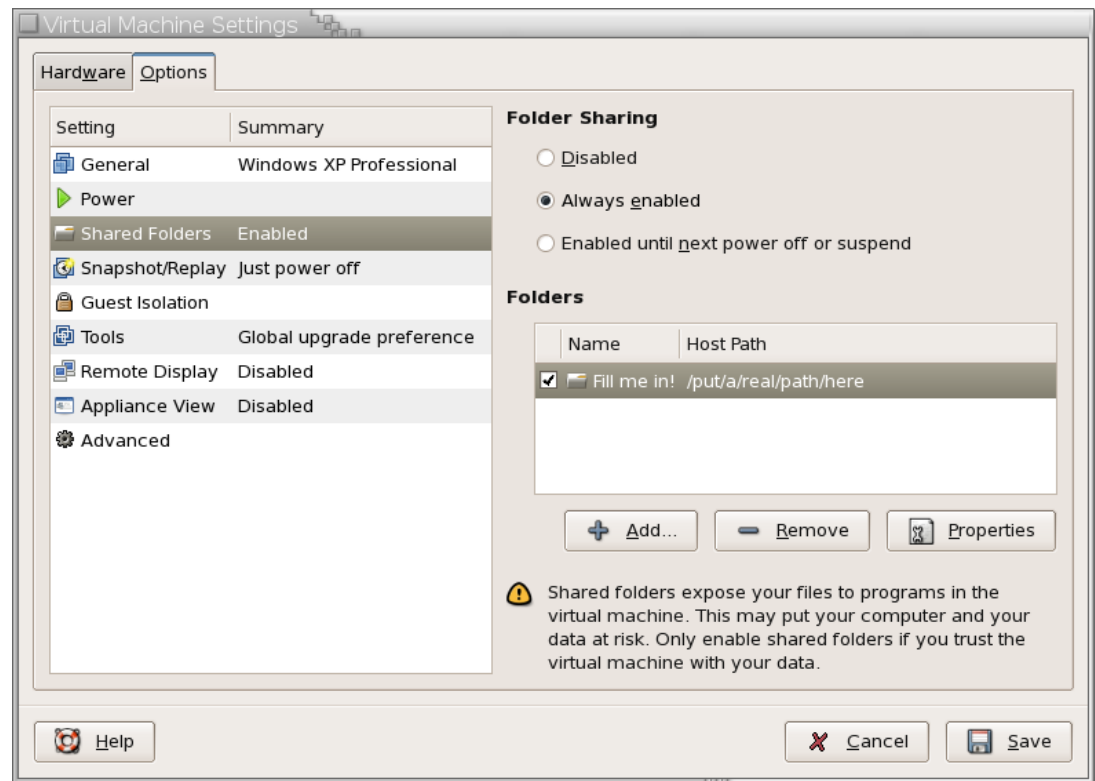
# VMWare 6



- Getting files into VM (Method #1)
  - Go to 'edit virtual machine settings'
  - Select the 'Options' tab, then 'Shared Folders'
  - Select 'Always enabled'
  - Add your directory that you want to share
  - See the screenshot on the next slide...
  - This folder will now be accessible from within the VM under */mnt/hgfs/<folder name>/*

# VMWare 7

- 'Shared Folders' settings:



# VMWare 8



- Getting files into VM (Method #2)
  - Open k3b (a cd burning software)
  - Create a data cd and copy files into the cd
  - Right click on the CD and go to properties
  - Set it to “Only create image”

# VMWare 9



- Now, we'll import the ISO into your VM
  - Go to 'edit virtual machine settings'
  - Click on your DVD/CD-ROM and check the Use ISO image check diamond and chose which ISO to import
  - Load up the VM and you'll have your CD in the VM
  - **THIS (along with Shared Folders) ARE THE ONLY SETTINGS YOU SHOULD CHANGE!!**

# VMWare 10



- That's basically it for VMWare
- If you've got questions, email the staff
  
- Some shortcuts
- Ctrl-Alt – Releases you mouse from the VM
- Ctrl-Alt-Enter – Toggle full screen mode
  
- There are times when you are outside of Vmware but your keyboard/mouse are acting funny
  - Try hitting Ctrl-Alt to fix it

# Eclipse 1



- Eclipse is Software Development Environment for Java
- Makes it easier to code and stuff
- We're using it because we've set up all the classpaths and such – Makes it easier for you to code and run stuff
  - You don't need to use Eclipse
- We're not really going to go into detail on how to do things since you can figure that out on your own...

# Eclipse 2



- We're going to provide a folder that's going to contain everything for you to get going
  - This includes the workspace (It's an eclipse thing...)
- When you open Eclipse, it'll ask you for a workspace
- Just give it the directory that we provide you as a stencil

# Eclipse 3

- The left hand side is your package explorer
  - It'll have all your packages and your classes within those packages
  - Double click on a class to open it
- The middle viewer will open up your java file so you can edit it
- The bottom viewer will be your console among other things

# Eclipse 4

- Eclipse builds the project as it goes
- If there is a red x next to a line of code, that means there's an error that you need to fix
- A yellow exclamation mark is for warnings that java gives
- The bottom viewer has a problems tab that shows all errors in the project

# Eclipse 5



- Run:

- Go to the File Menu and then go to Run
- Within Run, there should be a java Application that's set up for you to run
- Just click Run and it'll run your code
- It'll output everything to the console at the bottom

# Eclipse 6



- Eclipse is a really strong tool that has a gazillion features that can help you with coding such as auto complete, refactoring, CVS & SVN plugins, etc.
- Look it up yourself if you want to learn more