Senior Design
Lab Policies

Presented by:
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CSC IT Staff
Agenda

- IT Staff Introductions
- Brief Student Introduction
- Best way to get IT help
- Overview of student computing and equipment resources
- Trey’s Top Secret Tips to help get an A in Senior Design
- Student Questions
CSC IT Staff

- Trey Murdoch - VMWare, Networking, Servers
- Tyler Puckett - Windows, Mac and iOS
- Chris Gurley - Linux and Android
- Tyler Mayberry - Web Developer, Branding Specialist
- Marhn Fullmer - Networking Lab Manager
- Carlos Benavente - IT Manager
- 200 to 250 lab computers
- 85 faculty
- 15 staff
- Almost 2400 students
- Labs that service another 1200
Getting to Know You

- Laptop OS Poll
Virtual Machines - It’s How We Roll

- Pure virtual environment:
  - dictated by space and resources
- VMWare vSphere
- vCenter management
- Remote Access from on and off campus
- Available upon request
  - Like VCL
What’s on the OS Menu?

● OS Loads we provide
  ○ Server 2016
  ○ Windows 10 with Office 2016
  ○ RedHat, Centos, or Ubuntu
  ○ Help available with other Linux distros [Arch, etc.]
  ○ DO NOT reload your machine without IT advice

● Resources available
  ○ CPU, RAM, HDD, Extra Network, etc.
Networking

- All virtual machines have external IP address and protected by a hardware firewall
- Also have a DNS Name, ie: sd-vm01.csc.ncsu.edu
VMs - Connect from Campus

- connect directly to assigned VM: ie, sd-vm00.csc.ncsu.edu
- works on campus wireless
- SSH for Linux loads
  - UnityID/PW
  - Sudo access
  - You DO NOT NEED root password
- RDP by default on port 4040
  - wolftech\UnityID
  - Full Admin access
VMs - Connect from Campus
VMs - Connect from Home

● VPN is required when not using campus wireless
  ○ Gives you an on-campus IP address
  ○ Split-tunnel
  ○ installation info available at vpn.ncsu.edu
  ○ detailed info here:
    ■ http://www.wolftech.ncsu.edu/support/support/NCSU_VPN
  ○ works on Mac and Windows
  ○ works on CentOS and Ubuntu as well

● Also available to sponsors
VMs - vCenter Console

- vCenter (console access)
  - [https://vcenter.csc.ncsu.edu](https://vcenter.csc.ncsu.edu) -- notice the .CSC
  - Use the HTML5 client
  - UnityID and password
  - web client: turn machine on/off, adjust settings, console access
  - Must be on-campus or connected via VPN
Networking

- What if I want to host something on my VM ie: WWW, Database, etc.
- Exclusive behind the scenes look at the Senior Design networking systems
- Highly Sensitive. DO NOT SHARE
Internets

- Windows

- Linux

Cool Students

-Chris
Internets

= Blocked

= Allowed

Windows

Linux
Outgoing

Internets

Windows

Linux
ALL traffic from campus wireless and VPN is allowed

All other traffic is blocked

RDP traffic allowed

SSH traffic allowed
VM Connection Issues

- Are you on campus wireless or VPN?
- Try VPN, even on campus
Cloud Services

What if I told you,

The cloud is just someone else's computer?
Cloud Services: Someone Else’s Computer

- Pre-Approved Examples
  - Google Drive (using NCSU account)
  - Github.ncsu.edu

- Don’t store anything on external services without consulting your sponsor
  - AWS
  - Azure
  - Dropbox
  - github.com
AWS

- AWS Educate
- [https://www.awseducate.com](https://www.awseducate.com)
- Sign up as a student
- $100 worth of free credit
- Additional credits can be purchase with STRONG justification
- Just an FYI EC2=VMs
Available Software - Free

- Software installed by students
  - Freeware
  - Dreamspark/VMAP
  - The “Best Effort” Rule
  - No P2P file sharing
- Software installed by CSC IT Staff (resource request)
  - Office 2016
  - Adobe Acrobat
  - software.ncsu.edu
Available Software - Purchase

● Software Purchases
  ○ Cost
  ○ Purpose
  ○ Web Link
  ○ Why do you need it?

● University purchased software may **NOT** be installed on student owned laptops
Resource Requests

● From the Senior Design Website
  ○ [https://sdc.csc.ncsu.edu/resource-request](https://sdc.csc.ncsu.edu/resource-request)
  ○ Creates a ServiceNow (incident tracking system) ticket
  ○ ServiceNow adds all these people to your incident:
    ■ Teammates
    ■ Tech advisor
    ■ Ms. Heil
    ■ TAs
  ○ Alerts all CSC IT Staff
Resource Requests 2

● You’ll receive an automatic e-mail with your incident number from csc_help@ncsu.edu in 5 minutes.
● You’ll also get an e-mail from an IT Staff member in 1 to 2 business days, also from csc_help@ncsu.edu
● Use the REPLY function to communicate with the IT Staff member
● All members of a ServiceNow incident receive copies of all communications
● If something happens, feel free to make a new resource request
Resource Requests - Do NOTs

● E-mail csc_help@ncsu.edu directly for new incidents
  ○ Use resource request form
● E-mail csc it staff directly
● Create a new e-mail and CC csc_help@ncsu.edu
Resource Requests - The Waiting Game

- Be sure to respond to IT e-mails
- If you’re waiting on us:
  - Make sure you received an incident number
  - Check your e-mail and spam, we might be waiting on you
  - If no reply in two business days, reply to previous message again, ask for an update.