

1. Stuart Steiner, Eastern Washington University – transforming an Edurange lab to a GENI lab
 - a. Edurange – nmap, scanning lab, total recon, ssh lab for club learning
 - b. SSH Lab from edurange – how can we transfer this on GENI?
 - i. Entry point
 - ii. Scan
 - iii. Ssh to an address
 - c. Challenge1: how to make ssh from node to node?
 - d. Challenge2: how to hide a topology from students to make scan interesting?
2. Jacob Barnard, University of Jamestown – tiered repetitive approach
 - a. Openflow failover idea
 - b. Simulate difference between physical issue and virtual
 - c. Openflow groups to negotiate redundant links
 - d. Good: Found the original RSpec and instructions from past failover lab, maybe end of semester project for CS students to teach redundant links
 - e. Problems – old RSpec. Solution: write a script that sets up the exercise
 - f. Several classes this can be used
3. Julie Henderson, Charleston Southern University, Walter Kerner, Fashion Institute of Technology
 - a. An industry scenario on GENI – firewall good practices and closing the open services that are not needed
 - b. Explain expectations, what should the network allow and not, a critical thinking exercise
 - c. Open source firewalls on GENI
 - d. Different Servers behind a firewall, users and attacker
 - e. Openflow tutorial: how can we virtualize the firewall function?
 - f. Wrong traffic to the wrong place – a good learning moment for students to differentiate services
 - g. Port business-purpose matching, directionality, geolocation
 - h. Data analysis to find unsolicited traffic
4. Brian Barnard, SUNY Postdam
 - a. Online networking and games: what does this involve?
 - b. Distributed vs centralized servers
 - c. Setup a game server on GENI, watch the traffic flow, latency
 - d. How can we cheat the game? See the next frame info, find game server vulnerabilities and fixes.
 - e. Wireless networking and game traffic
 - f. Ethics – build a network that allows one to view a data broker's view of networking
 - g. Simulate female, male from traffic pattern, geopattern – Mobile emulators on GENI instances
5. Roberto Hoyle, Oberlin College
 - a. SEED Labs on GENI – network that is not controlled by school IT
 - b. Buffer overflow or XSS SEED Labs on GENI

- c. Privacy related project related to tracking
 - i. Advertising on a website is not direct, it may be through a third party
 - ii. Monitor traffic that sends private information
 - iii. Tracking awareness – many interested parties may be tracking you, not just the direct website that you have accessed
- 6. Ameen, Jonathan
 - a. Use the wireless infrastructure to execute man in the middle
 - b. Shows importance of encrypted traffic
 - c. IoT testbed on GENI – install BusyBox
 - d. Demonstrate the flaws in the wireless setup
- 7. Mohammad Azhar, BMCC City University of NY
 - a. Advanced cyber security – traffic, IDS, progress in levels
 - b. CS0 course on cyber security – Cyber for All (Townson U.)
 - c. Cyber security across curriculum – good cyber citizenship, a module is easier to adopt than a whole course
 - d. Engage high school teachers, not just students
 - e. Educate parents about the dangers of buying a phone for a 10-year old
- 8. Selvarajah Mohanarajah, UNC Pembroke
 - a. Infusing security to all CS courses
 - b. Challenges of hands on labs: ASLR, NX-bits
 - c. Use GENI to setup a vulnerable VM, do a buffer overflow to become admin (Level 1). This project can also be done with docker
 - d. Intro to computer architecture class – Level 2
- 9. Athar Rafiq, Mount St. Mary University
 - a. Use GENI and improve experience in computer networks class
 - b. Materials from GENI to start with basics, have a checklist of what you need to run a class (Train the TA slides and video from webinar)
 - c. Used GNS3 - runs VMs behind each icon