A Hands One Workshop on Computer Security Tools for Classroom Instruction

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ABSTRACT

In the last ten years, the Internet has become an important component of the global economy and security has emerged as an important part of the Information Technology professions. It is clear that universities and colleges must start preparing professionals ready to take on these challenges in the workplace. NSA is actively encouraging universities and colleges to start new courses and programs in information assurance and recently, Pace University was awarded designation as a National Center of Academic Excellence in Information Assurance Education by NSA. This ½ day hands-on workshop will very briefly overview basic security issues (e.g. security policies and management, firewalls, host security, cryptography, application security, incident and disaster response, Social Engineering). Participants will learn a number of tools which are used in our introductory courses.

Keywords

Security education, security tools, network security, information systems education, online education security laboratory

WORKSHOP ACTIVITIES

Based on a graduate and undergraduate introductory security course, this workshop demonstrates the lab tools which complement the curriculum. Each participant will learn how to install and use a variety of security related tools. Most of the activities are designed to run on local and remote machines. The workshop does not require participants to have access to the Internet. The workshop will demonstrate the tools; however, participants with laptops will be able to install windows-based tools. Participants with Internet access will be able to use Linux based tools. All attendees will be given a CD which contains all the workshop materials.

OUTLINE

1. Introduction and Overview
2. Steganography - Invisible Secrets
3. Password Recover – LC5
4. Windows Security Analysis – Microsoft Base Security Analyzer
5. Integrity checking - Tripwire
6. Password recovery - John the Ripper
7. Network - Sniffer Ethereal
8. Encryption - GnuPG, PGP, S-DES
10. Phishing
11. Email Spoofing

The workshop will cover as many of the tools possible within the constraints of the workshop time.