Building Networks Defensively

Overview

The need for cybersecurity is all over the news today and local governments are no strangers at being part of the headlines themselves. More and more attackers are realizing the soft targets and demanding a king's ransom before giving back control of the systems within the network. Although these attacks can be quite sophisticated, their point of entry is usually simple. Consequently, mitigation techniques can be just as simple. Unfortunately, administrators have gotten away from the basics or do not have the time and manpower to keep up when it comes to network defense and countermeasures.

In this class, the overall approach will be to deploy a network environment with a defensive mindset. You will not just talk about network defense. You will be creating a network environment and then applying defensive countermeasures to it. To do this, you will build a simple virtual network implementing various technologies and techniques in order to harden and defend a network environment. You will use several cybersecurity, systems and network administration tools to accomplish this.

Schedule

Day One

The Major Players

- Routers
- Switches
- Firewalls

The Glue Guys

- IDSs
- VPNs
- Proxies

Day Two

The Protected

- Servers
- PCs
- Data

The Overseers

- People
- Loggers
- Monitors

Prevention

- Vulnerability Scanning
- Network Scanning
- Patch Management

Insurance

- Backups
- Recovery Plans
- Incident Handling

Key Takeaways

- Full free environment with all tools and instructions for those tools

- Testing environment to build network, systems and cybersecurity skills

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Who Should Take this Course

- System Administrators

- Network Administrators

- IT Managers

Audience Skill Level

All

What Students Should Bring

A laptop

Laptop Requirements

- x64-compatible 2.0 GHz CPU minimum or higher

- USB port

- 8 GB RAM or higher required. 16 GB recommended.

- Ethernet adapter (a wired connection is required in class; if your laptop supports only wireless, please make sure to bring an Ethernet adapter with you)

- 40 GB available hard drive space

- Windows 10

What Students Will Be Provided With

USB with all the material and tools loaded and ready to go.

Trainer

Dederick Scott is an instructor for the Augusta Technical College Networking program. He has over 20 years of experience in telecommunications electronics maintenance and information technology. His career started in the U.S. Army where he served for over 7 and a half years. From there, he worked for 8 years as a Computer Automations Technician on Fort Gordon before joining Augusta Technical College in 2013 as a Systems Administrator. After doing that for nearly 3 years, he decided to join the faculty as a Networking Instructor. Mr. Scott has also created a start-up training and consulting company named OWUN Computing. The company focuses on teaching experience through training augmentation by leveraging existing content and emerging students into real world scenarios to bring a holistic strategy to acquiring and applying practical cyber skills.

His educational background includes a Bachelor's in Computer Science, a Master's in Information Technology, a Master's in Business Administration, and a Graduate Certificate in Information Assurance. He also holds A+, Network+, GSEC and GCIH certifications.

Mr. Scott stays current in the field by presenting at conferences, training and coaching for cyber competitions and researching the latest techniques in systems, networking and cybersecurity.