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Network Infrastructure Penetration Testing and Ethical Hacking

This course teaches penetration testing and will illustrate how to think like an attacker and use industry standard tools to perform penetration testing. The course is aligned with the CREST CRT technical syllabus. Students will learn and perform the different phases of penetration testing assessments. The students will practice using Kali Linux and its tools to perform information gathering, target discovery and enumeration, vulnerability mapping, social engineering, system exploitation, privilege escalation, and maintaining access to compromised systems. The students will also learn to report the results of their assessments.

Certification

ICSI | CPT Certified Penetration Tester

Required Courses and Exam

Network Infrastructure Penetration Testing & Ethical Hacking CPT-INF

Accreditation

CREST Accredited Training Course (CRT) - University of Central Lancashire (MSc Cybersecurity Credits: 20)

Candidate Prerequisites

Basic Familiarity with Networking and Linux Operating System.

Who Should Attend

This course will provide students with basic to intermediate knowledge in Ethical Hacking and Penetration Testing, significantly benefiting any professional who is involved in the area of Information Security as well as new individuals wanting to begin a career in IT Security.

What is Included

- eBook
- Lab Guide
- 6 months 24x7 remote access to a virtual lab
- 1 exam voucher - Online Exam Proctoring
- Certificate of Attendance (Digital)

Module 1 | Introduction to Kali Linux

- Installing, Configuring and Updating Kali Linux
- Configuring Network Services

Module 2 | Introduction to Pen Testing

- What is Pen Testing
- Vulnerability Scans
- Methodologies of Pen Testing
- Ethics and Compliance to Legal Systems

Module 3 | Standards

- Penetration Testing Execution Standard (PTES)
- PCI DSS
- NIST 800-115
- Crest (UK)
- OWASP Top 10
- ISO 27002

Module 4 | Network Essentials

- TCP / IP
- IP Protocols
- Network Architectures
- Domain Name Server (DNS)
- Management Protocols
- Network Protocols
- Netcat

Module 5 | Cryptography

- Cryptography Basics
- Encryption History

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- Symmetric Encryption
- Asymmetric (Public Key) Encryption
- Digital Signatures
- Hashing
- MAC and HMAC
- Password Crackers (Ophcrack, John the Ripper)
- Steganography
- Cryptanalysis

Module 6 | Information Gathering

- Passive Information Gathering
- Google Searching
- Active Information Gathering
- DNS Enumeration
- Port and Operating System Scanning
- Fingerprinting and Enumeration

Module 7 | Vulnerability Assessment

- Vulnerabilities
- Packet Capture
- Network Scanners
- Metasploit Framework
- Web Application Scanners

Module 8 | Reconnaissance and Exploitation of Windows Services

- Important Windows Files
- Log Files
- The Registry
- Active Directory Reconnaissance
- User and System Enumeration
- Windows Vulnerabilities
- Windows Password Cracking
- Privilege Escalation
- Client-Side Attacks and SET (Social Engineering Toolkit)

Module 9 | Reconnaissance and Exploitation of Linux/Unix Services

- User Enumeration
- Linux/Unix Service Enumeration
- Linux/Unix Vulnerabilities
- Privilege Escalation
- Password Cracking

Module 10 | Reconnaissance and Exploitation of Web-Based Applications

- Web Protocols
- Web Servers
- Web Application Structure Discovery
- Cross-Site Scripting (XSS)
- SQL Injection
- Directory Traversal

- File Uploads
- Command Execution

Module 11 | Assessing Databases

- Microsoft SQL Server
- Oracle RDBMS
- MySQL

Module 12 | Maintaining Access and Covering Tracks

- Msfvenom
- Clearev

Module 13 | Documentation and Reporting

- Writing Pen Test Reports

Module 14 | Course Review

- CTF Scenario
  In this workshop you will apply skills acquired during the course to conduct a full penetration test in an isolated environment.

Exam

The CPT-INF practical certification exam covers Hands-On material from all 14 modules. The exam duration is 2.5 hours. Passing Grade = 70%.

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