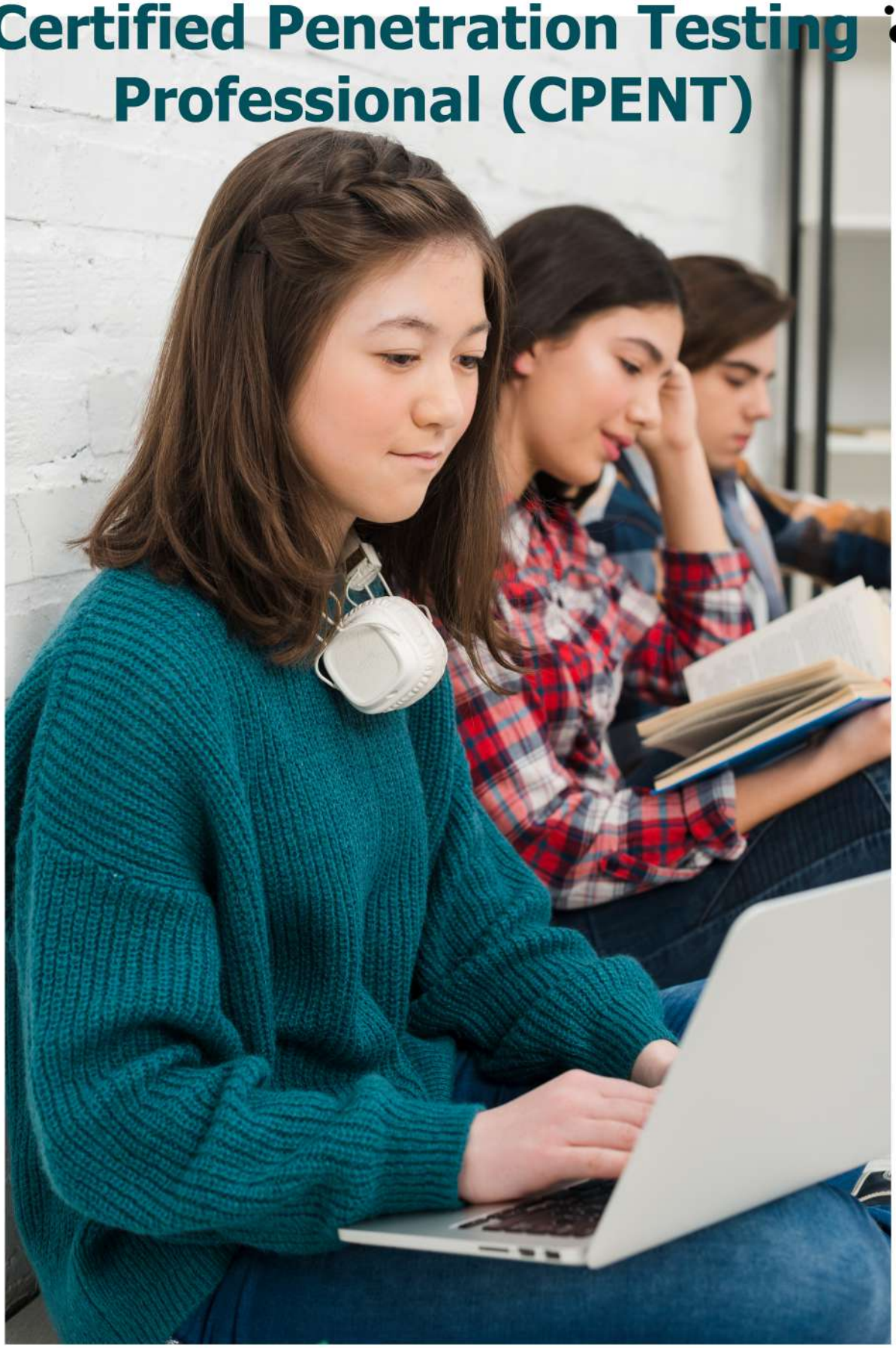
Certified Penetration Testing Professional (CPENT)

Zetlan Technologies



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Online Course

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Course Modules

1.Introduction to Penetration Testing

- Penetration Testing
- Penetration Testing Service Delivery Models
- ROI for Penetration Testing
- Types of Penetration Assessment
- Strategies of Penetration Testing
- Selection of Appropriate Testing Type
- Different methods of Penetration Testing
- Common Area of Penetration Testing
- Penetration Testing Process
- Penetration Testing Phases
- Penetration Testing Methodologies
- EC-Council LPT Methodology
- Qualities of a Licensed Penetration Tester
- Characteristics of Good Penetration test
- Ethics of a Penetration tester

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2.Penetration Testing Scoping and Engagement

- Pre-engagement Activities
- Initiation of a Pen Testing Engagement Process
- Rules of Engagement
- Penetration Testing Schedule
- Identifying the Reporting Time Scales
- Deciding the time of day for the Test
- ROE Document
- Penetration Testing contract
- Penetration Testing Rules of Behaviour
- Confidentiality and Nondisclosure Agreement Clauses
- Identifying the Security Tools Required for the Penetration Test
- Preparing the Test Plan
- Penetration Testing Hardware/Software Requirements
- Mission Briefing
- Scope Creeping

3.Open-Source Intelligence (OSINT)

- OSINT through the WWW
- OSINT through website Analysis
- OSINT through DNS Interrogation
- Who is Lookups
- Reverse Lookups
- DNS Zone Transfer
- Traceroute Analysis
- Automatg the OSINT Process usg Tools / Frameworks / Scripts

4.Social Engineering Penetration Testing

- Social Engineering Penetration Testing
- Social Engineering Penetration Testing Modes
- Social Engineering Penetration Testing Process
- Social Engineering Using Email
- Phishing
- Spear Phishing
- Whaling
- Phone (Vishing)
- SmiShing (SMS Phishing)
- Social Engineering Using Physical Attack Vector
- Piggybacking / Tailgating
- Eavesdropping
- Dumpster Diving
- Reverse Social Engineering
- Social Engineering Using Motivation Techniques
- Social Engineering Countermeasures

5. Network Penetration Testing – External

- Network Penetration Testing
- External vs Internal Penetration Testing
- External network Penetration Testing
- Internal network Penetration Testing
- Network Penetration Testing Process
- Port Scanning
- Fingerprinting the OS
- Examining the Patches Applied to the Target OS
- Fingerprinting the Services
- External Vulnerability Assessment
- Searching & Mapping the Target with the Associated Security
- Find out the Security Vulnerability Exploits
- Running the Exploits against Identified Vulnerabilities

6.Network Penetration Testing – Internal

- Interna Network Penetration Testing
- Footprinting
- Network Scanning
- Scanning Analysis
- Scanning Methodology
- OS and Service Fingerprinting
- Identifying the OS
- SMB OS Discovery
- Manual Banner Grabbing
- Identifying the services
- Displaying services within Metasploit
- Map the internal network
- Enumeration
- Vulnerability assessment
- Internal Vulnerability Assessment Report
- Scan Analysis Process
- Windows Exploitation
- Unix / Linux Exploitation
- Attempt Repay Attacks
- Attempt ARP Poisoning
- Attempt Mac Flooding
- Conduct a Man-in-the-Middle Attack

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- Attempt DNS Poisoning
- Automated Internal Network Penetration Testing
- Post Exploitation
- Pivoting
- Port Forwarding
- OS Discovery
- Proxychains
- Web Shells

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7.Network Penetration Testing – Perimeter Devices

- Assessing Firewall Security Implementation
- Testing the Firewall from Both Sides
- Find Information about the Firewall
- Enumerate Firewall Access Control List Using Nmap
- Scan the firewall for Vulnerabilities
- Trying to Bypass the Firewall using various Techniques
- Assessing IDS Security Implementation
- Common Techniques used to Evade ISD System
- Test for Resource Exhaustion
- Test the IDS by using various Techniques
- Assessing security of Router Operating System and its cersion
- Identify Protocols Running
- Gain Access to the Router
- IP Spoofing
- Router Penetration Testing using secure Cisco Auditor (SCA)
- Assessing Security of Switches
- Test for Address of Cache Size
- Test for Data Integrity and Error Checking
- Test for Frame Error Filtering
- Test for VLAN Hopping
- Test for MAC table Flooding
- Testing for ARP Attack

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9.Wireless Penetration Testing

- Wireless Penetration Testing
- Wireless Local Area network (WALN) Penetration Testing
- Discovering the Wireless Networks
- Detect Wireless Connections
- Use a Wireless Honeypot to Discovr Vulnerable wireless Clients
- Preforming a Denia-of-service Attack
- Attempt Rapid Traffic Generation
- Attempt Single-packet Decryption
- Perform an ARP Poisoning Attack
- Creak WPA-PSK Keys
- Creak WPA/WPA2 Enterprise Mode
- Check for MAC Filtering
- Spoof the MAC Address
- Create a Direct Connection to the Wireless Access Point
- Introduction to RFID Penetration Testing
- Perform Reverse Engineering
- Perform Power Analysis Attack
- Perform Eavesdropping
- Perform an MITM Attack
- Perform a DoS Attack
- Perform RFID Cloning / Spoofing

- Perform an RFID Replay attack
- Perform a Virus Attack
- Oscilloscopes
- RFID Antennas
- RFID Readers
- Introduction to NFC Penetration Testing
- Perform Data Corruption Attack
- Perform a MITM Attack

10. IoT Penetration Testing

- IoT
- Popular IoT Hacks
- IoT Challengers
- IoT Penetration Testing
- Abstract IoT testing Methodology
- Attack Surface Mapping
- IoT Architecture
- Typical IoT Vulnerabilities
- Steps to Analysing the IoT Hardware
- Firewall Attacks
- Attack Surface Map
- Sample Firewall Analysis Process
- Binwalk to Extract the File System
- Firmware Emulation

11. OT/SCADA Penetration Testing

- IT vs OT System Architecture
- ICS / SCADA Protocols
- Modbus
- ICS and SCADA Pen Testing
- Attack Monitoring
- Testing Environment
- Penetration Testing Actions
- Host Attack Types
- Network Attack Types
- Port of SCADA
- Attack Modification
- OT Testing Tools
- BACnet
- Commercial SCADA Fuzzing Tool
- Danger of Port Scanning
- Types of Vulnerability Scans
- Device Separation
- ICS Cyber test Impact

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12. Cloud Penetration Testing

- Cloud Computing Security and Concerns
- Security Risk Involved in Cloud Computing
- Role of Penetration Testing in Cloud Computing
- Scope of Cloud Pen Testing
- Shared Responsibilities in Cloud
- Penetration Testing Process
- Identifying the Type of Cloud to be Tested
- Identifying Tools for Penetration Testing
- Perform a Detailed Vulnerability Assessment
- AWS Specific Penetration Testing
- Attempt to Identify S3 Buckets
- Azure Specific Penetration Testing
- Google Cloud Platform Specific Penetration Testing
- Google Cloud's Provision for Penetration Testing

13. Binary Analysis and Exploitation

- Binary Coding
- Machine Instructions
- Sample Stack Frame
- C Program Memory
- Analyzing Binaries
- Registers
- Important IA-32 Instructions for Pen Testing
- Executable and Linkable Format
- Advanced Binary Analysis
- Obfuscation Challenges
- Binary Instrumentation
- IA-64
- Binary Analysis Methodology
- Sample Program
- ASLR
- Return-to-libc vulnerability
- Defeating the No-execute Stack
- 64-bit Fundamentals
- Attack using ROP

14. Report Writing and Post Testing Actions

- Goal of the Penetration Testing Report
- Penetration Testing Deliverables
- Report Formats
- Types of Pen Test Reports
- Characteristics of a Good Pen Testing Report
- Phases of Report Development
- Sample Pen Testing Report Format
- Report Components
- Penetration Testing Report Analysis
- Section of the Penetration Testing Report
- Pen Test Team Meeting
- Research Analysis
- Prioritize Recommendations
- Delivering Penetration Testing Report
- Letter of Attestation
- Cleanup and Restoration
- Report Retention
- Sign-ff Document
- Post-Testing Actions for Organizations
- Develop an Action Plan
- Develop and Implement data Backup Plan
- Create a Process for Minimizing Misconfiguration Chances
- Updates and Patches

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