





## Advanced Infrastructure Attacks

CR109



#### **Advanced Infrastructure Attacks**

#### Outline

IT and security teams are responsible for meeting cyber challenges that involve the technical layer of the organization. This course is designed to help such teams build and maintain secure networks and systems, protect data, implement vulnerability management programs, initiate strong access control measures, regularly monitor and test networks, and maintain consistent information security policies. This course also introduces various attack vectors that can be used by pen testers to breach internal systems.



#### Target Audience

This course was designed for:

- Personnel with IT background, skill, and experience, and high-level knowledge of both Linux and Windows operating systems.
- Personnel with knowledge of information security, computer networking & common protocols.
- Personnel with an understanding of security-related terms.



#### Prerequisites

Before attending this course, Personnel must have the following technical knowledge:

- Basic knowledge of the Linux OS.
- Basic knowledge of the Windows OS.
- Basic knowledge of networking.



#### Objectives

Upon completing this course, graduates will be able to:

- Enumerate an organization.
- Perform lateral movement in a network.
- Gather information about an organization via LDAP.
- Bypass security measures.
- Collect users and passwords over a network.
- Exploit common protocols.
- Use PowerShell as a weapon.



## Module 01 Enumerating an Organization

- Windows domain environment
- Domain enumeration techniques
- Manual enumeration
- Automatic enumeration

#### Module 02 Lateral Movement

- Manual Lateral Movement
- PsExec
- **I** WMI
- WinRM
- Pass the Hash

## 2 SMB Relay & Responder

- Broadcasting
- LLMNR Manipulation
- Hash Evolution
- Responder
- SMB Relay
- Inveigh

#### PowerShell as a Weapon

- PowerShell Fundamentals
- PowerShell ISE
- PowerShell Modules
- Attack with PowerShell
- PowerShell to EXE



**build and maintain** secure networks and systems, **protect data** and implement vulnerability management programs"

## Module 05 3 Office Exploitation

- Macro & VBA
- Word Exploitation
- Excel as a weapon
- PowerPoint exploit
- Macro Obfuscation
- SFX
- Social Engineering technique

## Module 06 Exploiting Services

- Basic Enumeration
- Vulnerability search
- Services features
- SearchSploit
- Misconfiguration bugs
- RDP Enumeration

## Module 07 Veil Framework & Obfuscation

- What is obfuscation?
- Types of obfuscation
- Packing
- Various tools
- Tools comparison
- Multi-layered obfuscation

## Module 08 4 Reverse Shell & Tunneling

- Shell
- Reverse Shell
- Remote connections
- Firewall Evasion
- ICMP Tunneling
- SSH Tunneling
- DNS Tunneling

#### Module 09 Kerberoasting & Pass the Ticket

- Kerberos Authentication
- Kerberos Traffic Analysis
- Kerberoasting
- Pass the Ticket
- Golden Ticket
- Domain Replications

#### Module 10 5 Challenge

I The students will receive a challenge and will try to hack according to the learning material to the targeted machine/services.



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