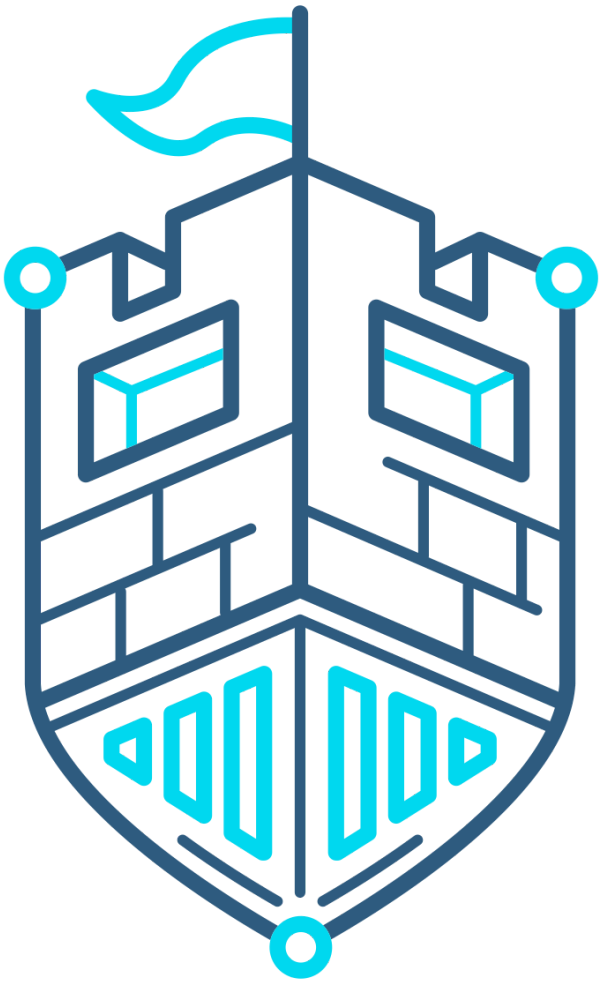
Security Operations and Defensive Analysis

Syllabus



- Visual Basic Script (VBScript)
- PowerShell

d. Programming on Windows
- Component Object Model
- .NET and .NET Core

e. Windows Event Log
- Introduction to Windows Events
- PowerShell and Event Logs

f. Empowering the Logs
- System Monitor (Sysmon)
- Sysmon and Event Viewer
- Sysmon and PowerShell
- Remote Access with PowerShell Core

g. Wrapping Up

5. Windows Server Side Attacks

a. Credential Abuse
- The Security Account Manager (SAM) and Windows Authentication
- Suspicious Logins
- Brute Force Logins

b. Web Application Attacks
- Internet Information Services (IIS)
- Local File Inclusion
- Command Injection
- File Upload

c. Binary Exploitation
- Binary Attacks
- Windows Defender Exploit Guard (WDEG)

d. Wrapping Up

6. Windows Client-Side Attacks

a. Attacking Microsoft Office
- Social Engineering and Spearphishing
- Installing Microsoft Office
- Using Macros

b. Monitoring Windows PowerShell

- Introduction to PowerShell Logging
- PowerShell Module Logging
- PowerShell Script Block Logging
- PowerShell Transcription
- Case Study: PowerShell Logging for Phishing Attacks
- Obfuscating/Deobfuscating Commands

c. Wrapping Up

7. Windows Privilege Escalation
   a. Privilege Escalation Introduction
      - Privilege Escalation Enumeration
      - User Account Control
      - Bypassing UAC
   b. Escalating to SYSTEM
      - Service Creation
      - Attacking Service Permissions
      - Leveraging Unquoted Service Paths
   c. Wrapping Up
8. Linux Endpoint Introduction
   a. Linux Applications and Daemons
      - Daemons
      - Logging on Linux and the Syslog Framework
      - Rsyslog Meets Journal
      - Web Daemon Logging
   b. Automating the Defensive Analysis
      - Python for Log Analysis
      - DevOps Tools
      - Hunting for Login Attempts
   c. Wrapping Up
9. Linux Server Side Attacks
   a. Credential Abuse
      - Suspicious Logins
      - Password Brute Forcing
   b. Web Application Attacks
      - Command Injection

        SQL Injection
    c. Wrapping Up
10. Linux Privilege Escalation
    a. Attacking the Users
        Becoming a User
        Backdooring a User
    b. Attacking the System
        Abusing System Programs
        Weak Permissions
    c. Wrapping Up
11. Windows Persistence - *coming soon*
12. Network Detections - *coming soon*
13. Antivirus Alerts and Evasion - *coming soon*
14. Network Evasion and Tunneling - *coming soon*
15. Active Directory Enumeration - *coming soon*
16. Windows Lateral Movement - *coming soon*
17. Active Directory Persistence - *coming soon*
18. SIEM pt 1: Intro to ELK - *coming soon*
19. SIEM pt 2: Combining the Logs - *coming soon*