Panel: Actions with Impact. Lessons Learnt from Schools Conducting Ethical Hacks

12:20pm - 12:50pm

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What Is An Ethical Hack?

What is Ethical Hacking?

- Proactive security practice
- Pre-approved
- Defined scope
- Professionals simulating cyber-attacks on a network, system or application
- Seeking to identify and exploit vulnerabilities before malicious actors
- Report of vulnerabilities and rectification guidance is provided
- Usually an NDA is signed
- Also known as ‘Penetration Testing’

Essential to:

- uncover security weaknesses
- assess systems configuration and defense mechanisms
- ensure resilient cybersecurity posture
- heighten your cyber security defences

What should Ethical Hacking achieve?

Ethical hackers:

- prevent malicious hackers from breaching an organization's network
- identify system vulnerabilities that others may exploit
- analyze and enhance an organisation’s security policies
- help protect customer data

Ethical Hacking Skills

- Knowledge of operating environments such as Windows, Linux, Unix, OSX/iOS
- Familiarity with programming languages such as HTML, PHP, Python, etc.
- In-depth understanding of networking
- Awareness of local security laws and standards
- Understanding the architecture of the operating system
- Can analyse malware and reverse engineer

Types Of Ethical Hackers

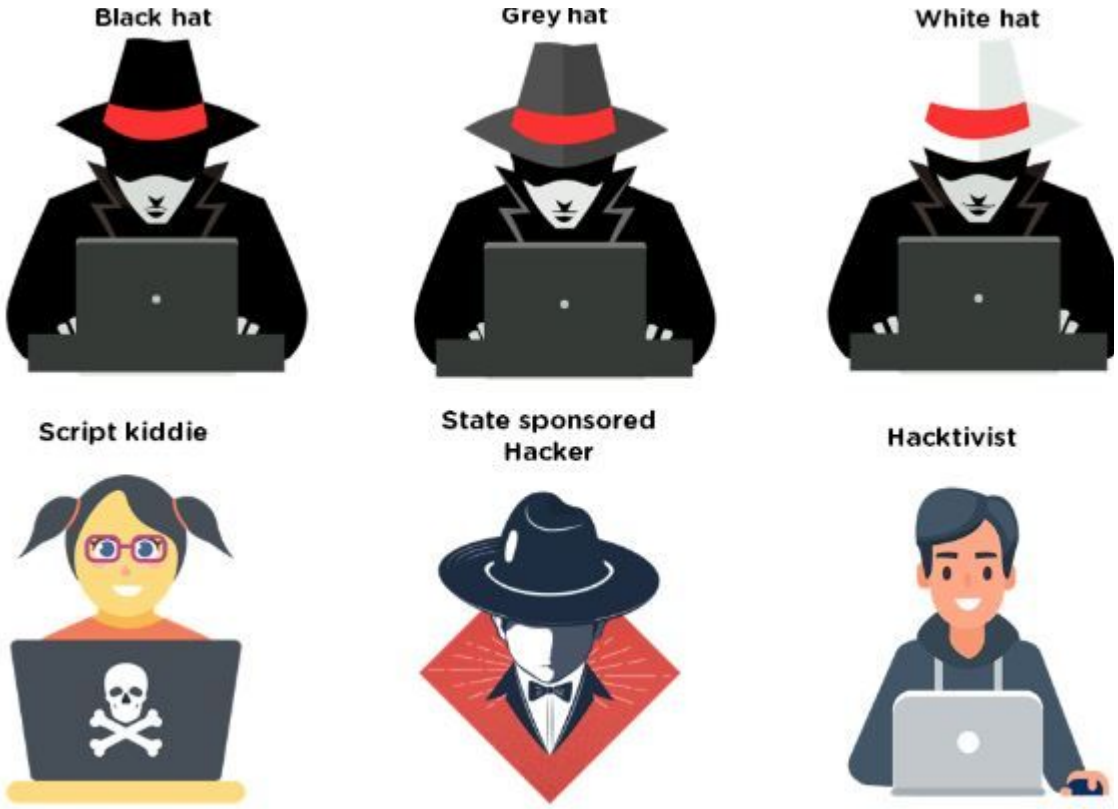


Image source: https://www.simplilearn.com/ethical-hacking-tutorial-article

Strategies Ethical Hackers Commonly Deploy

Wireless Network Testing

Physical Testing

Social Engineering

Vulnerability Scanning

The Ethical Hack Process

1: Statement of Work

- Quote
- Agreed scope and timeframe
- Formal approval process
- NDA

2: External Pen Testing

- Remotely testing school's IP addresses etc
- Best practice is to start with external testing

3: Internal Pen Testing

- Remote engineer
- Using organisation provisioned device
- With basic user privileges

4: Report

- Results of testing
- With evidence
- Vulnerabilities categorised into critical, high, medium and low risk

5: Remediation

- Steps to remediate exposed vulnerabilities
- Often requires significant time and resources

6: Retest

- At an agreed upon time
- Included in original scope
- Used to test the effectiveness of remediation steps

Participants In Ethical Hacking

Red Team

- Simulates a real-world attack
- Uses the same tactics, techniques and procedures that a cybercriminal would
- Objective to attack the school's systems and exploit vulnerabilities to gain unauthorised access

Blue Team

- Is responsible for defending against the simulated attacks
- Assess how well the school's cybersecurity team can respond to attacks and detect intrusions in real-time

Purple Team

- A more collaborative approach
- Combines the strengths of both the Red and Blue Teams
- The two teams work together to improve the school's security posture
- Also known as "Red Team/Blue Team"

Purpose

AISNSW partial grants provided to:

Activate Ethical Hacking

Promote Member Schools' cyber resilience

Awarded 53 Schools CAF Grant totaling : $213,850

Why the traditional approach does not work for schools

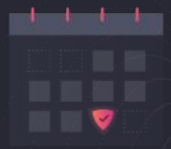
Traditional framework-based assessments assume there's only one way to reach maturity, but reality is more complex…

Oversimplification

- Frameworks assume minimum security foundations
- Schools need flexible, adaptable approaches

Knowledge Gap

- Assumes security expertise exists
- Most schools lack dedicated security teams



Implementation Guidance

- Too many generic recommendations at once
- Need prioritisation with achievable steps