Ethical Hacking Roadmap

Cybersecurity & Ethical Hacking Roadmap

This roadmap will guide you from **beginner** to **professional** in cybersecurity and ethical hacking. \mathcal{Q}

Beginner Level - Foundations

At this stage, focus on learning **networking**, **Linux**, **cybersecurity basics**, **and scripting**. Understanding the fundamentals is crucial before moving on to hacking techniques.

(iii) Websites & Platforms

- <u>TryHackMe</u> A Interactive cybersecurity challenges.
- OverTheWire - Learn Linux and security through war games.
- <u>Cybrary</u> = Free and paid cybersecurity courses.
- <u>Udemy</u> - Various cybersecurity courses for beginners.

- Blue Team Labs () Defensive cybersecurity exercises.

YouTube Channels

- A NetworkChuck Networking, Linux, and ethical hacking.
- David Bombal Networking fundamentals and security basics.
- Penetration testing & ethical hacking.
- **P IppSec** Walkthroughs of Hack The Box challenges.
- And Cybersecurity tricks.
- **% Computerphile** Concepts in computer security.

Essential Topics to Learn

- Networking OSI Model, TCP/IP, DNS, HTTP(S), VPNs, Proxies.
- The Linux & Bash File system, user management, permissions, scripting.
- Mindows Basics Registry, PowerShell, Group Policies, Active Directory.
- Programming & Scripting Python, Bash scripting.
- Cybersecurity Basics Encryption, hashing, firewalls, VPNs.
- Web Security SQL Injection, XSS, CSRF, OWASP Top 10.

Intermediate Level - Web Security & Exploitation

At this stage, start focusing on web application security, scripting, and penetration testing.

Websites & Platforms

- Hack The Box Advanced penetration testing labs.

- <u>HackerOne</u> - Bug bounty platform.
- Web Security Academy Learn OWASP top 10 & Burp Suite.

A YouTube Channels

- STÖK Bug bounty hunting & web security.
- **LiveOverflow** Exploit development and security research.
- NahamSec Web application security & bug bounty.

Intermediate Topics to Learn

- **()** Penetration Testing Kali Linux, Metasploit, enumeration, privilege escalation.
- O Web Security SQL Injection, XSS, CSRF, LFI, RFI.
- Active Directory (AD) Hacking Kerberos, BloodHound, Pass-the-Hash.
- Q OSINT (Open Source Intelligence) Information gathering.
- Tools to Master Nmap, Wireshark, Burp Suite, Gobuster, Hydra, John the Ripper.

Advanced Level - Red Teaming & Exploit Development

At this level, focus on red teaming, exploit development, and malware analysis.

Websites & Platforms

- Exploit Database Exploit collection.
- Flare-On - Reverse engineering & malware analysis.
- Red Team Ops
 Advanced penetration testing.
- MalwareTech Blog - Malware analysis resources.

Marcola YouTube Channels

- E Seytonic Cybersecurity & hacking news.
- HackerSploit Red teaming & exploit development.

• Security Researcher LiveOverflow - Advanced hacking concepts.

Advanced Topics to Learn

- Red Teaming Lateral movement, evasion techniques.
- K Exploit Development Buffer overflows, ROP chains.
- Malware Analysis Reverse engineering, rootkits.
- Post-Exploitation Techniques Persistence, privilege escalation.

Recommended Certifications

- **Beginner:** CompTIA Security+ **(**) Cybersecurity basics.

Y Additional Resources

Podcasts & Blogs

- Malwarebytes Blog O Cybersecurity research.
- Red Team Blog by SpecterOps P Red teaming tactics.

Best Books

- The Web Application Hacker's Handbook Web security techniques.
- The Art of Exploitation ____ Exploit development.