

Forum:[Hack Forums](#)

Thread: [Research Post - Penetration Testing and Digital Forensics in Ethical Hacking \[By Code](#)

code-29 - July 16, 2025, 2:50 am

Hello HackForums ?

-My name is Code-29. I am a student currently learning and exploring the field of ethical hacking ????. I am particularly focused on two important areas in cybersecurity: penetration testing and digital forensics. This is a short research-based post I created to better understand these subjects and share knowledge with others who are also starting their journey.

? Penetration Testing

-Penetration testing, often called pentesting, is the process of simulating cyberattacks on systems, networks, or applications to find security vulnerabilities before a malicious hacker can exploit them. The purpose is to improve defenses and fix weaknesses. Pentesting plays a key role in prevention ?.

There are different types of pentesting:

? Black Box – no prior knowledge

? White Box – full access

?? Gray Box – partial access

? Common tools include:

- Nmap

- Metasploit

- Burp Suite

- Nikto

- Hydra

- Pentesters test systems like web applications, servers, wireless networks, and APIs ?.

? Digital Forensics

Digital forensics is used after an attack has happened. It involves investigating and analyzing digital evidence to understand what occurred, how, and by whom. It is vital for incident response and sometimes for legal investigations ?.

Main areas include:

- ? Computer Forensics

- ? Mobile Forensics

- ? Network Forensics

- ? Cloud Forensics

? Common tools:

- Autopsy

- FTK

- Volatility

- Wireshark

? Key Difference

Pentesting = Prevent attacks before they happen ?

Forensics = Investigate after something goes wrong ?

? My Focus

As a student, I am actively learning through TryHackMe, Hack The Box, and CTF challenges. I hope to pursue certifications like:

- ? CEH

- ? OSCP

- ? CHFI

- I aim to become a well-rounded cybersecurity professional working in red teams and investigations.

- If anyone here has tips, resources, or wants to collaborate, I'd love to connect ?. Thank you for reading my first post!

— Code-29

? "Hack legally. Investigate ethically. Defend globally."??