



# Ethical Hacking Advance

## (HackNEX 2 – 1 Day)

2 Days Workshop | 16 February 2019 | IIT (BHU) Varanasi

### EISYSTEMS SERVICES

FF-113, Express Greens Plaza, Sector 1, Vaishali – Ghaziabad -201010  
W: [www.eisystems.in](http://www.eisystems.in) | P: (+91) 977 3976 977 | E: [technex@eisystems.in](mailto:technex@eisystems.in)

## Prerequisites & Eligibility

- This is not a basic level workshop.
- The course and curriculum of this workshop is more inclined towards Computer Science/Information Technology/Computer Applications department however anybody can join this workshop even from different department.
- It will be better if participant join basic level 2 days workshop on Ethical Hacking & Whatsapp Security.
- Participants are expected to bring their laptop (Windows Platform only)
- Mode of Training/Teaching will be English only.

## Workshop Fees, Certification & Kit Deliverables

- Workshop Fees: Rs. 600 per participant.
- Certification from Technex IIT BHU Varanasi and EISystems Services.
- EISystems Technex Summer Internship & Training Voucher of Rs. 1000 if join with basic level Ethical Hacking workshop.

### Note

All of the participants registering for any Technex workshop will be required to pay Technex Registration charges along with workshop charges to get eligible for joining the workshop.

## Content Outline

### Session 1

#### Ethics & Hacking

- Hacking history : How it all begin
- Why is security needed?
- What is ethical hacking?
- Ethical Hacker Vs Malicious hacker
- Types of Hackers
- Building an approach for ethical hacking
- Steps in Ethical hacking

#### Basics of Internet, Networking & Hacking

- What is a Network?
- Types of network – LANs, WANs & WLANs
- What is Internet?
- History of the Internet
- Basic Structure
- What is a Server?
- What is an IP Address?
- What is a domain name?
- IP-Domain Relation
- Client-Server Relationship Model
- Internet networking
- What is a port?
- What is Programming?
- Types of programming languages.
- What is a Programming loophole or error?

## Session 2

Information gathering & Google Hacking (Practical)

- Whois access (Demo)
- Maltego (Demo)
- 123people.com (Demo)
- Ip scanning (Demo)
- Port scanning (Demo)
- Network scanning & its tools (Demo)
- What is Google and how does it work?
- Google tricks (Demo)
- Basic hacks (Demo)
- How can Google hacking help an Ethical Hacker? (Demo)
- Accessing online remote cameras

Windows security (Practical)

- Windows security (Demo)
- Registry (Demo)
- Port & Services (Demo)

## Session 3

SQL injections attacks (Practical)

- Introduction of SQL
- What is SQL injection
- Checking SQL injection vulnerability (demo)
- Basic strategy of SQL injection (Demo)
- Getting login credentials using SQL injections (Live Demo)
- Using SQL to login via middleware language (Demo)
- URL and Forms (Demo)
- SQL Query SELECT, DROP etc. (Demo)
- SQL cheat sheets (Demo)
- Using source changes to bypass client side validation (Demo)
- Live demonstration of the attack (Demo)
- Using SQL injection tools (Demo)
- Importance of server side validation (Demo)
- How to protect your system from SQL Injections (Demo)

Man-in-the-middle attack (MITM Attack) (Practical)

- What is Man-in-the-middle attack?
- What is Backtrack linux (Most common unix system for ethical hacking)?
- Preparation for Man-in-the-middle attack (Demo)
- Setting ettercap tool for the attack (demo)

Identifying victim (Demo)

- Cache poisoning (Demo)
- Routing table modification (Demo)
- Eveasdropping (Demo)
- Countermeasures against MITM attack (Demo)

## Session 4

Phishing, Trojan & Viruses

- What is phishing?
- Social engineering used in phishing (Demo)
- Phishing attack (Demo)
- Phishing sites (Demo)
- Protection against phishing (Demo)
- Viruses: Trojans, Worms, Malware, Spyware
- Modes of spreading
- Different Ways a Trojan can Get into a System (Demo)
- Creation of Trojan using cybergate (Demo)
- Attacking a system using our created trojan (Demo)
- Indications of a Trojan Attack (Demo)
- Some Famous Trojans and Ports They Use (Demo)
- How to Detect Trojans? (Demo)
- How to Determine which Ports are Listening (Demo)
- Netstat

Session hijacking & Cookie grabbing

- What are cookies? (Demo)
- Reading and writing cookies (Demo)
- Passive Vs Active session hijack (demo)
- TCP sessions and HTTP sessions (Demo)
- TCP session hijacking: Telnet (Demo)
- Stealing Cookies to hijack session using: XSS (Demo)
- Sniffers (Demo) - Spoofing (Demo)
- Spoofing Vs Hijacking
- Types of Hijacking
- Protection against session Hijacking (Demo)

## Session 5

Social Network Attacks (Facebook, WhatsApp & Gmail)

- Overview of Social Engineering - Case Study
- Example of Social Engineering Attack
- Java Applet Attack (Demo) -WhatsApp Security -Facebook Security -Gmail Security

Call & SMS Spoofing

- What is Fake SMS & Call?
- Method of generating fake SMS & Calls (Demo)
- Actions to be taken for fake SMS and Calls (Demo) Indian IT Act & Cybercrime
- IT ACT 2000
- Cyber crime/terrorism and its type
- Sections in the Indian constitution Sec. 65, 66 A,B,C, D , 67, 69 etc.
- Penalty in all sections of Indian constitution

DNS Spoofing:

- What is DNS Spoofing?
- How does it work?
- How to secure yourself?

## Session 6

### Email Forging & Tracing

- How does an email work?
- Tracing an email (Demo)
- Spam

### Firewalls & Keyloggers (Demo)

- Detecting fake emails (Demo)
- What is a firewall? & How can it help you
- How a firewall works
- What are key loggers? (Demo)
- Types of key loggers? (Demo)

## Disclaimer

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