

Indian Institute of Technology Jodhpur

Computer Science and Engineering Department

Lab 9

CSL6010 - Cyber Security

Date: 27-03-2025

Marks: 10

Objective:

- 1. Understand the concept and impact of MITM attacks.**
- 2. Learn how to perform MITM attacks using Kali Linux tools.**
- 3. Explore defensive measures against MITM attacks.**

Tools Required:

- Kali Linux
- Ettercap
- Wireshark
- Bettercap
- arpspoof
- A local network with multiple devices (Use 2 VMs/Systems)

Tasks:

1. ARP Spoofing

- Explain the concept of ARP Spoofing and how it can be used in a MITM attack.
- Identify the target IP and gateway on the local network.
- Perform an ARP Spoofing attack using an appropriate tool in Kali Linux.
- Capture and analyze network traffic to extract useful information.
- Discuss methods to prevent ARP Spoofing attacks.

2. DNS Spoofing

- Describe how DNS Spoofing works and its impact on security.
- Configure and execute a DNS Spoofing attack using Kali Linux.
- Redirect a target machine to a fake website and analyze the results.
- Explain how DNS Security Extensions (DNSSEC) can help mitigate such attacks.

Submission Requirements:

- Include relevant screenshots demonstrating your experiments.
- Submit only a single **PDF** file.