

## Lab 2: Reconnaissance using Nmap and Exploitation

### Lab Instructions

You are required to complete the following tasks for this lab:

- Task 1 - Introduction.
- Task 2 - Host Discovery.
- Task 3 - Scan a Target (Including Subtasks).
- Task 5 - Nmap scripting engine.
- Exploit one of the three vulnerabilities given in the Exploit Lab manual and complete the given Goal(s).

### Submission Requirements

For each task, include the following in your report:

- A clear explanation of what you did.
- Relevant screenshots showing successful execution.
- Wireshark packet captures with brief analysis of key packets.
- The chosen attack and its execution process.
- Summary of what happened and why it worked.
- Potential security mitigations for the exploited vulnerability.