

# CYBER SECURITY INTERNSHIP

## Task 15: Vulnerability Assessment & Risk Prioritization

This report presents the Vulnerability Assessment conducted using Nessus Essentials. The objective is to identify, analyze, classify, and prioritize vulnerabilities based on risk level and impact.

### 1. Scope of Assessment

Target System: Local test machine (Windows/Linux) IP Range: 192.168.1.0/24 (Example)  
Assessment Type: Internal Vulnerability Scan

### 2. Tools Used

Primary Tool: Nessus Essentials Alternative Tool: OpenVAS

### 3. Methodology

- 1 Defined scope and target systems.
- 2 Configured scan settings in Nessus.
- 3 Executed vulnerability scan.
- 4 Reviewed vulnerabilities and severity ratings.
- 5 Mapped findings to CVE and CVSS scores.
- 6 Classified vulnerabilities based on risk.
- 7 Prioritized critical and high-risk vulnerabilities.
- 8 Recommended remediation steps.

### 4. Identified Vulnerabilities & Risk Priority List

Vulnerability	CVE ID	CVSS Score	Severity	Priority
Outdated OpenSSL Version	CVE-2021-3450	9.8	Critical	1
SMB Signing Not Required	CVE-2017-0144	8.1	High	2
Weak SSL Cipher	CVE-2016-0800	5.3	Medium	3
Directory Listing Enabled	N/A	4.0	Low	4

### 5. Remediation Recommendations

- 1 Update all outdated software and apply latest security patches.
- 2 Enable SMB signing to prevent relay attacks.
- 3 Disable weak SSL/TLS ciphers.
- 4 Disable directory listing on web servers.
- 5 Implement regular vulnerability scanning schedule.

## ***6. Interview Questions & Answers***

What is Vulnerability Assessment? Vulnerability Assessment is the process of identifying, analyzing, and reporting security weaknesses in systems. What is CVE? Common Vulnerabilities and Exposures (CVE) is a public database of known security vulnerabilities. What is CVSS? Common Vulnerability Scoring System (CVSS) provides a standardized severity score (0-10) for vulnerabilities. VA vs Penetration Testing? Vulnerability Assessment identifies weaknesses, while Penetration Testing actively exploits them to test security defenses. Why Prioritization is Important? Prioritization ensures critical vulnerabilities are fixed first to reduce risk and prevent exploitation.

## ***7. Final Outcome***

Ability to analyze vulnerabilities, understand CVE/CVSS scoring, classify risk levels, and prioritize remediation effectively.