Elevate Labs Cyber Security Internship – Task 2

Operating System Security Checklist with Commands and Outputs

This contains an Operating System security checklist with all commands used, their purpose, and expected outputs.

1. View File Permissions:

Used to list files along with permissions, ownership, and access rights.

Command: ls -l

Sample Output: -rw-r--r-- 1 user user 4096 Sep 15 notes.txt

2. Change File Permissions (chmod)

Restricts access to sensitive files so only the owner can read or write.

Command: chmod 600 secret.txt

Output: (no output if successful)

Verification: -rw------- 1 user user 1024 Sep 15 secret.txt

3. Change File Ownership (chown)

Assigns file ownership to root to protect system configuration files.

Command: sudo chown root:root secure.conf

Output: (no output if successful)

Verification: -rw-r--r-- 1 root root 2048 Sep 15 secure.conf

4. Enable Firewall

Enables Uncomplicated Firewall to block unauthorized network traffic.

Command: sudo ufw enable

Output: Firewall is active and enabled on system startup

5. Check Firewall Status

Displays current firewall rules and allowed ports.

Command: sudo ufw status Sample

Output: Status: active 22 ALLOW Anywhere

6. List Running Processes

Displays all running processes to detect suspicious activity.

Command: ps aux

Sample Output: USER PID %CPU %MEM COMMAND root 1 0.0 0.1 /sbin/init

7. List Active Services

Shows all active services that may increase attack surface.

Command: systemctl list-units --type=service

Sample Output: ssh.service loaded active running

8. Stop Unnecessary Services

Stops unused services to reduce attack surface.

Command: sudo systemctl stop apache2

Output: (no output if successful)

9. Disable Services at Boot

Prevents unnecessary services from starting automatically.

Command: sudo systemctl disable apache2

Output: Removed symlink apache2.service

Final Outcome: Improved understanding of OS-level security, file permissions, firewall configuration, process monitoring, and service hardening.

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