

Rungta College of Engineering and Technology

Department of B.Tech CSE (Cybersecurity)

Minor-2 Project Report

Metasploitable 2 & Mutillidae II Lab

Submitted By:

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Subject: Minor-2 Project

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Abstract

This project focuses on building a controlled vulnerable lab environment using Metasploitable 2 and the Mutillidae II web application. The objective is to gain hands-on experience with Linux system administration, virtualization safety mechanisms, and troubleshooting web application configuration issues.

1.Introduction

This project demonstrates the setup and configuration of an intentionally vulnerable virtual lab using Metasploitable 2 and the Mutillidae II web application. The objective is to understand vulnerable environments, perform basic Linux administrative tasks, and troubleshoot common configuration errors.

2. Environment Setup

Metasploitable 2 is an Ubuntu-based virtual machine designed for security testing and learning. The VM was imported into a virtualization

platform and accessed using default credentials (username: msfadmin, password: msfadmin)

```
Warning: Never expose this VM to an untrusted network!
Contact: msfdev[at]metasploit.com
Login with msfadmin/msfadmin to get started

metasploitable login: msfadmin
Password:
Last login: Mon Jan  5 23:44:41 EST 2026 on tty1
Linux metasploitable 2.6.24-16-server #1 SMP Thu Apr 10 13:58:00 UTC 2008 i686

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To access official Ubuntu documentation, please visit:
http://help.ubuntu.com/
No mail.
msfadmin@metasploitable:~$
```

3. User Management

A new Linux user account was created using my own name to demonstrate system administration skills. The adduser command was used, followed by verification through the /etc/passwd file.

Commands Used:

```
sudo adduser vaishnavi
```

```
cat /etc/passwd | grep vaishnavi
```

```

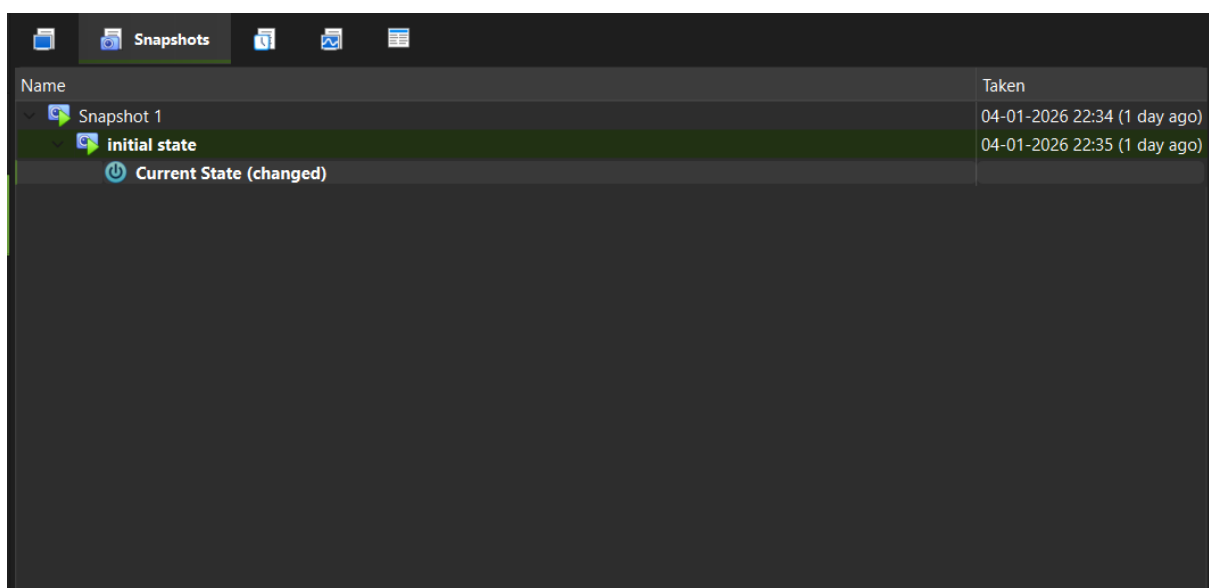
...done.
* Reloading Postfix configuration...
...done.

msfadmin@metasploitable:~$ sudo adduser vaishnavi
[sudo] password for msfadmin:
Adding user 'vaishnavi' ...
Adding new group 'vaishnavi' (1003) ...
Adding new user 'vaishnavi' (1003) with group 'vaishnavi' ...
Creating home directory '/home/vaishnavi' ...
Copying files from '/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for vaishnavi
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [y/N] y
msfadmin@metasploitable:~$ cat /etc/passwd | grep vaishnavi
vaishnavi:x:1003:1003:::/home/vaishnavi:/bin/bash
msfadmin@metasploitable:~$ S_

```

4. Virtual Machine Snapshot

A snapshot was taken after user creation to preserve a safe system state. Snapshots allow easy rollback during testing and troubleshooting.



5. Mutillidae II Database Fix

Initially, Mutillidae II displayed database-related errors due to missing tables. The issue was resolved by using the Setup/Reset Database option within the application, which initialized the MySQL database successfully.

-IP address issued


```
DHCPACK of 10.0.6.72 from 10.0.0.1
bound to 10.0.6.72 -- renewal in 249722 seconds.

msfadmin@metasploitable:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:91:53:93
          inet addr:10.0.6.72  Bcast:10.0.63.255  Mask:255.255.192.0
          inet6 addr: fd8c:d698:b7ea:40cd:a00:27ff:fe91:5393/64 Scope:Global
          inet6 addr: fe80::a00:27ff:fe91:5393/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:7031 errors:0 dropped:0 overruns:0 frame:0
          TX packets:198 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:836003 (816.4 KB)  TX bytes:30911 (30.1 KB)
          Base address:0xd020 Memory:f0200000-f0220000

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:143 errors:0 dropped:0 overruns:0 frame:0
          TX packets:143 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:44197 (43.1 KB)  TX bytes:44197 (43.1 KB)

msfadmin@metasploitable:~$ _
```

-Mutillidae II working.

**Mutillidae: Born to be Hacked**

Version: 2.1.19 Security Level: 0 (Hosed) Hints: Disabled (0 - I try harder) Not Logged In

Home Login/Register Toggle Hints Toggle Security Reset DB View Log View Captured Data


Core Controls

OWASP Top 10

Others

Documentation

Resources



Site hacked...err...quality-tested with Samurai WTF, Backtrack, Firefox, Burp-Suite, Netcat, and these Mozilla Add-ons

@webpwnized

Mutillidae Channel

Developed by Adrian "Irongeek" Crenshaw and Jeremy Druin

Mutillidae: Deliberately Vulnerable PHP Scripts Of OWASP Top 10

Latest Version / Installation

- Latest Version
- Installation Instructions
- Usage Instructions
- Get rid of those pesky PHP errors
- Change Log
- Notes

Samurai WTF and Backtrack contains all the tools needed or you may build your own collection

backtrack

BUILT ON netease

PHP MySQL

Toad

Samurai Web Testing Framework

HACKERS FOR CHARITY

-Mutillidae II database error.

Error: Failure is always an option and this situation proves it	
Line	49
Code	0
File	/var/www/mutillidae/process-login-attempt.php
Message	Error executing query: Table 'metasploit.accounts' doesn't exist
Trace	#0 /var/www/mutillidae/index.php(96): include() #1 {main}
Diagnostic Information	SELECT * FROM accounts WHERE username='nhtr' AND password='jhuek'
Did you setup/reset the DB?	

Warning: Cannot modify header information - headers already sent by (output started at /var/www/mutillidae/process-login-attempt.php:97) in /var/www/mutillidae/index.php on line 148

Warning: Cannot modify header information - headers already sent by (output started at /var/www/mutillidae/process-login-attempt.php:97) in /var/www/mutillidae/index.php on line 254

Warning: Cannot modify header information - headers already sent by (output started at /var/www/mutillidae/process-login-attempt.php:97) in /var/www/mutillidae/index.php on line 255

Warning: Cannot modify header information - headers already sent by (output started at /var/www/mutillidae/process-login-attempt.php:97) in /var/www/mutillidae/index.php on line 256

 **Mutillidae: Born to be Hacked**

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Please sign-in

Name

Password

Login

Don't have an account? [Please register here.](#)


-Mutillidae II database fixed.

```
<?php
    /* NOTE: On Samurai, the $dbpass password is "samurai" rather than blank

    $dbhost = 'localhost';
    $dbuser = 'root';
    $dbpass = '';
    $dbname = 'owasp10';
?>
```

[Wrote 8 lines]

```
msfadmin@metasploitable:/var/www/mutillidae$
msfadmin@metasploitable:/var/www/mutillidae$ _
```


Mutillidae: Born to be Hacked

Version: 2.1.19
Security Level: 0 (Hosed)
Hints: Disabled (0 - I try harder)
Not Logged In

[Home](#)
[Login/Register](#)
[Toggle Hints](#)
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Site hacked...err...quality-tested with Samurai WTF, Backtrack, Firefox, Burp-Suite, Netcat, and these [Mozilla Add-ons](#)

[@webpwnized](#)

 Mutillidae Channel

Developed by Adrian "Irongeek" Crenshaw and Jeremy Druin

Login

[Back](#)

Authentication Error: Bad user name or password

Please sign-in

Name
Password

Dont have an account? [Please register here](#)


Mutillidae: Born to be Hacked

Version: 2.1.19
Security Level: 0 (Hosed)
Hints: Disabled (0 - I try harder)
Not Logged In

[Home](#)
[Login/Register](#)
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[@webpwnized](#)

 Mutillidae Channel

Developed by Adrian "Irongeek" Crenshaw

View your details

[Back](#)

Please enter username and password to view account details

Name
Password

Dont have an account? [Please register here](#)

Results for . 1 records found.

Username=vaishnavi
Password=vaishnavi
Signature=

6.Conclusion

This project successfully demonstrated the setup of a vulnerable lab using Metasploitable2 and the troubleshooting of a real-world configuration issue in Mutillidae II. It enhanced practical understanding of Linux administration, virtualization safety, and web application deployment issues, which are essential skills in cybersecurity.

Appendix: Linux Commands Used

- ifconfig
- sudo adduser vaishnavi
- cat /etc/passwd | grep vaishnavi
- service mysql start
- Accessing [http://\[IP\]/mutillidae/](http://[IP]/mutillidae/)