

Wafw00f and CewL Tool

Name: Samiksha Patil.

Intern ID: 280

Tool Name: Wafw00f

WafW00f – Web Application Firewall Fingerprinting Tool

Description of the Tool

WafW00f is a tool used by penetration testers and ethical hackers to detect and identify Web Application Firewalls (WAFs) in use on a target website. It helps determine if a WAF is present and which vendor or technology is being used.

WafW00f is a Python-based tool that helps security professionals detect and fingerprint Web Application Firewalls (WAFs) on web servers. It is part of the reconnaissance phase in penetration testing.

Features:

1. Identifies over 80+ different WAF products (e.g., Cloudflare, AWS WAF, Akamai, etc.).
2. Works by sending specially crafted HTTP requests and analyzing the responses.
3. Helps plan bypass techniques during a penetration test.

How It Works:

1. WafW00f sends a series of custom HTTP requests (including known malicious payloads like SQLi, XSS, etc.) to the target.
2. It then analyzes the responses (HTTP status codes, headers, redirection behavior, etc.) to identify patterns.
3. Based on these patterns, it matches them against a database of known WAF signatures (like Cloudflare, Sucuri, AWS WAF, etc.).

Why It's Useful:

1. Helps attackers/pen testers know what protections are in place.
2. Helps bypass WAFs (if identified) using proper evasion techniques.
3. Useful in Red Teaming to prepare for advanced attacks.

Platform:

Works on Linux, Windows, and macOS (via Python).

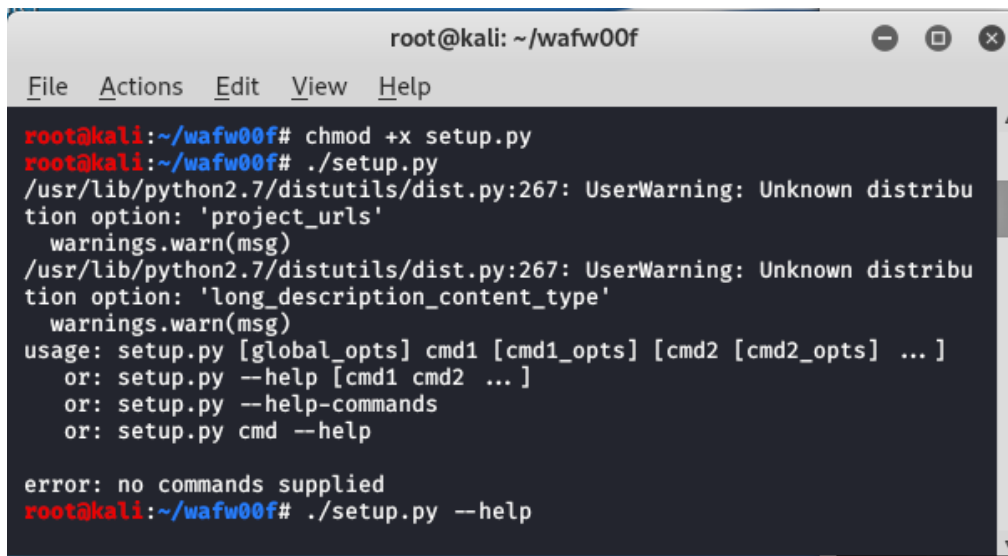
Security Assessment & Reporting:

1. Adds valuable information to vulnerability assessment reports.
2. Shows clients the layers of defense their applications have.

Open-source and Easy to Use:

1. Lightweight tool, command-line based.
2. Great for students, ethical hackers, and researchers learning about web app defense mechanisms.

Used in Kali Linux:



```
root@kali: ~/wafw00f
File Actions Edit View Help
root@kali:~/wafw00f# chmod +x setup.py
root@kali:~/wafw00f# ./setup.py
/usr/lib/python2.7/distutils/dist.py:267: UserWarning: Unknown distribu
tion option: 'project_urls'
  warnings.warn(msg)
/usr/lib/python2.7/distutils/dist.py:267: UserWarning: Unknown distribu
tion option: 'long_description_content_type'
  warnings.warn(msg)
usage: setup.py [global_opts] cmd1 [cmd1_opts] [cmd2 [cmd2_opts] ... ]
   or: setup.py --help [cmd1 cmd2 ... ]
   or: setup.py --help-commands
   or: setup.py cmd --help

error: no commands supplied
root@kali:~/wafw00f# ./setup.py --help
```

Good About The Tool:

WAFW00F is a powerful tool for detecting and identifying Web Application Firewalls (WAFs) protecting websites. Here are some good things about WAFW00F:

- *Accurate Detection:* WAFW00F uses a growing database of known WAFs and their characteristics to ensure high accuracy in detection.
- *Time Efficiency:* Automates the process of identifying WAFs, saving time for security experts and penetration testers.
- *Comprehensive Reports:* Provides detailed reports on detected WAFs, including confidence scores and additional information.¹
- *Improved Security*:* Helps security professionals understand the security posture of web applications and plan their testing approach.
- *Customizable*:* Allows users to pass custom headers, use proxies, and test for specific WAF products.
- *Open-source*:* Actively maintained on GitHub, with a community-driven database of WAF signatures.

Tool Name:Cewl

CeWL – Custom Wordlist Generator for Social Engineering

Description of the Tool

CEWL (Custom Word List Generator) is a tool used in cybersecurity and penetration testing to generate custom wordlists for password cracking.

CeWL (pronounced "cool") is a Ruby tool that spiders a website to collect words from its pages and outputs a custom wordlist. It's commonly used during password cracking or brute-force attacks where default wordlists aren't effective.

Key Features

- 1. **Web crawling:** CEWL crawls a website to gather words and phrases.*
- 2. **Wordlist generation:** It creates a custom wordlist based on the crawled content.*
- 3. **Password cracking:** The generated wordlist can be used with password cracking tools like John the Ripper.*

Use Cases

- 1. Penetration testing: CEWL helps testers identify weak passwords.*
- 2. Security assessments: It aids in evaluating password strength.*

Benefits:

- 1. Customized wordlists: CEWL generates wordlists tailored to specific targets.*
- 2. Improved password cracking: Custom wordlists increase the effectiveness of password cracking attempts.*

How It Works:

CeWL crawls a target website like a bot or browser.

Why It's Useful:

- 1. Highly targeted wordlists are often more effective than generic ones (like rockyou.txt).*
- 2. Great for dictionary attacks with tools like John the Ripper or Hydra.*

Use in Kali linux:

```
root@kali: ~  
File Edit View Search Terminal Help  
root@kali:~# cewl -w /home/cewl/kali_wordlist.txt -d 1 -m 10 -c https://en.wikipedia.org/wiki/Kali_Linux  
cewl 5.4.3 (Arkansid) Robin Wood (robing@digl.ninja) (https://digl.ninja/)  
root@kali:~#  
root@kali:~# head /home/cewl/kali_wordlist.txt  
information, 227  
WikiProject, 133  
guidelines, 121  
Foundation, 118  
Navigation, 99  
Disclaimer, 99  
Contributions, 90  
Discussion, 86  
Introduction, 73  
encouraged, 71  
root@kali:~#
```

Good About The Tool:

CEWL is a powerful tool for cybersecurity professionals and penetration testers. Its ability to generate custom wordlists based on specific targets makes it a valuable asset for identifying weak passwords and improving overall security.

Some benefits of using CEWL include:

- Increased effectiveness: Custom wordlists can lead to more successful password cracking attempts.*
- Targeted approach: CEWL's web crawling feature allows for a targeted approach to password cracking.*
- Time-saving: Automating the wordlist generation process saves time and effort.*

Overall, CEWL is a useful tool for anyone looking to test and improve password security.