uNGINXed

A tool that generates reports about misconfigurations in specified NGINX configuration files.

The reports may be in JSON format or PDF.

Installation Guide

The uNGINXed project relies on Poetry to manage Python dependencies. It is highly encouraged to perform all uNGINXed operations within Poetry's environment.

Follow Poetry installation Guide

Installing uNGINXed Dependencies

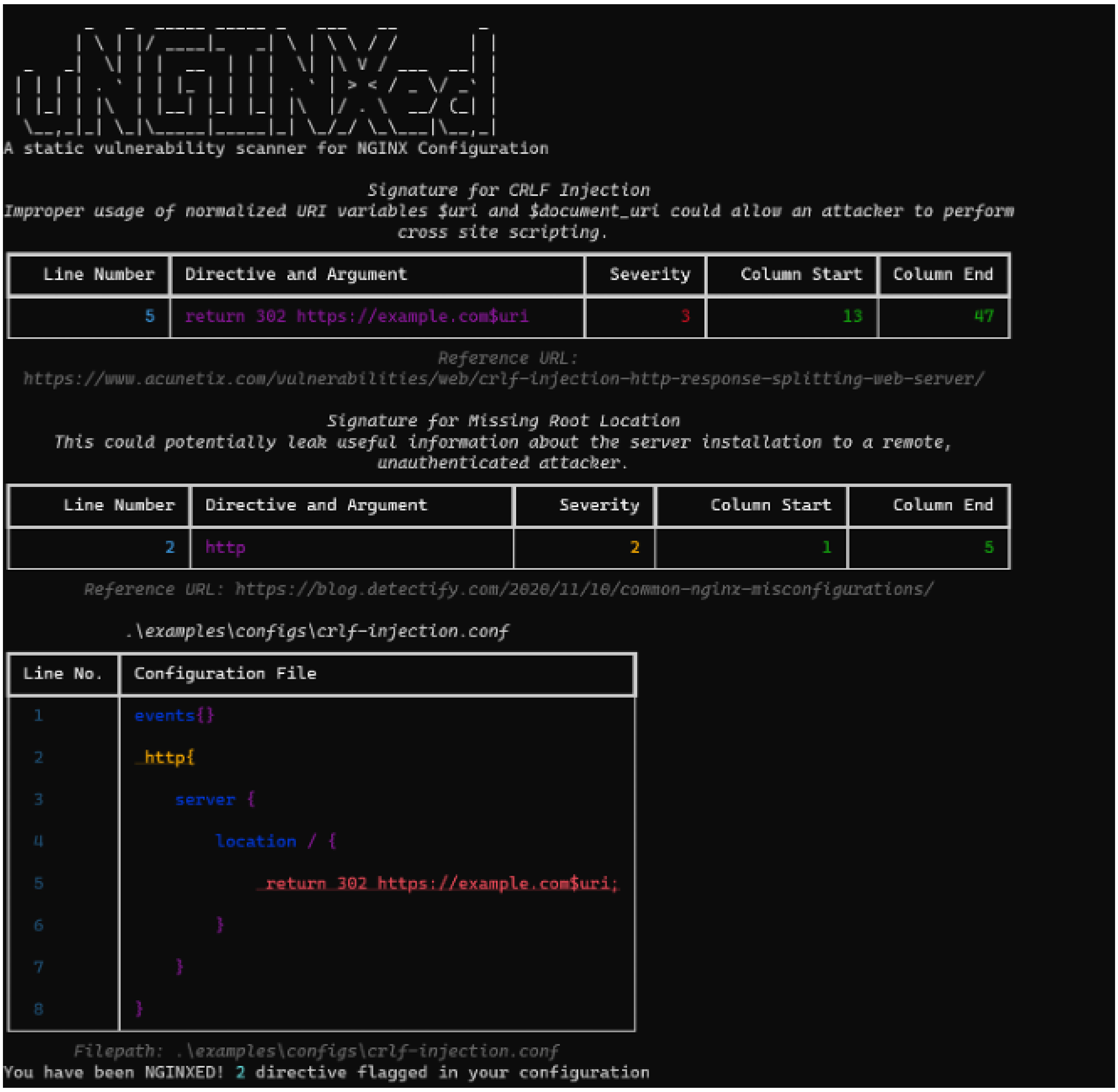
```
poetry install
```

unNGINXed Usage

The uNGINXed engine support scanning of NGINX configurations from the command line.

Command Line Report

```
poetry run python -m unginxed <NGINX Configuration Path> -sv
```



```
       _   _  _____ _____ _   ___   __         _ 
      | \ | |/ ____|_   _| \ | \ \ / /        | |
 _   _|  \| | |  __  | | |  \| |\ V / ___  __| |
| | | | . ` | | |_ | | | | . ` | > < / _ \/ _` |
| |_| | |\  | |__| |_| |_| |\  |/ . \  __/ (_| |
 \__,_|_| \_|\_____|_____|_| \_/_/ \_\___|\__,_|
A static vulnerability scanner for NGINX Configuration

                              Signature for CRLF Injection
Improper usage of normalized URI variables $uri and $document_uri could allow an attacker to perform
                                cross site scripting.
┌─────────────┬────────────────────────────────────────┬──────────┬─────────────┬────────────┐
│ Line Number │ Directive and Argument                 │ Severity │ Column Start│ Column End │
├─────────────┼────────────────────────────────────────┼──────────┼─────────────┼────────────┤
│           5 │ return 302 https://example.com$uri     │        3 │          13 │         47 │
└─────────────┴────────────────────────────────────────┴──────────┴─────────────┴────────────┘
                                    Reference URL:
  https://www.acunetix.com/vulnerabilities/web/crlf-injection-http-response-splitting-web-server/

                          Signature for Missing Root Location
     This could potentially leak useful information about the server installation to a remote,
                               unauthenticated attacker.
┌───────────────┬────────────────────────────────┬─────────────┬──────────────────┬───────────────┐
│   Line Number │ Directive and Argument         │    Severity │     Column Start │    Column End │
├───────────────┼────────────────────────────────┼─────────────┼──────────────────┼───────────────┤
│             2 │ http                           │           2 │                1 │             5 │
└───────────────┴────────────────────────────────┴─────────────┴──────────────────┴───────────────┘
        Reference URL: https://blog.detectify.com/2020/11/10/common-nginx-misconfigurations/

                  .\examples\configs\crlf-injection.conf
┌──────────┬──────────────────────────────────────────────┐
│ Line No. │ Configuration File                           │
├──────────┼──────────────────────────────────────────────┤
│ 1        │ events{}                                     │
│ 2        │  http{                                       │
│ 3        │     server {                                 │
│ 4        │         location / {                         │
│ 5        │             return 302 https://example.com$uri; │
│ 6        │         }                                    │
│ 7        │     }                                        │
│ 8        │ }                                            │
└──────────┴──────────────────────────────────────────────┘
       Filepath: .\examples\configs\crlf-injection.conf
You have been NGINXED! 2 directive flagged in your configuration
```

PDF Report Generation

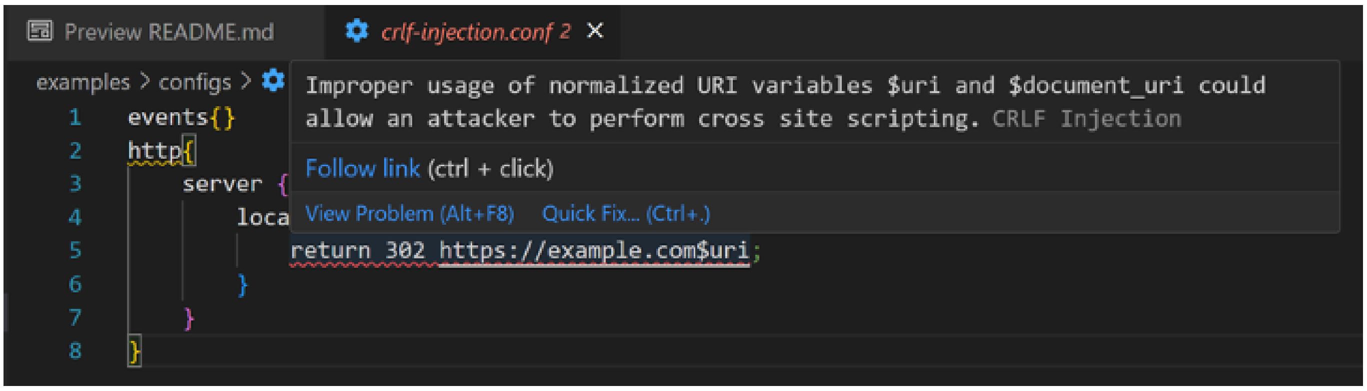
```
poetry run python -m unginxed <NGINX Configuration Path> -o <output
directory>
```

Report Generation With Command Line Report

```
poetry run python -m unginxed <NGINX Configuration Path> -svo <output
directory>
```

uNGINXed integration with VSCode

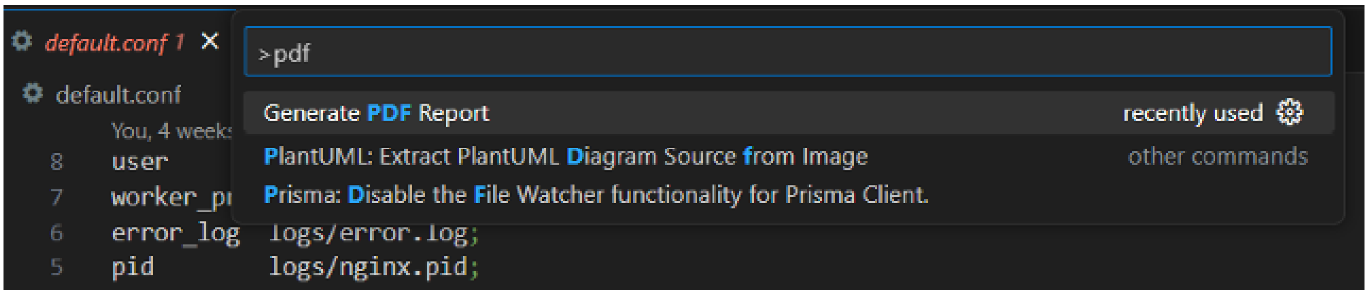
uNGINXed is available as a linter, implemented as a VSCode extension. To use the extension, simply install the `unginxed-linter.vsix` extension in VSCode via the `Install From VSIX` option in VSCode.



Improper usage of normalized URI variables $uri and $document_uri could allow an attacker to perform cross site scripting. CRLF Injection

```
events{}
http{
    server {
        loca
            return 302 https://example.com$uri;
        }
    }
}
```

The linter is able to generate a PDF report via a extension command:


default.conf 1
default.conf
You, 4 weeks
>pdf
Generate PDF Report
recently used
PlantUML: Extract PlantUML Diagram Source from Image
other commands
Prisma: Disable the File Watcher functionality for Prisma Client.

```
user
worker_pı
error_log   logs/error.log;
pid         logs/nginx.pid;
```

Development for uNGINXed

Adding signatures

Signatures come in the form of python code.

In the sigs folder, create a new python file which contains a function named `matcher`. The function takes in an NGINXConfig object as a parameter, and should return a `Signature` object as a result. Use the `SignatureBuilder` class to build your signatures, as it abstracts the complicated logic away from creating the Signature.

Command line tool

Use the `tools/sigs.py` tool to create a signature python file which contains boilerplate to get you started.

Example usage (from `unginxed` folder):

```
poetry run python unginxed/tools/sigs.py create Alias LFI
```

This creates a file named `alias_lfi.py`, with the following boilerplate code:

```python
from ..nginx_config import NginxConfig
from ..signature import Signature, SignatureBuilder


def matcher(config: NginxConfig) -> Signature:
    signature_builder = SignatureBuilder(config.raw).set_name('Alias LFI') \
                                          .set_reference_url('') \
                                          .set_description('') \
                                          .set_severity()

    # Your logic here.
    # Flag out directives using signature_builder.add_flagged(directive, config)

    return signature_builder.build()
```