

# SOC

Le centre d'opération de cyberdéfense est là pour vous protéger !

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# [SOC] Outils de cyber défense

## Introduction

Cette page répertorie une base d'outils de cyber défense utile à un SOC ou même à un administrateur aguéri et conscient des enjeux cyber.



## Scanner d'URL

Une multitude d'outils existent pour scanner les URL grâce à leur réputation.

Voici une liste d'outils :

- [VirusTotal](#)

- [MetaDefender Cloud - OPSWAT](#)
- [URLscan.io](#)
- [URLhaus](#)
- [Whols](#)
- [Cisco Talos Intelligence](#)
- [ThreatMiner](#)
- [Brightcloud](#)

## Scanner d'adresse IP

Voici une liste d'outils en ligne pour analyser la réputation des adresses IP :

- [AbuseIPDB](#)
- [MetaDefender Cloud - OPSWAT](#)
- [Cisco Talos Intelligence](#)
- [Feodo Tracker](#)
- [Threatbook](#)
- [Pulsedive](#)
- [Shodan](#)
- [XForceIBN](#)
- [Alienvault](#)
- [GreyNoise](#)

## Scanner de fichier et de hash

Voici une liste d'outils en ligne pour analyser des fichiers et des hashes de fichiers :

- [VirusTotal](#)
- [MetaDefender Cloud - OPSWAT](#)
- [MalwareBazaar](#)
- [Malshare](#)
- [Cisco Talos Intelligence](#)
- [HybridAnalysis](#)

# Règles de détection

- [SOC Prime Threat Detection Marketplace](#)

# Blacklist d'empreintes de certificats SSL

- [SSL Blacklist](#)

# Scanner de mail

Pour se protéger du phishing, il peut être utile d'utiliser des outils qui vont décortiquer le mail afin de potentiellement trouver des IOC.

- [PhishTool](#)

# Sandbox

Les sandboxes permettent de tester le comportement de fichier ou de site web afin de détecter un comportement malveillant dans un environnement protégé.

- [Browserling](#) : Accéder à un site web dans une sandbox.
- [AnyRun](#) : Lancer un exécutable Windows dans une sandbox.
- [Wannabrowser](#) : Accéder à un site web dans une sandbox.

# Matrice MITRE ATT&CK

Framework permettant notamment de lister les TTPs et les APT.

- [MITRE ATT&CK](#)

# Liste d'IOC multiples

- [ThreatFox](#) : MISP events, Suricata IDS Ruleset, Domain Host files, DNS Response Policy Zone, JSON files and CSV files.

## PS - Obtenir le hash d'un fichier

```
Get-FileHash <FILE> -Algorithm MD5
```

# [SOC] Afficher l'empreinte d'un fichier

## Introduction

Dans le cadre du travail d'analyste, il peut être intéressant d'obtenir l'empreinte d'un fichier sous ses différentes formes (**MD5**, **SHA-1** ou **SHA-256**).

Ce tutoriel traitera la méthodologie à suivre sous Linux exclusivement.



## Manuel

### MD5

```
md5sum <FILE>
```

### SHA-1

```
sha1sum <FILE>
```

## SHA-256

```
sha256sum <FILE>
```

# [SOC] YARA

## Introduction

Le **YARA** est un langage pour écrire des règles de détection de malware.

Il s'agit d'un langage simple et descriptif qui est adopté par le grand public.

Il est découpé par section qui ont chacune leur utilité.



## Source

- [TryHackMe - Yara](#)
- [Cuckoosandbox - Sandbox pour tester vos règles Yara](#)
- [PEfile - Scan les exécutables Windows PE](#)

## Annexes



- [Github - Awesome Yara](#)
- [Valhalla - Base de règles Yara Opensource](#)

# Anatomie d'une règle

# ANATOMY OF A YARA RULE



Yara is a tool used to identify file, based on **textual or binary pattern**.



A rule consists of a **set of strings and conditions** that determine its logic.



Rules can be compiled with "yacc" to **increase the speed** of multiple Yara scans.

1

## IMPORT MODULE

Yara modules allow you to extend its functionality. The PE module can be used to match specific data from a PE:

- `penumber_of_exports`
- `pesections[0].name`
- `peimphash()`
- `peimports("kernel32.dll")`
- `peis.dll()`

List of modules: `pe`, `elf`, `hash`, `math`, `cuckoo`, `dotnet`, `time`

2

## RULE NAME

The rule name identifies your Yara rule. It is recommended to add a meaningful name. There are different types of rules:

- Global rules: applies for all your rules in the file.
- Private rules: can be called in a condition of a rule but not reported.
- Rule tags: used to filter yara's output.

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## METADATA

Rules can also have a metadata section where you can put additional information about your rule.

- Author
- Date
- Description
- Etc...

4

## STRINGS

The field strings is used to define the strings that should match your rule. It exists 3 type of strings:

- Text strings
- Hexadecimal strings
- Regex

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## CONDITION

Conditions are Boolean expressions used to match the defined pattern.

- Boolean operators:
  - `and`, `or`, `not`
  - `<`, `>`, `==`, `<`, `>`, `!=`
- Arithmetic operators:
  - `+`, `-`, `*`, `/`, `%`
- Bitwise operators:
  - `&`, `|`, `<<`, `>>`, `^`, `~`
- Counting strings:
  - `#string0 == 5`
- Strings offset:
  - `$string1 at 100`

```
import "pe"

rule demo_rule : Tag1 Demo
{
    meta:
        author = "Thomas Roccia"
        description = "demo"
        hash = ""

    strings:
        $string0 = "hello" nocase wide
        $string1 = "world" fullword ascii
        $hex1 = { 01 23 45 ?? 89 ab cd ef }
        $re1 = /md5: [0-9a-zA-Z]{32}/

    condition:
        uint16(0) == 0x5A4D and filesize < 2000KB
        or pe.number_of_sections == 1 and
        any of ($string*) and (not $hex1 or $re1)
}
```

## TEXT STRINGS

Text strings can be used with modifiers:

- `nocase`: case insensitive
- `wide`: encoded strings with 2 bytes per character
- `fullword`: non alphanumeric
- `xor(0x01-0xFF)`: look for xor encryption
- `base64`: base64 encoding

## HEXADECIMAL

Hex strings can be used to match piece of code:

- Wild-cards: `{ 00 ?2 A? }`
- Jump: `{ 3B [2-4] B4 }`
- Alternatives: `{ F4 (B4 | 56) }`

## REGEX

Regular expression can also be used and defined as text strings but enclosed in forward slash.

## ADVANCED CONDITION

- Accessing data at a given position: `uint16(0) == 0x5A4D`
- Check the size of the file: `filesize < 2000KB`
- Set of strings: `any of ($string0, $hex1)`
- Same condition to many strings: `for all of them : (# > 3)`
- Scan entry point: `$value at pe.entry_point`
- Match length: `!re1[1] == 32`
- Search within a range of offsets: `$value in (0..100)`

 @FR0GGER\_  
THOMAS ROCCIA

# Manuel

## Installation

```
apt install -y yara
```

## Meta

Cette section permet de donner des informations complémentaires qui ne seront pas interprétés comme le ferait un commentaire dans du code.

Par exemple on peut utiliser le mot-clé **desc**, pour donner une description à notre règle afin qu'elle soit plus explicite pour les utilisateurs.

## Strings

Cette section permet de détecter des chaînes de caractères présente dans les fichiers.

Voici un exemple d'utilisation :

```
rule helloworld_checker{
  strings:
    $hello_world = "Hello World!"

  condition:
    $hello_world
}
```

On peut aussi détecter des chaînes multiples :

```
rule helloworld_checker{
  strings:
    $hello_world = "Hello World!"
    $hello_world_lowercase = "hello world"
    $hello_world_uppercase = "HELLO WORLD"

  condition:
    any of them
}
```

## Opérateurs

Comme dans les langages de programmation traditionnels, on peut utiliser des opérateurs pour nos conditions :

```
rule helloworld_checker{
  strings:
    $hello_world = "Hello World!"

  condition:
    #hello_world <= 10
}
```

Opérateurs	Descriptions
<=	Plus petit ou égal
>=	Plus grand ou égal
!=	Différent de

## Combinaisons

On peut utiliser les mot-clés suivants pour combiner nos conditions :

Mot-clés	Descriptions
and	Les deux conditions doivent être valides
or	Au moins l'une des deux conditions doit être valide
not	Inverse la condition (true devient false et false devient true)

Voici un exemple pour vérifier si la chaîne est présente et si la taille du fichier est inférieure à 10KB :

```
rule helloworld_checker{
  strings:
    $hello_world = "Hello World!"

  condition:
    $hello_world and filesize < 10KB
}
```

## Lancer le scan

```
yara <RULE>.yar <FILE_TO_SCAN>
```

Si la règle match, la commande renverra le nom de la règle qui a matchée ainsi que le nom du fichier qui a matché.

## Scanners d'IOC basés sur Yara

- [Loki](#)
- [THOR](#)
- [Fenrir](#)
- [YAYA](#)

# Loki

## Mettre à jour la base de signature

```
python loki.py --update
```

## Lancer un scan d'un dossier

```
python loki.py -p <DIR>
```

# YarGen

Cet outil permet de créer une règle Yara à partir d'un ou plusieurs fichiers connus pour être malveillants.

Il va se baser sur les chaînes de caractères et les informations pour générer la règle qui va détecter le ou les fichiers.

## Téléchargement

- [Github - YarGen](#)

## Mettre à jour l'outil

```
python3 yarGen.py --update
```

Cela va mettre à jour la base avec les chaînes et les opcodes.

## Créer une règle

```
python3 yarGen.py -m <FILE_PATH> --excludegood -o <OUTPUT.yar>
```

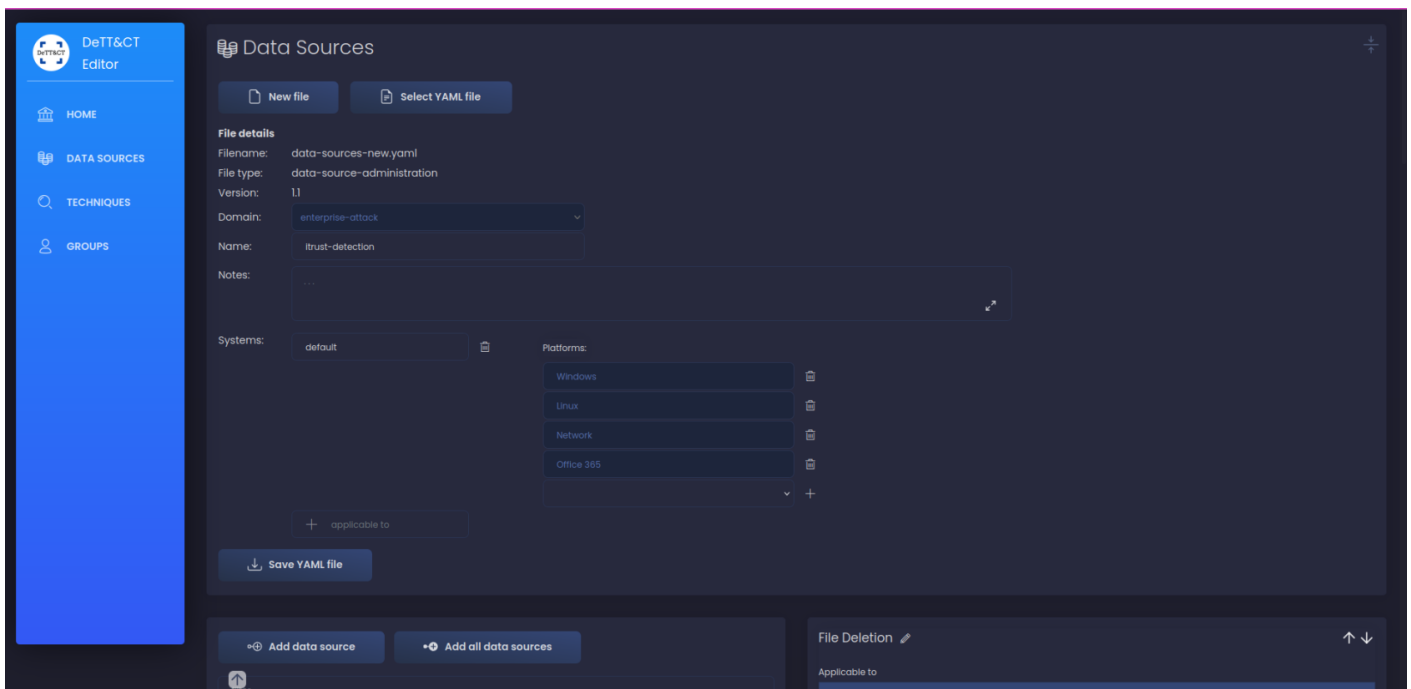
Bien que l'outil soit fonctionnel, il est recommandé d'éditer la règle pour supprimer les chaînes qui pourraient lever des faux-positifs.

# [SOC] Dettect

## Introduction

Le projet Dettect a pour objectif d'identifier les TTPs couvertes (et non-couvertes) par vos règles de détection.

Le projet vous aidera à générer un fichier avec vos datasources couvertes et à convertir ce fichier en un fichier importable dans le MITRE Navigator afin d'afficher les TTPs.



## DeTT&CT

Voici le lien du projet :

- <https://github.com/rabobank-cdc/DeTTECT>

Lancez le conteneur :

```
docker run -p 8080:8080 -v $(pwd)/output:/opt/DeTTECT/output -v $(pwd)/input:/opt/DeTTECT/input --name  
dettect -it rabobankcdc/dettect:latest /bin/bash
```

```
python3 dettect.py e
```

Vous pouvez ouvrir un navigateur web et vous rendre sur <http://localhost:8080> .

- ```
docker exec -it dettect bash
```

```
python3 dettect.py ds -fd input/data-sources-new.yaml -l
```

| ATT&Koon 5.0 returns October 22-23, 2024 in McLean, VA. Register here today!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                            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Calculation</div> <div>Domain Generation Algorithms</div> <div>Fast Flux DNS</div> <div>Encrypted Channel</div> <div>Asymmetric Cryptography</div> <div>Symmetric Cryptography</div> | <div>Automated Exfiltration</div> <div>Traffic Duplication</div> <div>Data Transfer Size Limits</div> <div>Exfiltration Over Alternative Protocol</div> <div>Exfiltration Over Asymmetric Encrypted Non-C2 Protocol</div> <div>Exfiltration Over Symmetric Encrypted Non-C2 Protocol</div> <div>Exfiltration Over Unencrypted Non-C2 Protocol</div> <div>Exfiltration Over C2 Channel</div> <div>Exfiltration Over Inner Network</div> <div>Exfiltration Over Bluetooth</div> <div>Exfiltration Over Physical Medium</div> <div>Exfiltration over USB</div> <div>Exfiltration Over Web Service</div> <div>Exfiltration Over Webhook</div> | <div>Account Access Removal</div> <div>Data Destruction</div> <div>Data Encrypted for Impact</div> <div>Data Manipulation</div> <div>Runtime Data Manipulation</div> <div>Stored Data Manipulation</div> <div>Transmitted Data Manipulation</div> <div>Defacement</div> <div>External Defacement</div> <div>Internal Defacement</div> <div>Disk Wipe</div> <div>Disk Content Wipe</div> <div>Disk Structure Wipe</div> <div>Endpoint Denial of Service (4/4)</div> <div>Application Exhaustion Flood</div> <div>System or System Exploitation</div> <div>OS Exhaustion Flood</div> <div>Service Exhaustion Flood</div> |                |  |                                                                                                                                                          |  |  |  |        |  |
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