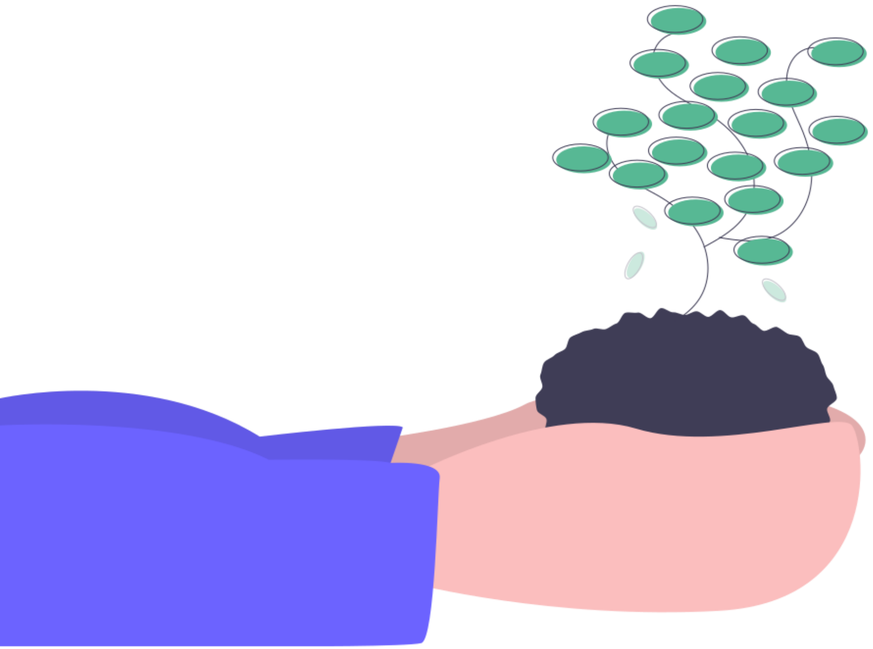
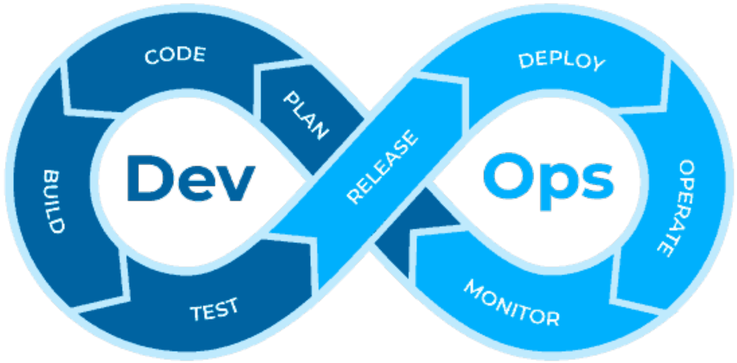
DevSecOps : add security to my DevOps

Introduction

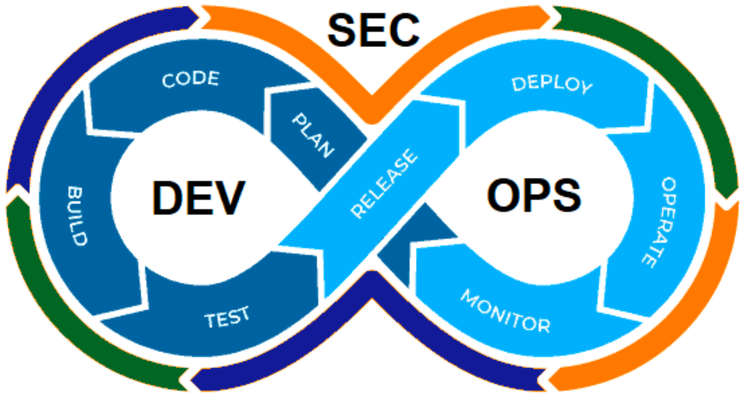
Introduction



Introduction



Introduction



Introduction

Oublier la cybersécurité, c'est "rouler à 200 km/h à moto sans casque”

Forget about cybersecurity, it’s ride a motocycle at 200 km/h without helmet

Guillaume Poupard, (futur) ex-director of the French Anssi

Introduction

@adrienpessu

SAST (STATIC APPLICATION SECURITY TESTING)

VERACODE

GRAMMATECH

Checkmarx

phpcs-security-audit v3

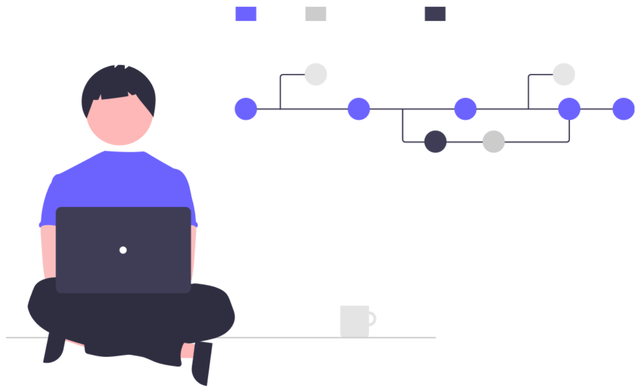
Find Security Bugs

pmd
DON'T SHOOT THE MESSENGER

snyk

sonarqube

CODACY



SAST (STATIC APPLICATION SECURITY TESTING)

<div text [innerHTML]="'greeting.translate.key' | translate:{**name**: **name**}">

Hello {{ name }}, welcome to Voxxed Days

Hello Adrien, welcome to Voxxed Days

SCA (SOFTWARE COMPOSITION ANALYSIS)

snyk

Checkmarx

npm-audit

OWASP®

sonatype

VERACODE

DEPENDENCY-TRACK

SCA (SOFTWARE COMPOSITION ANALYSIS)

VULNERABILITIES

CVE-2020-7774 Detail

MODIFIED

This vulnerability has been modified since it was last analyzed by the NVD. It is awaiting reanalysis which may result in further changes to the information provided.

Current Description

This affects the package y18n before 3.2.2, 4.0.1 and 5.0.5. PoC by po6ix: const y18n = require('y18n')(); y18n.setLocale('__proto__'); y18n.updateLocale({polluted: true}); console.log(polluted); // true

+View Analysis Description

Severity

CVSS Version 3.x | CVSS Version 2.0

CVSS 3.x Severity and Metrics:

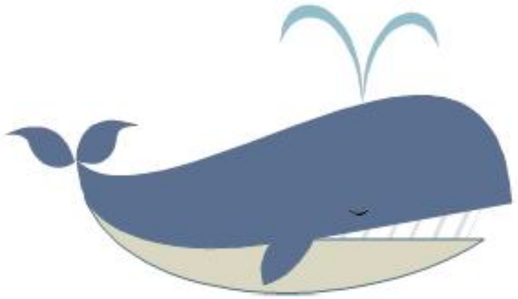
NIST: NVD **Base Score:** N/A

NVD score not yet provided.

CNA: Snyk **Base Score:** 7.3 HIGH

Vector: CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:U/C:L/I:L/A:L

Docker

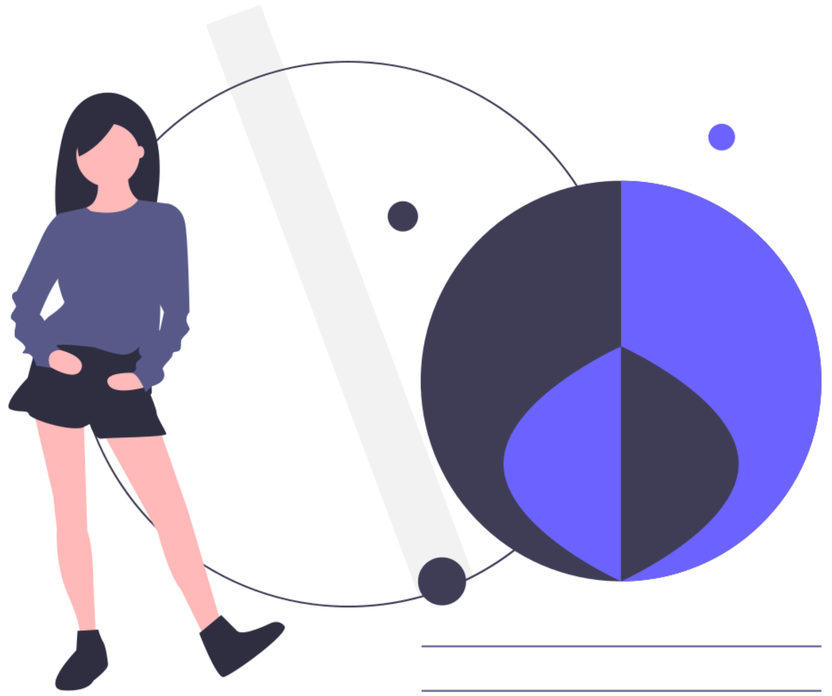


Falco

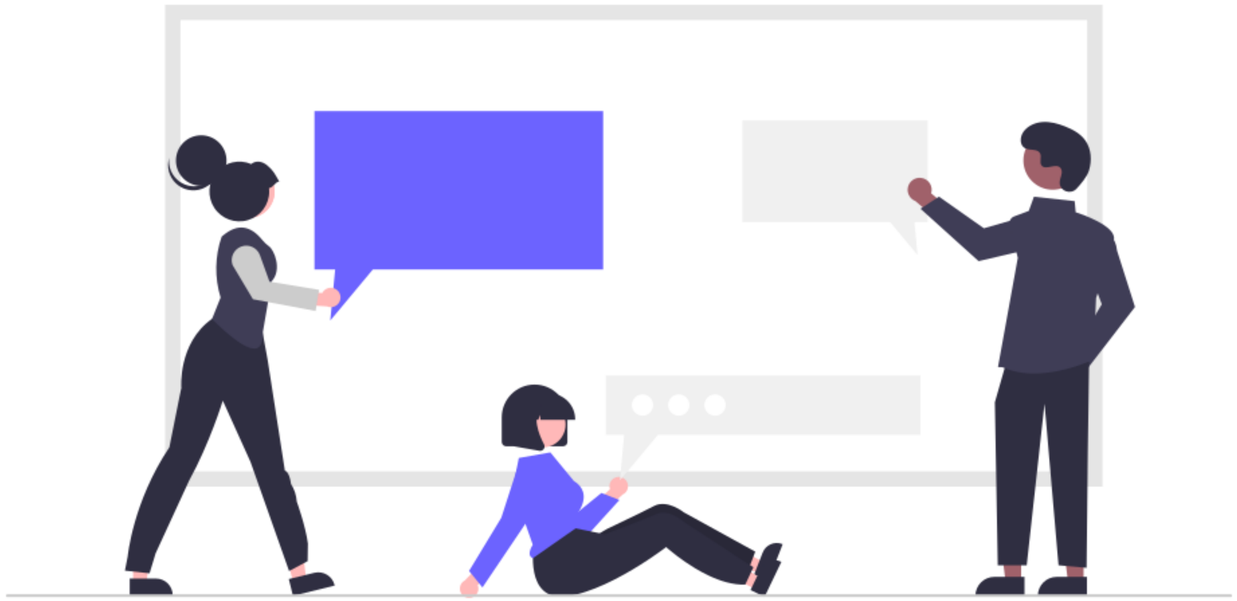
Docker

```
$ docker scan --file Dockerfile docker-scan:e2e
Testing docker-scan:e2e
...
✗ High severity vulnerability found in perl
  Description: Integer Overflow or Wraparound
  Info: https://snyk.io/vuln/SNYK-DEBIAN10-PERL-570802
  Introduced through: git@1:2.20.1-2+deb10u3, meta-common-packages@meta
  From: git@1:2.20.1-2+deb10u3 > perl@5.28.1-6
  From: git@1:2.20.1-2+deb10u3 > liberror-perl@0.17027-2 > perl@5.28.1-6
  From: git@1:2.20.1-2+deb10u3 > perl@5.28.1-6 > perl/perl-modules-5.28@5.28.1-6
  and 3 more...
  Introduced by your base image (golang:1.14.6)

Organization:      docker-desktop-test
Package manager:   deb
Target file:       Dockerfile
Project name:      docker-image|99138c65ebc7
Docker image:      99138c65ebc7
Base image:        golang:1.14.6
Licenses:          enabled

Tested 200 dependencies for known issues, found 157 issues.

According to our scan, you are currently using the most secure version of the selected base image
```

DAST (DYNAMIC APPLICATION SECURITY TESTING)



IAST (INTERACTIVE APPLICATION SECURITY TESTING)



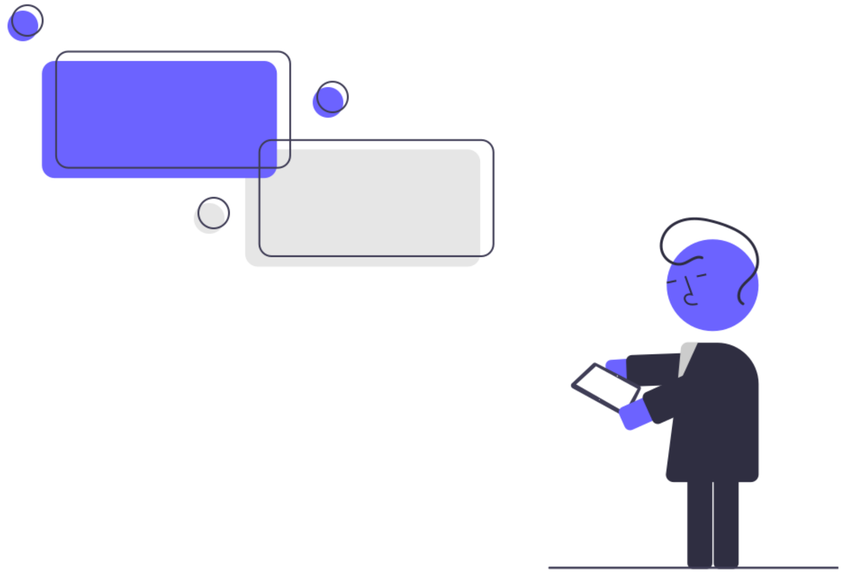
IaC

IaC

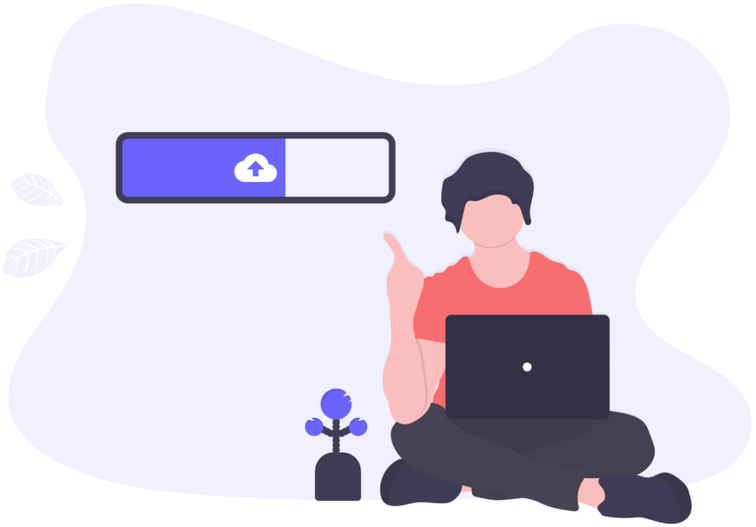
```
> terraform plan | scenery
+ aws_cloudtrail.main
    id:                           <computed>
    arn:                          <computed>
    enable_log_file_validation:   "true"
    enable_logging:               "true"
    home_region:                  <computed>
    include_global_service_events: "true"
    is_multi_region_trail:        "true"
    kms_key_id:                   "arn:aws:kms:us-west-2:123456789123:key/c6c7f815-5c3c-42b8-a0f8-e93e61b42215"
    name:                         "main"
    s3_bucket_name:               "cloudtrail-logs"
    tags.%:                       "2"
    tags.Name:                    "audit-log-trail"
    tags.Service:                 "auditing"

~ aws_iam_policy.demo_service
    policy:  {
               "Version": "2012-10-17",
               "Statement": [
           +     {
           +       "Sid": "",
           +       "Effect": "Allow",
           +       "Action": "s3:GetObject",
           +       "Resource": "arn:aws:s3:::demo-bucket/*"
           +     },
                 {
                   "Sid": "",
                   "Effect": "Allow",
                   "Action": "ssm:GetParametersByPath",
                   "Resource": "arn:aws:ssm:us-west-2:123456789123:parameter/demo/*"


~ aws_route53_record.record
    allow_overwrite: "" => "true"

-/+ module.replica.aws_security_group_rule.whitelists[1] (new resource required)
    id:                       "sgrule-2762726406" => <computed> (forces new resource)
    from_port:                "5432" => "5432"
    protocol:                 "tcp" => "tcp"
    security_group_id:        "sg-abcdef12" => "sg-abcdef12"
    self:                     "false" => "false"
    source_security_group_id: "sg-12345678" => "sg-87654321" (forces new resource)
    to_port:                  "5432" => "5432"
    type:                     "ingress" => "ingress"

Plan: 1 to add, 3 to change, 0 to destroy.
>
```

DevSec

WAF (WEB APPLICATION FIREWALL)

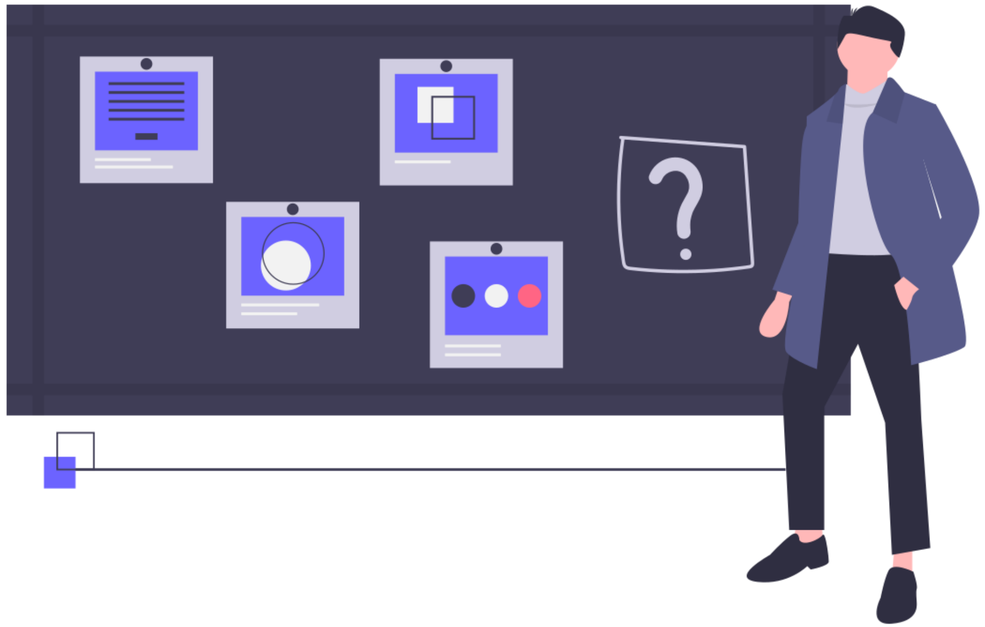


RASP (RUN-TIME APPLICATION SECURITY PROTECTION)



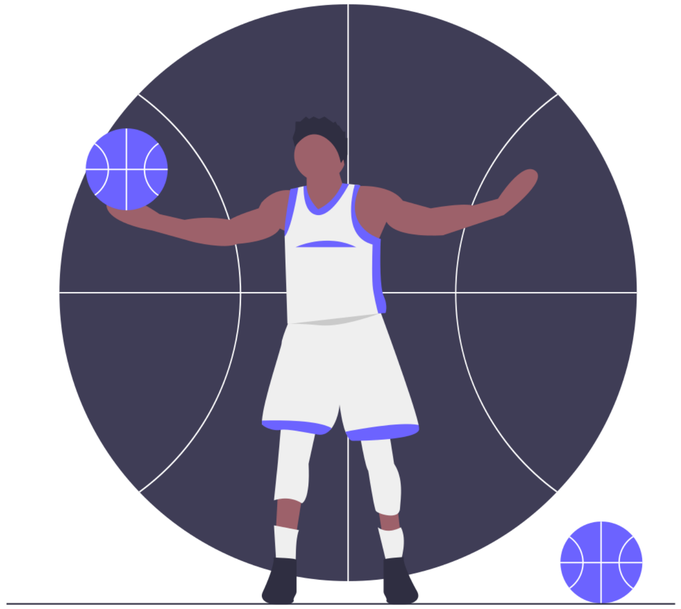
Pentesting

Training



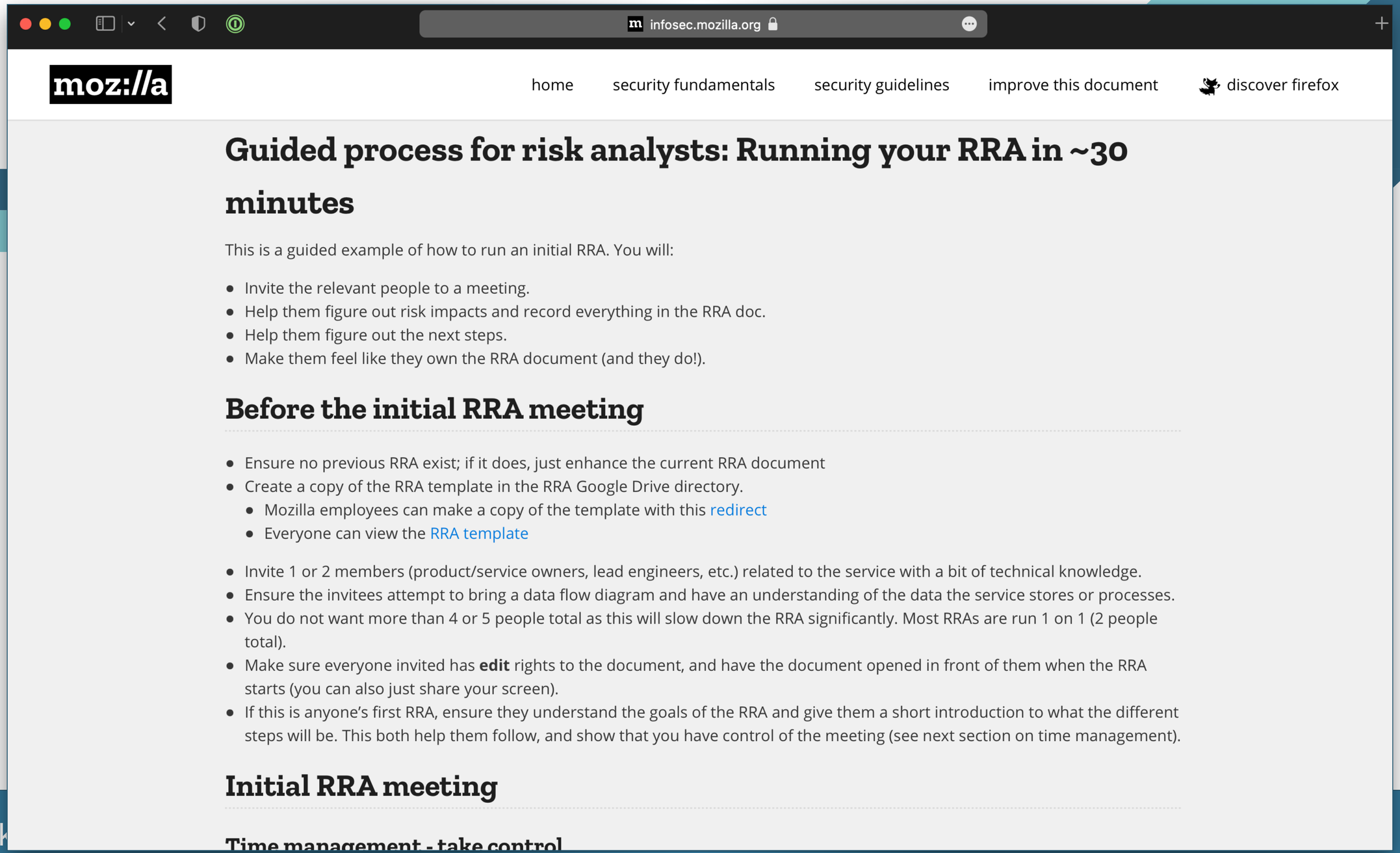
Documentation

Security champion

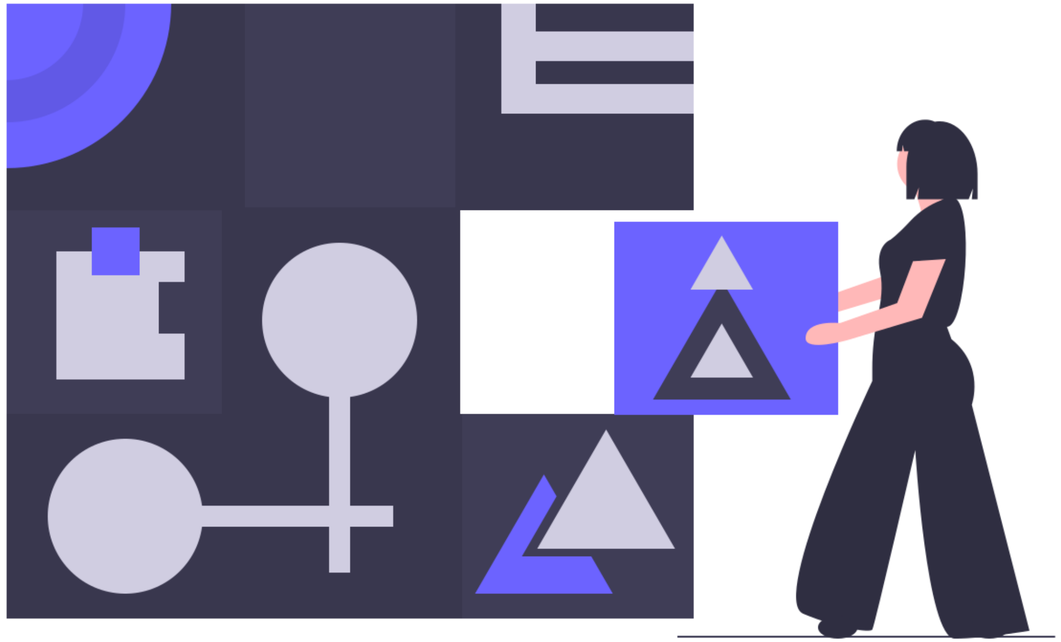


Risk assessment

Risk assessment

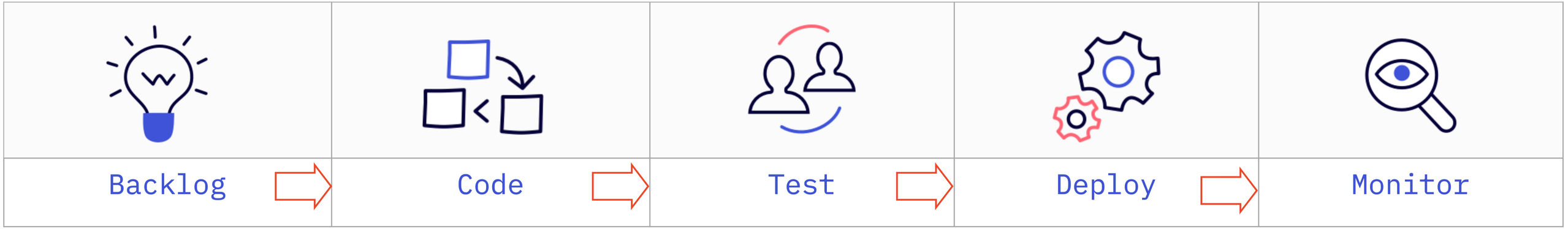


Threat modelling



KPI (Key performance indicator)

Conclusion


Backlog
Code
Test
Deploy
Monitor
Threat Modeling
SAST/SCA
DAST
Penetration test

Conclusion

Backlog	Code	Test	Deploy	Monitor
Threat Modeling	SAST/SCA	DAST	IAST	Penetration test