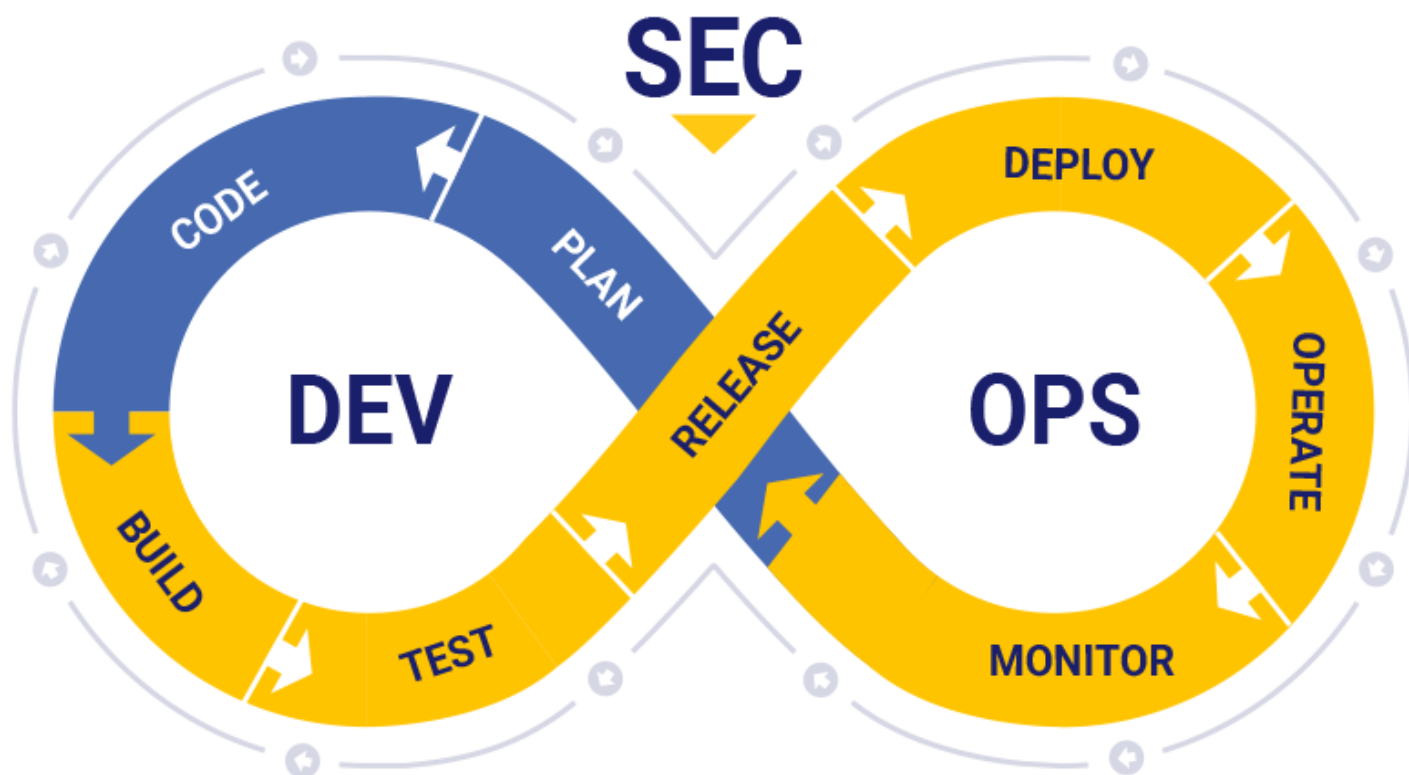


# Ultimate DevSecOps library



## DevSecOps library info:

STARS	4.8K	WATCHERS	148	FORKS	848
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This library contains list of tools and methodologies accompanied with resources. The main goal is to provide to the engineers a guide through opensource DevSecOps tooling. This repository covers only cyber security in the cloud and the DevSecOps scope.

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# What is DevSecOps

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DevSecOps focuses on security automation, testing and enforcement during DevOps - Release - SDLC cycles. The whole meaning behind this methodology is connecting together Development, Security and Operations. DevSecOps is methodology providing different methods, techniques and processes backed mainly with tooling focusing on developer / security experience.

DevSecOps takes care that security is part of every stage of DevOps loop - Plan, Code, Build, Test, Release, Deploy, Operate, Monitor.

Various definitions:

- <https://www.redhat.com/en/topics/devops/what-is-devsecops>
- <https://www.ibm.com/cloud/learn/devsecops>
- <https://snyk.io/series/devsecops/>
- <https://www.synopsys.com/glossary/what-is-devsecops.html>
- <https://spacelift.io/blog/what-is-devsecops>

# Tooling

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## Pre-commit time tools




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In this section you can find lifecycle helpers, precommit hook tools and threat modeling tools. Threat modeling tools are specific category by themselves allowing you to simulate and discover potential gaps before you start to develop the software or during the process.

Modern DevSecOps tools allow using Threat modeling as code or generation of threat models based on the existing code annotations.




Name	URL	Description	Meta
<b>git-secrets</b>	<a href="https://github.com/awslabs/git-secrets">https://github.com/awslabs/git-secrets</a>	AWS labs tool preventing you from committing secrets to a git repository	STARS 12K
<b>git-hound</b>	<a href="https://github.com/tillson/git-hound">https://github.com/tillson/git-hound</a>	Searchers secrets in git	STARS 1K
<b>goSDL</b>	<a href="https://github.com/slackhq/goSDL">https://github.com/slackhq/goSDL</a>	Security Development Lifecycle checklist	STARS 510
<b>ThreatPlaybook</b>	<a href="https://github.com/we45/ThreatPlaybook">https://github.com/we45/ThreatPlaybook</a>	Threat modeling as code	STARS 256
<b>Threat Dragon</b>	<a href="https://github.com/OWASP/threat-dragon">https://github.com/OWASP/threat-dragon</a>	OWASP Threat modeling tool	STARS 625
<b>threatspec</b>	<a href="https://github.com/threatspec/threatspec">https://github.com/threatspec/threatspec</a>	Threat modeling as code	STARS 282
<b>pytm</b>	<a href="https://github.com/izar/pytm">https://github.com/izar/pytm</a>	A Pythonic framework for threat modeling	STARS 758
<b>Threagile</b>	<a href="https://github.com/Threagile/threagile">https://github.com/Threagile/threagile</a>	A Go framework for threat modeling	STARS 493
		A language to create cyber	










<b>MAL-lang</b>	<a href="https://mal-lang.org/#what">https://mal-lang.org/#what</a>	threat modeling systems for specific domains	STARS 22
<b>Microsoft Threat modeling tool</b>	<a href="https://docs.microsoft.com/en-us/azure/security/develop/threat-modeling-tool">https://docs.microsoft.com/en-us/azure/security/develop/threat-modeling-tool</a>	Microsoft threat modeling tool	STARS 154
<b>Talisman</b>	<a href="https://github.com/thoughtworks/talisman">https://github.com/thoughtworks/talisman</a>	A tool to detect and prevent secrets from getting checked in	STARS 1.8K
<b>SEDATED</b>	<a href="https://github.com/OWASP/SEDATED">https://github.com/OWASP/SEDATED</a>	The SEDATED® Project (Sensitive Enterprise Data Analyzer To Eliminate Disclosure) focuses on preventing sensitive data such as user credentials and tokens from being pushed to Git.	STARS 109
<b>Sonarlint</b>	<a href="https://github.com/SonarSource/sonarlint-core">https://github.com/SonarSource/sonarlint-core</a>	Sonar linting utility for IDE	STARS 210
<b>DevSkim</b>	<a href="https://github.com/microsoft/DevSkim">https://github.com/microsoft/DevSkim</a>	DevSkim is a framework of IDE extensions and language analyzers that provide inline security analysis	STARS 821

<b>detect-secrets</b>	<a href="https://github.com/Yelp/detect-secrets">https://github.com/Yelp/detect-secrets</a>	Detects secrets in your codebase	
<b>tflint</b>	<a href="https://github.com/terraform-linters/tflint">https://github.com/terraform-linters/tflint</a>	A Pluggable Terraform Linter	
<b>Steampipe Code Plugin</b>	<a href="https://github.com/turbot/steampipe-plugin-code">https://github.com/turbot/steampipe-plugin-code</a>	Use SQL to detect secrets from source code and data sources.	

## Secrets management

Secrets management includes managing, versioning, encryption, discovery, rotating, provisioning of passwords, certificates, configuration values and other types of secrets.

Name	URL	Description	Meta
<b>GitLeaks</b>	<a href="https://github.com/zricethezav/gitleaks">https://github.com/zricethezav/gitleaks</a>	Gitleaks is a scanning tool for detecting hardcoded secrets	
<b>ggshield</b>	<a href="https://github.com/gitguardian/ggshield">https://github.com/gitguardian/ggshield</a>	GitGuardian shield (ggshield) is a CLI application that runs in your local environment or in a CI environment and helps you detect more than 350+ types of secrets and sensitive files.	
<b>TruffleHog</b>	<a href="https://github.com/trufflesecurity/truffleHog">https://github.com/trufflesecurity/truffleHog</a>	TruffleHog is a scanning tool for detecting hardcoded secrets	
<b>Hashicorp</b>		Hashicorp Vault	

<b>Vault</b>	<a href="https://github.com/hashicorp/vault">https://github.com/hashicorp/vault</a>	secrets management	 28K
<b>Mozilla SOPS</b>	<a href="https://github.com/mozilla/sops">https://github.com/mozilla/sops</a>	Mozilla Secrets Operations	 14K
<b>AWS secrets manager GH action</b>	<a href="https://github.com/marketplace/actions/aws-secrets-manager-actions">https://github.com/marketplace/actions/aws-secrets-manager-actions</a>	AWS secrets manager docs	 60
<b>GitRob</b>	<a href="https://github.com/michenriksen/gitrob">https://github.com/michenriksen/gitrob</a>	Gitrob is a tool to help find potentially sensitive files pushed to public repositories on Github	 5.2K
<b>git-wild-hunt</b>	<a href="https://github.com/d1vious/git-wild-hunt">https://github.com/d1vious/git-wild-hunt</a>	A tool to hunt for credentials in the GitHub	 264
<b>aws-vault</b>	<a href="https://github.com/99designs/aws-vault">https://github.com/99designs/aws-vault</a>	AWS Vault is a tool to securely store and access AWS credentials in a development environment	 7.8K
<b>Knox</b>	<a href="https://github.com/pinterest/knox">https://github.com/pinterest/knox</a>	Knox is a service for storing and rotation of secrets, keys, and passwords used by other services	 1.2K
<b>Chef vault</b>	<a href="https://github.com/chef/chef-vault">https://github.com/chef/chef-vault</a>	allows you to encrypt a Chef Data Bag Item	 409
<b>Ansible vault</b>	<a href="#">Ansible vault docs</a>	Encryption/decryption utility for Ansible data files	 317

# OSS and Dependency management

Dependency security testing and analysis is very important part of discovering supply chain attacks. SBOM creation and following dependency scanning (Software composition analysis) is critical part of continuous integration (CI). Data series and data trends tracking should be part of CI tooling. You need to know what you produce and what you consume in context of libraries and packages.

Name	URL	Description
CycloneDX	<a href="https://github.com/orgs/CycloneDX/repositories">https://github.com/orgs/CycloneDX/repositories</a>	CycloneDX format for <b>SBOM</b>
cdxgen	<a href="https://github.com/AppThreat/cdxgen">https://github.com/AppThreat/cdxgen</a>	Generates CycloneDX <b>SBOM</b> , supports many languages and package managers.
SPDX	<a href="https://github.com/spdx/spdx-spec">https://github.com/spdx/spdx-spec</a>	SPDX format for <b>SBOM</b> - Software Package Data Exchange
Snyk	<a href="https://github.com/snyk/snyk">https://github.com/snyk/snyk</a>	Snyk scans and monitors your projects for security vulnerabilities
vulncost	<a href="https://github.com/snyk/vulncost">https://github.com/snyk/vulncost</a>	Security Scanner for VS Code
		Dependency-






<p><b>Dependency Combobulator</b></p>	<p><a href="https://github.com/apiiro/combobulator">https://github.com/apiiro/combobulator</a></p>	<p>related attacks detection and prevention through heuristics and insight engine (support multiple dependency schemes)</p>
<p><b>DependencyTrack</b></p>	<p><a href="https://github.com/DependencyTrack/dependency-track">https://github.com/DependencyTrack/dependency-track</a></p>	<p>Dependency security tracking platform</p>
<p><b>DependencyCheck</b></p>	<p><a href="https://github.com/jeremylong/DependencyCheck">https://github.com/jeremylong/DependencyCheck</a></p>	<p>Simple dependency security scanner good for CI</p>
<p><b>Retire.js</b></p>	<p><a href="https://github.com/retirejs/retire.js/">https://github.com/retirejs/retire.js/</a></p>	<p>Helps developers to detect the use of JS-library versions with known vulnerabilities</p>
<p><b>PHP security checker</b></p>	<p><a href="https://github.com/fabpot/local-php-security-checker">https://github.com/fabpot/local-php-security-checker</a></p>	<p>Check vulnerabilities in PHP dependencies</p>
<p><b>bundler-audit</b></p>	<p><a href="https://github.com/rubysec/bundler-audit">https://github.com/rubysec/bundler-audit</a></p>	<p>Patch-level verification for bundler</p>

<p><b>gemnasium</b></p>	<p><a href="https://gitlab.com/gitlab-org/security-products/analyzers/gemnasium">https://gitlab.com/gitlab-org/security-products/analyzers/gemnasium</a></p>	<p>Dependency Scanning Analyzer based on Gemnasium</p>
<p><b>Dependabot</b></p>	<p><a href="https://github.com/dependabot/dependabot-core">https://github.com/dependabot/dependabot-core</a></p>	<p>Automated dependency updates built into GitHub providing security alerts</p>
<p><b>Renovatebot</b></p>	<p><a href="https://github.com/renovatebot/renovate">https://github.com/renovatebot/renovate</a></p>	<p>Automated dependency updates, patches multi-platform and multi-language</p>
<p><b>npm-check</b></p>	<p><a href="https://www.npmjs.com/package/npm-check">https://www.npmjs.com/package/npm-check</a></p>	<p>Check for outdated, incorrect, and unused dependencies.</p>
<p><b>Security Scorecards</b></p>	<p><a href="https://securityscorecards.dev">https://securityscorecards.dev</a></p>	<p>Checks for several security health metrics on open source libraries and provides a score (0-10) to be considered in the decision making of</p>

		what libraries to use.
<b>Syft</b>	<a href="https://github.com/anchore/syft">https://github.com/anchore/syft</a>	CLI tool and library for generating an SBOM from container images (and filesystems).


## Supply chain specific tools






Supply chain is often the target of attacks. Which libraries you use can have a massive impact on security of the final product (artifacts). CI (continuous integration) must be monitored inside the tasks and jobs in pipeline steps. Integrity checks must be stored out of the system and in ideal case several validation runs with comparison of integrity hashes / or attestation must be performed.

Name	URL	Description	Meta
<b>Tekton chains</b>	<a href="https://github.com/tektoncd/chains">https://github.com/tektoncd/chains</a>	Kubernetes Custom Resource Definition (CRD) controller that allows you to manage your supply chain security in Tekton.	 222
<b>in-toto</b>	<a href="https://github.com/in-toto/attestation/tree/v0.1.0/spec">https://github.com/in-toto/attestation/tree/v0.1.0/spec</a>	An in-toto attestation is authenticated metadata about one or more software artifacts	 149
<b>SLSA</b>	<a href="#">Official GitHub link</a>	Supply-chain Levels for Software Artifacts	 1.3K
<b>kritis</b>	<a href="https://github.com/grafeas/kritis">https://github.com/grafeas/kritis</a>	Solution for securing your software supply chain for Kubernetes apps	 674
<b>ratify</b>	<a href="https://github.com/deislabs/ratify">https://github.com/deislabs/ratify</a>	Artifact Ratification Framework	 140

# SAST

Static code review tools working with source code and looking for known patterns and relationships of methods, variables, classes and libraries. SAST works with the raw code and usually not with build packages.

Name	URL	Description	Meta
<b>Brakeman</b>	<a href="https://github.com/presidentbeef/brakeman">https://github.com/presidentbeef/brakeman</a>	Brakeman is a static analysis tool which checks Ruby on Rails applications for security vulnerabilities	 6.7K
<b>Semgrep</b>	<a href="https://semgrep.dev/">https://semgrep.dev/</a>	Hi-Quality Open source, works on 17+ languages	 8.8K
<b>Bandit</b>	<a href="https://github.com/PyCQA/bandit">https://github.com/PyCQA/bandit</a>	Python specific SAST tool	 5.8K
<b>libsast</b>	<a href="https://github.com/ajinabraham/libsast">https://github.com/ajinabraham/libsast</a>	Generic SAST for Security Engineers. Powered by regex based pattern matcher and semantic aware semgrep	 106
<b>ESLint</b>	<a href="https://eslint.org/">https://eslint.org/</a>	Find and fix problems in your	







		JavaScript code	
<b>nodejsscan</b>	<a href="https://github.com/ajinabraham/nodejsscan">https://github.com/ajinabraham/nodejsscan</a>	NodeJs SAST scanner with GUI	 2.2K
<b>FindSecurityBugs</b>	<a href="https://find-sec-bugs.github.io/">https://find-sec-bugs.github.io/</a>	The SpotBugs plugin for security audits of Java web applications	 2.1K
<b>SonarQube community</b>	<a href="https://github.com/SonarSource/sonarqube">https://github.com/SonarSource/sonarqube</a>	Detect security issues in code review with Static Application Security Testing (SAST)	 8.1K
<b>gosec</b>	<a href="https://github.com/securego/gosec">https://github.com/securego/gosec</a>	Inspects source code for security problems by scanning the Go AST.	 7.1K
<b>Safety</b>	<a href="https://github.com/pyupio/safety">https://github.com/pyupio/safety</a>	Checks Python dependencies for known security vulnerabilities	 1.5K

**Note:** Semgrep is free CLI tool, however some rulesets (<https://semgrep.dev/r>) are having various licences, some can be free to use and can be commercial.

OWASP curated list of SAST tools : [https://owasp.org/www-community/Source\\_Code\\_Analysis\\_Tools](https://owasp.org/www-community/Source_Code_Analysis_Tools)

## DAST

Dynamic application security testing (DAST) is a type of application testing (in most cases web) that checks your application from the outside by active communication and analysis of the responses based on injected inputs. DAST tools rely on inputs and outputs to operate. A DAST tool uses these to check for security problems while the software is actually running and is actively deployed on the server (or serverless function).

Name	URL	Description	Meta
Zap proxy	<a href="https://owasp.org/www-project-zap/">https://owasp.org/www-project-zap/</a>	Zap proxy providing various docker containers for CI/CD pipeline	 11k
Wapiti	<a href="https://github.com/wapiti-scanner/wapiti">https://github.com/wapiti-scanner/wapiti</a>	Light pipeline ready scanning tool	 767
Nuclei	<a href="https://github.com/projectdiscovery/nuclei">https://github.com/projectdiscovery/nuclei</a>	Template based security scanning tool	 15k
purpleteam	<a href="https://github.com/purpleteam-labs/purpleteam">https://github.com/purpleteam-labs/purpleteam</a>	CLI DAST tool incubator project	 104
oss-fuzz	<a href="https://github.com/google/oss-fuzz">https://github.com/google/oss-fuzz</a>	OSS-Fuzz: Continuous Fuzzing for Open Source Software	 9k
nikto	<a href="https://github.com/sullo/nikto">https://github.com/sullo/nikto</a>	Nikto web server scanner	 7.1k
		Skipfish is an active web application	







<b>skipfish</b>	<a href="https://code.google.com/archive/p/skipfish/">https://code.google.com/archive/p/skipfish/</a>	security reconnaissance tool	STARS 615
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## Continuous deployment security

Name	URL	Description	Meta
<b>SecureCodeBox</b>	<a href="https://github.com/secureCodeBox/secureCodeBox">https://github.com/secureCodeBox/secureCodeBox</a>	Toolchain for continuous scanning of applications and infrastructure	5
<b>OpenSCAP</b>	<a href="https://github.com/OpenSCAP/openscap">https://github.com/OpenSCAP/openscap</a>	Open Source Security Compliance Solution	5
<b>ThreatMapper</b>	<a href="https://github.com/deepfence/ThreatMapper">https://github.com/deepfence/ThreatMapper</a>	ThreatMapper hunts for vulnerabilities in your production platforms, and ranks these vulnerabilities based on their risk-of-exploit.	5

## Kubernetes

Name	URL	Description	Meta
		A tool for	

<b>KubiScan</b>	<a href="https://github.com/cyberark/KubiScan">https://github.com/cyberark/KubiScan</a>	scanning Kubernetes cluster for risky permissions	
<b>Kubeaudit</b>	<a href="https://github.com/Shopify/kubeaudit">https://github.com/Shopify/kubeaudit</a>	Audit Kubernetes clusters for various different security concerns	
<b>Kubescape</b>	<a href="https://github.com/armosec/kubescape">https://github.com/armosec/kubescape</a>	The first open- source tool for testing if Kubernetes is deployed according to the NSA-CISA and the MITRE ATT&CK®.	
<b>kubesecc</b>	<a href="https://github.com/controlplaneio/kubesecc">https://github.com/controlplaneio/kubesecc</a>	Security risk analysis for Kubernetes resources	
<b>kube-bench</b>	<a href="https://github.com/aquasecurity/kube-bench">https://github.com/aquasecurity/kube-bench</a>	Kubernetes benchmarking tool	
<b>kube-score</b>	<a href="https://github.com/zegl/kube-score">https://github.com/zegl/kube-score</a>	Static code analysis of your Kubernetes object definitions	








<b>kube-hunter</b>	<a href="https://github.com/aquasecurity/kube-hunter">https://github.com/aquasecurity/kube-hunter</a>	Active scanner for k8s (purple)	
<b>Calico</b>	<a href="https://github.com/projectcalico/calico">https://github.com/projectcalico/calico</a>	Calico is an open source networking and network security solution for containers	
<b>Krane</b>	<a href="https://github.com/appvia/krane">https://github.com/appvia/krane</a>	Simple Kubernetes RBAC static analysis tool	
<b>Starboard</b>	<a href="https://github.com/aquasecurity/starboard">https://github.com/aquasecurity/starboard</a>	Starboard integrates security tools by outputs into Kubernetes CRDs	
<b>Gatekeeper</b>	<a href="https://github.com/open-policy-agent/gatekeeper">https://github.com/open-policy-agent/gatekeeper</a>	Open policy agent gatekeeper for k8s	
<b>Inspektor-gadget</b>	<a href="https://github.com/kinvolk/inspektor-gadget">https://github.com/kinvolk/inspektor-gadget</a>	Collection of tools (or gadgets) to debug and inspect k8s	
<b>kube-linter</b>	<a href="https://github.com/stackrox/kube-linter">https://github.com/stackrox/kube-linter</a>	Static analysis for Kubernetes	
		A simple-yet-powerful API traffic viewer	

<p><b>mizu-api-traffic-viewer</b></p>	<p><a href="https://github.com/up9inc/mizu">https://github.com/up9inc/mizu</a></p>	<p>for Kubernetes enabling you to view all API communication between microservices to help your debug and troubleshoot regressions.</p>	<p>stars 9.6k</p>
<p><b>HelmSnyk</b></p>	<p><a href="https://github.com/snyk-labs/helm-snyk">https://github.com/snyk-labs/helm-snyk</a></p>	<p>The Helm plugin for Snyk provides a subcommand for testing the images.</p>	<p>stars 40</p>
<p><b>Kubewarden</b></p>	<p><a href="https://github.com/orgs/kubewarden/repositories">https://github.com/orgs/kubewarden/repositories</a></p>	<p>Policy as code for kubernetes from SUSE.</p>	<p>stars 61</p>
<p><b>Kubernetes-sigs BOM</b></p>	<p><a href="https://github.com/kubernetes-sigs/bom">https://github.com/kubernetes-sigs/bom</a></p>	<p>Kubernetes BOM generator</p>	<p>stars 257</p>
<p><b>Capsule</b></p>	<p><a href="https://github.com/clastix/capsule">https://github.com/clastix/capsule</a></p>	<p>A multi-tenancy and policy-based framework for Kubernetes</p>	<p>stars 1.3k</p>
<p><b>Badrobot</b></p>	<p><a href="https://github.com/controlplaneio/badrobot">https://github.com/controlplaneio/badrobot</a></p>	<p>Badrobot is a Kubernetes Operator audit tool</p>	<p>stars 207</p>
<p><b>kube-scan</b></p>	<p><a href="https://github.com/octarinesec/kube-scan">https://github.com/octarinesec/kube-scan</a></p>	<p>k8s cluster risk assessment tool</p>	<p>stars 770</p>
		<p>Istio is a</p>	

<p><b>Istio</b></p>	<p><a href="https://istio.io">https://istio.io</a></p>	<p>service mesh based on Envoy. Engage encryption, role-based access, and authentication across services.</p>	<p>stars 34k</p>
<p><b>Kubernetes Insights</b></p>	<p><a href="https://github.com/turbot/steampipe-mod-kubernetes-insights">https://github.com/turbot/steampipe-mod-kubernetes-insights</a></p>	<p>Visualize Kubernetes inventory and permissions through relationship graphs.</p>	<p>stars 21</p>
<p><b>Kubernetes Compliance</b></p>	<p><a href="https://github.com/turbot/steampipe-mod-kubernetes-compliance">https://github.com/turbot/steampipe-mod-kubernetes-compliance</a></p>	<p>Check compliance of Kubernetes configurations to security best practices.</p>	<p>stars 28</p>

## Containers

Name	URL	Description	Meta
<p><b>Harbor</b></p>	<p><a href="https://github.com/goharbor/harbor">https://github.com/goharbor/harbor</a></p>	<p>Trusted cloud native registry project</p>	<p>STARS 21k</p>
<p><b>Anchore</b></p>	<p><a href="https://github.com/anchore/anchore-engine">https://github.com/anchore/anchore-engine</a></p>	<p>Centralized service for inspection, analysis, and certification of container</p>	<p>STARS 1.6k</p>

		images	
<b>Clair</b>	<a href="https://github.com/quay/clair">https://github.com/quay/clair</a>	Docker vulnerability scanner	
<b>Deepfence ThreatMapper</b>	<a href="https://github.com/deepfence/ThreatMapper">https://github.com/deepfence/ThreatMapper</a>	Apache v2, powerful runtime vulnerability scanner for kubernetes, virtual machines and serverless.	
<b>Docker bench</b>	<a href="https://github.com/docker/docker-bench-security">https://github.com/docker/docker-bench-security</a>	Docker benchmarking against CIS	
<b>Falco</b>	<a href="https://github.com/falcosecurity/falco">https://github.com/falcosecurity/falco</a>	Container runtime protection	
<b>Trivy</b>	<a href="https://github.com/aquasecurity/trivy">https://github.com/aquasecurity/trivy</a>	Comprehensive scanner for vulnerabilities in container images	
<b>Notary</b>	<a href="https://github.com/notaryproject/notary">https://github.com/notaryproject/notary</a>	Docker signing	
<b>Cosign</b>	<a href="https://github.com/sigstore/cosign">https://github.com/sigstore/cosign</a>	Container signing	
<b>watchtower</b>	<a href="https://github.com/containrrr/watchtower">https://github.com/containrrr/watchtower</a>	Updates the running version of your containerized app	
		Vulnerability scanner for	

<b>Grype</b>	<a href="https://github.com/anchore/grype">https://github.com/anchore/grype</a>	container images (and also filesystems).	
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## Multi-Cloud

Name	URL	Description	Meta
<b>Cloudsploit</b>	<a href="https://github.com/aquasecurity/cloudsploit">https://github.com/aquasecurity/cloudsploit</a>	Detection of security risks in cloud infrastructure	
<b>ScoutSuite</b>	<a href="https://github.com/nccgroup/ScoutSuite">https://github.com/nccgroup/ScoutSuite</a>	NCCgroup mutlicloud scanning tool	
<b>CloudCustodian</b>	<a href="https://github.com/cloud-custodian/cloud-custodian/">https://github.com/cloud-custodian/cloud-custodian/</a>	Multicloud security analysis framework	
<b>CloudGraph</b>	<a href="https://github.com/cloudgraphdev/cli">https://github.com/cloudgraphdev/cli</a>	GraphQL API + Security for AWS, Azure, GCP, and K8s	
<b>Steampipe</b>	<a href="https://github.com/turbot/steampipe">https://github.com/turbot/steampipe</a>	Instantly query your cloud, code, logs & more with SQL. Build on thousands of open-source benchmarks & dashboards for security & insights.	

# AWS

AWS specific DevSecOps tooling. Tools here cover different areas like inventory management, misconfiguration scanning or IAM roles and policies review.

Name	URL	Description	Meta
Dragoneye	<a href="https://github.com/indeni/dragoneye">https://github.com/indeni/dragoneye</a>	Dragoneye Indeni AWS scanner	
Prowler	<a href="https://github.com/toniblyx/prowler">https://github.com/toniblyx/prowler</a>	Prowler is a command line tool that helps with AWS security assessment, auditing, hardening and incident response.	
aws-inventory	<a href="https://github.com/nccgroup/aws-inventory">https://github.com/nccgroup/aws-inventory</a>	Helps to discover all AWS resources created in an account	
PacBot	<a href="https://github.com/tmobile/pacbot">https://github.com/tmobile/pacbot</a>	Policy as Code Bot (PacBot)	
Komiser	<a href="https://github.com/mlabouardy/komiser">https://github.com/mlabouardy/komiser</a>	Monitoring dashboard for costs and security	
Cloudsplaining	<a href="https://github.com/salesforce/cloudsplaining">https://github.com/salesforce/cloudsplaining</a>	IAM analysis framework	
		Continuously monitor your	

<b>ElectricEye</b>	<a href="https://github.com/jonrau1/ElectricEye">https://github.com/jonrau1/ElectricEye</a>	AWS services for configurations	
<b>Cloudmapper</b>	<a href="https://github.com/duo-labs/cloudmapper">https://github.com/duo-labs/cloudmapper</a>	CloudMapper helps you analyze your Amazon Web Services (AWS) environments	
<b>cartography</b>	<a href="https://github.com/lyft/cartography">https://github.com/lyft/cartography</a>	Consolidates AWS infrastructure assets and the relationships between them in an intuitive graph	
<b>policy_sentry</b>	<a href="https://github.com/salesforce/policy_sentry">https://github.com/salesforce/policy_sentry</a>	IAM Least Privilege Policy Generator	
<b>AirIAM</b>	<a href="https://github.com/bridgecrewio/AirIAM">https://github.com/bridgecrewio/AirIAM</a>	IAM Least Privilege analyzer and Terraformer	
<b>StreamAlert</b>	<a href="https://github.com/airbnb/streamalert">https://github.com/airbnb/streamalert</a>	AirBnB serverless, real-time data analysis framework which empowers you to ingest, analyze, and alert	

<p><b>CloudQuery</b></p>	<p><a href="https://github.com/cloudquery/cloudquery/">https://github.com/cloudquery/cloudquery/</a></p>	<p>AirBnB serverless, real-time data analysis framework which empowers you to ingest, analyze, and alert</p>	<p>STARS 5.1K</p>
<p><b>S3Scanner</b></p>	<p><a href="https://github.com/sa7mon/S3Scanner/">https://github.com/sa7mon/S3Scanner/</a></p>	<p>A tool to find open S3 buckets and dump their contents</p>	<p>STARS 2.2K</p>
<p><b>aws-iam-authenticator</b></p>	<p><a href="https://github.com/kubernetes-sigs/aws-iam-authenticator/">https://github.com/kubernetes-sigs/aws-iam-authenticator/</a></p>	<p>A tool to use AWS IAM credentials to authenticate to a Kubernetes cluster</p>	<p>STARS 2K</p>
<p><b>kube2iam</b></p>	<p><a href="https://github.com/jtblin/kube2iam/">https://github.com/jtblin/kube2iam/</a></p>	<p>A tool to use AWS IAM credentials to authenticate to a Kubernetes cluster</p>	<p>STARS 1.9K</p>
<p><b>AWS open source security samples</b></p>	<p><a href="#">Official AWS opensource repo</a></p>	<p>Collection of official AWS open-source resources</p>	<p>AMAZON AWS</p>
<p><b>AWS Firewall factory</b></p>	<p><a href="#">Globaldatanet FMS automation</a></p>	<p>Deploy, update, and stage your WAFs while managing them</p>	<p>STARS 155</p>

		centrally via FMS	
<b>Parliment</b>	<a href="#">Parliment</a>	Parliament is an AWS IAM linting library	
<b>Yor</b>	<a href="#">Yor</a>	Adds informative and consistent tags across infrastructure-as-code frameworks such as Terraform, CloudFormation, and Serverless	
<b>AWS Insights</b>	<a href="https://github.com/turbot/steampipe-mod-aws-insights">https://github.com/turbot/steampipe-mod-aws-insights</a>	Visualize AWS inventory and permissions through relationship graphs.	
<b>AWS Compliance</b>	<a href="https://github.com/turbot/steampipe-mod-aws-compliance">https://github.com/turbot/steampipe-mod-aws-compliance</a>	Check compliance of AWS configurations to security best practices.	

## Google cloud platform

GCP specific DevSecOps tooling. Tools here cover different areas like inventory management, misconfiguration scanning or IAM roles and policies review.

Name	URL	Description	Meta
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<b>Forseti</b>	<a href="https://github.com/forseti-security/forseti-security">https://github.com/forseti-security/forseti-security</a>	Complex security orchestration and scanning platform	<small>STARS</small> 1.3K
<b>GCP Insights</b>	<a href="https://github.com/turbot/steampipe-mod-gcp-insights">https://github.com/turbot/steampipe-mod-gcp-insights</a>	Visualize GCP inventory and permissions through relationship graphs.	<small>stars</small> 7
<b>GCP Compliance</b>	<a href="https://github.com/turbot/steampipe-mod-gcp-compliance">https://github.com/turbot/steampipe-mod-gcp-compliance</a>	Check compliance of GCP configurations to security best practices.	<small>stars</small> 29

## Microsoft Azure

Azure specific DevSecOps tooling. Tools here cover different areas like inventory management, misconfiguration scanning or IAM roles and policies review.

Name	URL	Description	Meta
<b>Azure Insights</b>	<a href="https://github.com/turbot/steampipe-mod-azure-insights">https://github.com/turbot/steampipe-mod-azure-insights</a>	Visualize Azure inventory and permissions through relationship graphs.	<small>stars</small> 8
<b>Azure Compliance</b>	<a href="https://github.com/turbot/steampipe-mod-azure-compliance">https://github.com/turbot/steampipe-mod-azure-compliance</a>	Check compliance of Azure configurations to security best practices.	<small>stars</small> 46

## Policy as code

Policy as code is the idea of writing code in a high-level language to manage and automate policies. By representing policies as code in text files, proven software development best practices can be adopted such as version control, automated testing, and automated deployment. (Source: <https://docs.hashicorp.com/sentinel/concepts/policy-as-code>)

Name	URL	Description	Meta
<b>Open Policy</b>	<a href="https://github.com/open-policy-engine">https://github.com/open-policy-engine</a>	General-purpose policy engine that enables unified, context-aware policy	<small>STARS</small> 8.5K

<b>agent</b>	<a href="#">agent/opa</a>	enforcement across the entire stack	
<b>Kyverno</b>	<a href="https://github.com/kyverno/kyverno">https://github.com/kyverno/kyverno</a>	Kyverno is a policy engine designed for Kubernetes	<small>STARS</small> 4.4K
<b>Inspect</b>	<a href="https://github.com/inspect/inspect">https://github.com/inspect/inspect</a>	Chef InSpec is an open-source testing framework for infrastructure with a human- and machine-readable language for specifying compliance, security and policy requirements.	<small>STARS</small> 2.7K
<b>Cloud Formation guard</b>	<a href="https://github.com/aws-cloudformation/cloudformation-guard">https://github.com/aws-cloudformation/cloudformation-guard</a>	Cloud Formation policy as code	<small>STARS</small> 1.2K
<b>cnspec</b>	<a href="https://github.com/mondoohq/cnspec">https://github.com/mondoohq/cnspec</a>	cnspec is a cloud-native and powerful Policy as Code engine to assess the security and compliance of your business-critical infrastructure. cnspec finds vulnerabilities and misconfigurations on all systems in your infrastructure including: public and private cloud environments, Kubernetes clusters, containers, container registries, servers and endpoints, SaaS products, infrastructure as code, APIs, and more.	<small>STARS</small> 196

# Chaos engineering

Chaos Engineering is the discipline of experimenting on a system in order to build confidence in the system's capability to withstand turbulent conditions in production.

Reading and manifestos: <https://principlesofchaos.org/>

Name	URL	Description	Meta
chaos-mesh	<a href="https://github.com/chaos-mesh/chaos-mesh">https://github.com/chaos-mesh/chaos-mesh</a>	It is a cloud-native Chaos Engineering platform that orchestrates chaos on Kubernetes environments	STARS 5.9K
Chaos monkey	<a href="https://netflix.github.io/chaosmonkey/">https://netflix.github.io/chaosmonkey/</a>	Chaos Monkey is responsible for randomly terminating instances in production to ensure that engineers implement their services to be resilient to instance failures.	STARS 14K
Chaos Engine	<a href="https://thalesgroup.github.io/chaos-engine/">https://thalesgroup.github.io/chaos-engine/</a>	The Chaos Engine is a tool that is designed to intermittently destroy or degrade application resources running in cloud based infrastructure. These events are designed to occur while the appropriate resources are available to resolve the issue if the platform fails to do so on it's own.	STARS 66
chaoskube	<a href="https://github.com/linki/chaoskube">https://github.com/linki/chaoskube</a>	Test how your system behaves under arbitrary pod failures.	STARS 1.7K
		Gamified chaos	

<b>Kube-Invaders</b>	<a href="https://github.com/lucky-sideburn/KubeInvaders">https://github.com/lucky-sideburn/KubeInvaders</a>	engineering tool for Kubernetes	STARS 917
<b>kube-monkey</b>	<a href="https://github.com/asobti/kube-monkey">https://github.com/asobti/kube-monkey</a>	Gamified chaos engineering tool for Kubernetes	STARS 2.8K
<b>Litmus Chaos</b>	<a href="https://litmuschaos.io/">https://litmuschaos.io/</a>	Litmus is an end-to-end chaos engineering platform for cloud native infrastructure and applications. Litmus is designed to orchestrate and analyze chaos in their environments.	STARS 2.8K
<b>Gremlin</b>	<a href="https://github.com/gremlin/gremlin-python">https://github.com/gremlin/gremlin-python</a>	Chaos engineering SaaS platform with free plan and some open source libraries	STARS 53
<b>AWS FIS samples</b>	<a href="https://github.com/aws-samples/aws-fault-injection-simulator-samples">https://github.com/aws-samples/aws-fault-injection-simulator-samples</a>	AWS Fault injection simulator samples	STARS 31
<b>CloudNuke</b>	<a href="https://github.com/gruntwork-io/cloud-nuke">https://github.com/gruntwork-io/cloud-nuke</a>	CLI tool to delete all resources in an AWS account	STARS 2.5K

## Infrastructure as code security

Scanning your infrastructure when it is only code helps shift-left the security. Many tools offer in IDE scanning and providing real-time advisory do Cloud engineers.

Name	URL	Description	Meta
<b>KICS</b>	<a href="https://github.com/Checkmarx/kics">https://github.com/Checkmarx/kics</a>	Checkmarx security testing opensource for IaC	STARS 1.7K
		Checkov is a static	

<b>Checkov</b>	<a href="https://github.com/bridgecrewio/checkov">https://github.com/bridgecrewio/checkov</a>	code analysis tool for infrastructure-as-code	
<b>tfsec</b>	<a href="https://github.com/aquasecurity/tfsec">https://github.com/aquasecurity/tfsec</a>	tfsec uses static analysis of your terraform templates to spot potential security issues. Now with terraform CDK support	
<b>terrascan</b>	<a href="https://github.com/accurics/terrascan">https://github.com/accurics/terrascan</a>	Terrascan is a static code analyzer for Infrastructure as Code	
<b>cfsec</b>	<a href="https://github.com/aquasecurity/cfsec">https://github.com/aquasecurity/cfsec</a>	cfsec scans CloudFormation configuration files for security issues	
<b>cfn_nag</b>	<a href="https://github.com/stelligent/cfn_nag">https://github.com/stelligent/cfn_nag</a>	Looks for insecure patterns in CloudFormation	
<b>Sysdig IaC scanner action</b>	<a href="https://github.com/sysdiglabs/cloud-iac-scanner-action">https://github.com/sysdiglabs/cloud-iac-scanner-action</a>	Scans your repository with Sysdig IAC Scanner and report the vulnerabilities.	
<b>Terraform Compliance for AWS</b>	<a href="https://github.com/turbot/steampipe-mod-terraform-aws-compliance">https://github.com/turbot/steampipe-mod-terraform-aws-compliance</a>	Check compliance of Terraform configurations to AWS security best practices.	
<b>Terraform Compliance for Azure</b>	<a href="https://github.com/turbot/steampipe-mod-terraform-azure-compliance">https://github.com/turbot/steampipe-mod-terraform-azure-compliance</a>	Check compliance of Terraform configurations to Azure security best practices.	

<b>Terraform Compliance for GCP</b>	<a href="https://github.com/turbot/steampipe-mod-terraform-gcp-compliance">https://github.com/turbot/steampipe-mod-terraform-gcp-compliance</a>	Check compliance of Terraform configurations to GCP security best practices.	stars 2
<b>Terraform Compliance for OCI</b>	<a href="https://github.com/turbot/steampipe-mod-terraform-oci-compliance">https://github.com/turbot/steampipe-mod-terraform-oci-compliance</a>	Check compliance of Terraform configurations to OCI security best practices.	stars 2

## Orchestration

Event driven security help to drive, automate and execute tasks for security processes. The tools here are not dedicated security tools but are helping to automate and orchestrate security tasks or are part of most modern security automation frameworks or tools.

Name	URL	Description	Meta
<b>StackStorm</b>	<a href="https://github.com/StackStorm/st2">https://github.com/StackStorm/st2</a>	Platform for integration and automation across services and tools supporting event driven security	stars 5.7k
<b>Camunda</b>	<a href="https://github.com/camunda/camunda-bpm-platform">https://github.com/camunda/camunda-bpm-platform</a>	Workflow and process automation	stars 3.5k
<b>DefectDojo</b>	<a href="https://github.com/DefectDojo/django-DefectDojo">https://github.com/DefectDojo/django-DefectDojo</a>	Security orchestration and vulnerability management platform	stars 3k
<b>Faraday</b>	<a href="https://github.com/infobyte/faraday">https://github.com/infobyte/faraday</a>	Security suite for Security Orchestration, vulnerability management and centralized information	stars 4.2k

# Methodologies, whitepapers and architecture

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List of resources worth investigating:

- [https://dodcio.defense.gov/Portals/0/Documents/DoD%20Enterprise%20DevSecOps%20Reference%20Design%20v1.0\\_Public%20Release.pdf](https://dodcio.defense.gov/Portals/0/Documents/DoD%20Enterprise%20DevSecOps%20Reference%20Design%20v1.0_Public%20Release.pdf)
- <https://dodcio.defense.gov/Portals/0/Documents/Library/DoDEnterpriseDevSecOpsStrategyGuide.pdf>
- <https://csrc.nist.gov/publications/detail/sp/800-204c/draft>
- <https://owasp.org/www-project-devsecops-maturity-model/>
- <https://www.sans.org/posters/cloud-security-devsecops-best-practices/>

AWS DevOps whitepapers:

- <https://d1.awsstatic.com/whitepapers/aws-development-test-environments.pdf>
- [https://d1.awsstatic.com/whitepapers/AWS\\_DevOps.pdf](https://d1.awsstatic.com/whitepapers/AWS_DevOps.pdf)
- [https://d1.awsstatic.com/whitepapers/AWS\\_Blue\\_Green\\_Deployments.pdf](https://d1.awsstatic.com/whitepapers/AWS_Blue_Green_Deployments.pdf)
- <https://d1.awsstatic.com/whitepapers/DevOps/import-windows-server-to-amazon-ec2.pdf>
- [https://d1.awsstatic.com/whitepapers/DevOps/Jenkins\\_on\\_AWS.pdf](https://d1.awsstatic.com/whitepapers/DevOps/Jenkins_on_AWS.pdf)
- <https://d1.awsstatic.com/whitepapers/DevOps/practicing-continuous-integration-continuous-delivery-on-AWS.pdf>
- <https://d1.awsstatic.com/whitepapers/DevOps/infrastructure-as-code.pdf>
- <https://d1.awsstatic.com/whitepapers/microservices-on-aws.pdf>
- <https://d1.awsstatic.com/whitepapers/DevOps/running-containerized-microservices-on-aws.pdf>
- <https://d1.awsstatic.com/Marketplace/solutions-center/downloads/AppSec-DevSecOps-AWS-SANS-eBook.pdf> (AWS + SANS whitepaper)

AWS blog:

- <https://aws.amazon.com/blogs/devops/building-end-to-end-aws-devsecops-ci-cd-pipeline-with-open-source-sca-sast-and-dast-tools/>
- <https://aws.amazon.com/blogs/devops/building-an-end-to-end-kubernetes-based-devsecops-software-factory-on-aws/>

Microsoft whitepapers:

- [https://azure.microsoft.com/mediahandler/files/resourcefiles/6-tips-to-integrate-security-into-your-devops-practices/DevSecOps\\_Report\\_Tips\\_D6\\_fm.pdf](https://azure.microsoft.com/mediahandler/files/resourcefiles/6-tips-to-integrate-security-into-your-devops-practices/DevSecOps_Report_Tips_D6_fm.pdf)
- <https://docs.microsoft.com/en-us/azure/architecture/solution-ideas/articles/devsecops-in-azure>
- <https://docs.microsoft.com/en-us/azure/architecture/solution-ideas/articles/devsecops-in-github>

GCP whitepapers:

- <https://cloud.google.com/architecture/devops/devops-tech-shifting-left-on-security>
- <https://cloud.google.com/security/overview/whitepaper>
- [https://services.google.com/fh/files/misc/security\\_whitepapers\\_march2018.pdf](https://services.google.com/fh/files/misc/security_whitepapers_march2018.pdf)
- <https://cloud.google.com/security/encryption-in-transit/application-layer-transport-security>
- <https://services.google.com/fh/files/misc/google-cloud-security-foundations-guide.pdf>

## Other

Here are the other links and resources that do not fit in any previous category. They can meet multiple categories in time or help you in your learning.

Name	URL	Description	Meta
<p><b>Automated Security Helper (ASH)</b></p>	<p><a href="https://github.com/aws-samples/automated-security-helper">https://github.com/aws-samples/automated-security-helper</a></p>	<p>ASH is a one stop shop for security scanners, and does not require any installation. It will identify the different frameworks, and download the relevant, up to date tools. ASH is running on isolated Docker containers, keeping the user environment clean, with a single aggregated report. The following frameworks are supported: Git, Python, Javascript, Cloudformation, Terraform and Jupyter Notebooks.</p>	<p><small>STARS</small> 227</p>

<p><b>Mobile security framework</b></p>	<p><a href="https://github.com/MobSF/Mobile-Security-Framework-MobSF">https://github.com/MobSF/Mobile-Security-Framework-MobSF</a></p>	<p>SAST, DAST and pentesting tool for mobile apps</p>	<p>STARS 15K</p>
<p><b>Legitify</b></p>	<p><a href="https://github.com/Legit-Labs/legitify">https://github.com/Legit-Labs/legitify</a></p>	<p>Detect and remediate misconfigurations and security risks across all your GitHub and GitLab assets</p>	<p>STARS 629</p>

Training - <https://www.practical-devsecops.com/devsecops-university/>

DevSecOps videos - [Hackitect playground](#)

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