A black and white logo

Description automatically generated with low confidence

|  |  |
| --- | --- |
| Document name | Trivy |
| Version no. | 1.0 |
| Release date | 12th oct 2023 |
| Document ID | *1* |
| Classification | Internal |

|  |
| --- |
| **Trivy** |

# Document History

| Ver. No | Release Date | Created By / Modified By and Date | Reviewed By and Date | Approved By and Date | Remarks and Changes Made |
| --- | --- | --- | --- | --- | --- |
| 1.0 | 12tth Oct 2023 | Ruturaj Kharde / 12th Oct 2023 |  |  |  |

# Table of Contents

[Document History 2](#_Toc152016136)

[Table of Contents 3](#_Toc152016137)

[1. sca and Code Coverage using cli 4](#_Toc152016138)

[1.1 SUPPORTED OPERATION SYSTEMS 4](#_Toc152016139)

[1.2 SUPPORTED TARGETS 4](#_Toc152016140)

[1.3 WHAT IT SCANS 4](#_Toc152016141)

[2. TRIVY WITH WINDOWS OS 5](#_Toc152016142)

[2.1 INSTALLATION 5](#_Toc152016143)

[2.2 SCANNING PROJECtS LOCALLY 5](#_Toc152016144)

[2.3 SCANNING REPOSITORY 6](#_Toc152016145)

[2.4 SCANNING PROJECT FROM PIPELINE ON SELF HOSTED AGENT 6](#_Toc152016146)

[2.5 LIMITATIONS 6](#_Toc152016147)

[3. References 7](#_Toc152016148)

# sca and Code Coverage using cli

## SUPPORTED OPERATION SYSTEMS

Trivy tool is open source and available on website <https://github.com/aquasecurity/trivy> .It is cross platform tool can easily work for OS as

* Linux
* Ubuntu
* windows
* mac
* Docs

## SUPPORTED TARGETS

Trivy (pronunciation) is a comprehensive and versatile security scanner. Trivy has scanners that look for security issues, and targets where it can find those issues**.**

* Container Image
* Filesystem
* Git Repository (remote)
* Virtual Machine Image
* Kubernetes
* AWS

## WHAT IT SCANS

Scanners (what Trivy can find there):

* OS packages and software dependencies in use (SBOM)
* Known vulnerabilities (CVEs)
* IaC issues and misconfigurations
* Sensitive information and secrets
* Software licenses

Trivy supports most popular programming languages, operating systems, and platforms. For a complete list, see the Scanning Coverage page.

We will be discussing how to scan the **file system** scanning on **windows** using Trivy

# TRIVY WITH WINDOWS OS

## **INSTALLATION**

**Step 1**. Open PowerShell in admin mode

**Step 2**. Download the tool from website using command *git clone --depth 1 --branch v0.46.0* [*https://github.com/aquasecurity/trivy*](https://github.com/aquasecurity/trivy)

**Step 3**. A folder will be created navigate PS in folder trivy using command *cd trivy*

**Step 4**. Check whether go language is installed or not by typing *go on PS*

**Step 5**. If go language is not installed open official website [*https://go.dev/dl/*](https://go.dev/dl/)and download .msi file and install it.

**Step 6**. According to installation folder, navigate to the bin folder of go language and set its path to path variable in environment variable section.

**Step 7**. Execute the trivy installation command *go install ./cmd/trivy*

## **SCANNING PROJECtS LOCALLY**

**Step 1**. Navigate to the root of the Filesystem/project.

**Step 2**. Open CLI

**Step 3**. Now to do the analysis, there are different commands which will output the same results in different format.

*Trivy Filesystem .* – will scan the project vulnebraties and display the result on CLI in from of table

*trivy fs --format json -o JSON\_REPORT.json . -* will scan the project vulnebraties and display the result in json file at root of the project in from of json

*trivy fs --format table -o TABLE\_REPORT.txt . -* will scan the project vulnebraties and display the result in txt file at root of the project in from of table

*trivy fs --format sarif -o SARIF\_REPORT.sarif . - w*ill scan the project vulnebraties and display the result in sarif file at root of the project in from of sarif

## SCANNING REPOSITORY

**Step 1**. Open CLI in admin mode

**Step 2**. To scan vulnebraties of a complete repo use command *trivy repo <repo url>*

**Step 3**. To scan a specific branch vulnebraties from repo *trivy repo --branch <branch-name> <repo-url>*

## SCANNING PROJECT FROM PIPELINE ON SELF HOSTED AGENT

**Step 1.** Add the file called trivy.exe in Agent.ToolsDirectory (which is tool folder in agent’s work directory)

**Step 2.** Add the task of CLI in pipeline just before the build task.

**Step 3.** Add the below command set in the task

cd $(Agent.ToolsDirectory)

# TABLE format

./trivy fs $(System.DefaultWorkingDirectory)

**step 4.** Run the pipeline and results will be displayed in task log

## LIMITATIONS

1. If project size is increasing, scanning of the project takes too long time.
2. If we want to exclude any of the file from scan, no mechanism is available

# References

https://aquasecurity.github.io/trivy/v0.47/ecosystem/prod/