Grype Vulnerability scanner

START HERE

`grype <image>`
Scan a container image

`grype dir:<path>`
Scan a project folder

`grype sbom:<file>`
Scan an existing SBOM

`syft <image> -o json | grype`
Pipe an SBOM in

`--fail-on high`
Exit 2 on serious findings

`--only-fixed`
Hide CVEs without a fix

`-o json`
Machine-readable report

`grype db update`
Refresh the vuln database

Source image, dir, SBOM, PURL → `catalog` → **Packages** OS and language deps → `match` → **Vuln DB** local, auto-updated → `filter` → **Report** table, json, sarif, cyclonedx

CONCEPTS

Grype matches the packages it finds (or reads from an SBOM) against a local vulnerability DB. It reports; it does not generate SBOMs (that is Syft).

A bare argument is auto-detected (local daemon, then registry, then path). Add a scheme prefix or --from when the guess is wrong.

The DB is downloaded on first scan and re-checked on later ones; offline or CI runs need it pre-fetched with db update or db import.

SCAN SOURCES

`grype <image>`
Scan an image (name:tag)

`grype dir:<path>`
Scan a directory

`grype sbom:<file>`
Scan a Syft/SPDX/CycloneDX SBOM

`cat <sbom.json> | grype`
Read an SBOM from stdin

`grype docker:<image>`
Force the local Docker daemon

`grype registry:<image>`
Force a pull from the registry

`grype podman:<image>`
Use the Podman daemon

`grype docker-archive:<file.tar>`
Scan a docker save tarball

`grype oci-archive:<file.tar>`
Scan an OCI archive

`grype oci-dir:<dir>`
Scan an OCI layout directory

`grype file:<path>`
Scan a single file

`grype purl:<file>`
Scan a file of package URLs

`grype pkg:<purl>`
Check one package URL
Example: pkg:apk/openssl@3.2.1?distro=alpine-3.20.3 (give distro for OS packages).

SCAN SOURCES (cont.)

`--from containers-storage <image>`
Use a local containers-storage image
Linux only; rootless stores need podman unshare grype ...

`--platform <os/arch>`
Pick the image platform (linux/arm64)

`--scope all-layers`
Include layers hidden by later ones
Default is squashed; deep-squashed also looks at more of the final image.

`--exclude <glob>`
Skip matching paths (repeatable)

`--name <name>`
Label the scanned target in reports

FILTERING

`--only-fixed`
Show only vulns with a fix available

`--only-notfixed`
Show only vulns with no fix

`--ignore-states <list>`
Drop fix states: fixed,not-fixed,unknown,wont-fix

`--vex <file>`
Apply a VEX document (repeatable)

`--show-suppressed`
List matches hidden by ignore rules
Table output only.

`--by-cve`
Report by CVE ID, not GHSA ID

`--distro <name:ver>`
Override the detected distro (alpine:3.20)

`--add-cpes-if-none`
Guess CPEs for packages lacking one

`--sort-by <key>`
Order: risk, severity, epss, kev, package
Default is risk.

`--ignore-states wont-fix`
Skip issues the vendor will not fix

`grype explain --id <CVE>`
Explain why a CVE matched

OUTPUT AND CI

`--fail-on <severity>`
Exit code 2 at or above this severity
Levels: negligible, low, medium, high, critical. Without it the exit code stays 0.

`-o table`
Human-readable table (default)

`-o json`
Full JSON report

`-o sarif`
SARIF for code-scanning tools

`-o cyclonedx-json`
CycloneDX report with vulns

`-o template -t <file>`
Render a Go template

`-o json=<file>`
Write one format to a file
Repeat -o to emit several formats in one run.

`--file <path>`
Write the report to a file

`-q`
Quiet: no log output

`-v / -vv`
Info / debug logging

`grype --version`
Print the version

IGNORE RULES AND CONFIG

`.grype.yaml`
Config file in the project root
Also read from .grype/config.yaml, ~/.grype.yaml and $XDG_CONFIG_HOME/grype/config.yaml.

`-c <file>`
Use a specific config file

`ignore: - vulnerability: <CVE>`
Suppress one CVE

`ignore: fix-state: not-fixed`
Suppress by fix state

`ignore: package: name: <regex>`
Suppress by package name

`ignore: package: location: <glob>`
Suppress by file location

`ignore: reason: <text>`
Record why it is ignored
Note only; it does not affect matching.

`fail-on-severity: high`
Config form of --fail-on

IGNORE RULES AND CONFIG (cont.)

`GRYPE_<KEY>=<value>`
Set any option via environment
Nested keys join with underscores: GRYPE_DB_AUTO_UPDATE=false.

`grype config --load`
Print and validate the effective config

DATABASE

`grype db update`
Download the latest database

`grype db check`
Is a newer database available

`grype db status`
Show the cached DB's age and validity

`grype db list`
List available database builds

`grype db import <file|url>`
Load a DB archive (air-gapped)

`grype db search --vuln <ID>`
Look up a vulnerability in the DB

`grype db search --pkg <name>`
Find vulns for a package, CPE or PURL

`GRYPE_DB_AUTO_UPDATE=false`
Do not fetch updates during a scan

`GRYPE_DB_VALIDATE_AGE=false`
Allow a DB older than 120h

RECIPES

Gate CI on fixable high-severity issues

```
grype <image> --only-fixed --fail-on high
```

Scan once, report as SARIF and JSON

```
grype <image> -o sarif=grype.sarif -o json=grype.json
```

SBOM first, then re-scan it as the DB changes

```
syft <image> -o json=sbom.json
grype db update
grype sbom:sbom.json --fail-on critical
```

Air-gapped scan with a transferred DB

```
# online host
grype db list
# offline host
grype db import <db.tar.zst>
GRYPE_DB_AUTO_UPDATE=false grype <image>
```