Kubescape

Kubernetes security scanner

CONCEPTS

Scan manifests before deploy and the live cluster afterwards: the same controls run on both.

Target cluster, files, Helm image
↓ load
Framework NSA, MITRE, CIS: sets of controls
↓ evaluate
Controls C-xxxx checks, exceptions applied
↓ score
Report table, JSON, SARIF, HTML

Exceptions show up as exclude, not fail, so accepted risk stays visible in the report.

SCAN TARGETS

`kubescape scan`
Scan the cluster in your kubeconfig

`kubescape scan <path>`
Scan local YAML files or a directory

`kubescape scan <chart-dir>`
Scan a Helm chart directory

`kubescape scan <kustomize-dir>`
Scan a Kustomize directory

`kubescape scan image <image>`
Scan an image for vulnerabilities

`--include-namespaces <list>`
Scan only these namespaces

`--exclude-namespaces <list>`
Skip these namespaces

FRAMEWORKS AND CONTROLS

`kubescape scan framework <name>`
Run all controls of a framework

`kubescape scan framework nsa`
NSA-CISA hardening guide

`kubescape scan framework mitre`
MITRE ATT&CK for Kubernetes

`kubescape scan control <id>`
Run a single control, e.g. C-0017

`--controls-config <file>`
Scan with edited control parameters

VIEWS AND THRESHOLDS

`--verbose`
Show each failing resource and the fix

`--view security`
Default view when scanning files

`--compliance-threshold <pct>`
Exit 1 if compliance is below pct

`--severity-threshold <level>`
Fail on controls at this severity or above

Gate CI on --compliance-threshold: it is the documented, non-deprecated pass/fail switch.

OUTPUT

`--format json --output <file>`
Machine-readable report

`--format sarif --output <file>`
SARIF for code scanning

`--format junit --output <file>`
JUnit XML for CI test views

EXCEPTIONS

`--exceptions <file>`
Apply accepted-risk exceptions

`posturePolicies`
Controls or frameworks to exclude

`resources`
Match by kind, name, namespace or labels

Exclude a control in one namespace

```
[{"name": "allow-hostpath",
  "policyType": "postureExceptionPolicy",
  "actions": ["alertOnly"],
  "resources": [{"designatorType":
"Attributes",
    "attributes": {"namespace":
"monitoring"}}],
  "posturePolicies": [{"controlID":
"C-0060"}]}]
```

FIX, PATCH AND POLICY

`kubescape fix <report.json>`
Auto-fix manifests from a JSON report

`kubescape fix <report.json> --dry-run`
Preview fixes without writing