Vitest Vite-native test runner

CONCEPTS

Plain vitest watches when run in a terminal and runs once when in CI or without a TTY. Use vitest run for a guaranteed single run.

Filter path, -t, --changed
↓ select
Run workers, pool, env
↓ report
Report --reporter, --coverage
↓ iterate
Watch a / f / u / p / t keys

CLI flags override the config file (vitest.config.ts or the test block in vite.config.ts); keep settings there and use flags for one-off runs.

RUN TESTS

npx vitest
Start watch mode (or one run in CI)

npx vitest run
Run once, no watch

npx vitest --run
Same as run, for any command

npx vitest *<filter> <filter>*
Run files whose path contains a filter

npx vitest *<file>*:*<line>*
Run the test at a line number

npx vitest -t "*<pattern>***"**
Run tests whose full name matches a regexp

npx vitest run *<file>* **-t "***<pattern>***"**
Combine file and name filters

npx vitest related *<file>* **--run**
Run tests that import the given files

npx vitest run --changed
Run tests affected by uncommitted changes

npx vitest run --changed HEAD~1
Tests affected since a commit or branch

RUN TESTS (cont.)

npx vitest run --passWithNoTests
Do not fail when nothing matches

WATCH MODE KEYS

a / Enter
Rerun all tests

f
Rerun only failed tests

r
Rerun the current pattern

u
Update failing snapshots

p
Filter by file name

t
Filter by test name regexp

h
Show the key help

q
Quit

OUTPUT

npx vitest run --reporter=verbose
One line per test

npx vitest run --reporter=dot
Compact dots

npx vitest run --reporter=json --outputFile=*<file>*
Write JSON results to a file

npx vitest run --reporter=junit --outputFile=*<file>*
JUnit XML for CI

npx vitest list
Print the collected tests without running

npx vitest --ui
Open the browser dashboard

COVERAGE

npx vitest run --coverage
Run with coverage report

COVERAGE (cont.)

npx vitest run --coverage --coverage.reporter=html
Pick report formats

npx vitest run --coverage --coverage.include="src/"**
Count uncovered files too

npx vitest run --coverage --coverage.thresholds.lines=80
Fail below 80% lines

SNAPSHOTS AND FAILURES

npx vitest run -u
Rewrite all failing snapshots

npx vitest run --bail 1
Stop after the first failure

npx vitest run --retry 2
Retry failed tests twice

SPEED AND CI

npx vitest run --shard 1/3
Run one third of the suite

npx vitest run --no-file-parallelism
Run files one after another

npx vitest run --project *<name>*
Run one workspace project

ENVIRONMENT AND DEBUGGING

npx vitest run --environment=jsdom
Test in a DOM environment

npx vitest --inspectBrk --no-file-parallelism
Debug with the Node inspector

RECIPES

CI run with reports and coverage

```
npx vitest run --coverage \
  --reporter=default --
reporter=junit \
  --outputFile.junit=reports/
junit.xml
```

Pre-commit: tests for staged files

```
git diff --name-only --cached \
  | xargs npx vitest related --run
```