golangci-lint Go linters runner

START HERE

`golangci-lint` **`run`**
Lint the module

`//nolint:`*`<linter>`*
Silence one line

`golangci-lint` **`run --fix`**
Lint and auto-fix

`golangci-lint` **`config verify`**
Check .golangci.yml

`golangci-lint` **`fmt`**
Format the code

`golangci-lint` **`linters`**
What is enabled?

`golangci-lint` **`run -E`** ***`<linter>`***
Add a linter

`golangci-lint` **`run --new-from-rev main`**
New issues only

Packages ./... → `load` **Linters** default + enable → `report` **Filters** exclusions, nolint, new-from → `print` **Output** text, json, sarif...

CONCEPTS

One binary runs many linters in parallel over a shared parse, with a cache. Exit code 1 means issues were found.

Coming from v1? Config needs version: "2", exclude rules moved to linters.exclusions, formatters (gofmt, goimports) have their own section. Run golangci-lint migrate.

INSTALL AND INFO

`curl -sSfL https://golangci-lint.run/install.sh | sh -s -- -b $(go env GOPATH)/bin v`*`<version>`*
Install a pinned release binary
go install is not guaranteed to work; prefer the release binary.

`docker run --rm -v $(pwd):/app -w /app golangci/golangci-lint golangci-lint run`
Run from the official image

`golangci-lint` **`--version`**
Show version and Go it was built with

`golangci-lint` **`help linters`**
Describe every available linter

RUN

`golangci-lint` **`run`**
Lint all packages below here
Same as run ./... ; it lints packages, not single files.

`golangci-lint` **`run`** ***`<dir>`*****`/...`**
Lint one subtree

`golangci-lint` **`run --fix`**
Apply fixes linters can make
Only linters marked [auto-fix] in the linters list rewrite code.

`golangci-lint` **`run --timeout 5m`**
Abort after a time limit
No timeout by default.

`golangci-lint` **`run --tests=false`**
Skip *_test.go files

`golangci-lint` **`run --build-tags`** ***`<tag>`***
Lint with build tags set

`golangci-lint` **`run -c`** ***`<file>`***
Use a specific config file

`golangci-lint` **`run --no-config`**
Ignore any config file

`golangci-lint` **`run -v`**
Show config used, linters and timings

`golangci-lint` **`run --issues-exit-code 0`**
Report but never fail

RUN (cont.)

`golangci-lint` **`cache clean`**
Clear the analysis cache
Try this first when results look stale.

PICK LINTERS

`golangci-lint` **`linters`**
List enabled and disabled linters
Tags show [fast] and [auto-fix] linters.

`golangci-lint` **`run -E`** ***`<linter>,<linter>`***
Enable extra linters

`golangci-lint` **`run -D`** ***`<linter>`***
Disable a linter

`golangci-lint` **`run --enable-only`** ***`<linter>`***
Run just this linter
Overrides the linters section of the config.

`golangci-lint` **`run --default all`**
Start from every linter
Noisy: combine with -D or a config.
Sets: standard, all, none, fast.

`golangci-lint` **`run --default none -E`** ***`<linter>`***
Start empty, add only these

`golangci-lint` **`run --fast-only`**
Keep only fast linters
Good for editor save hooks.

PICK LINTERS (cont.)

The standard set (default)

Linter	Catches
`errcheck`	unchecked errors
`govet`	go vet checks
`staticcheck`	bugs, simplifications, style
`unused`	unused code
`ineffassign`	assignments never read

ONLY NEW ISSUES

`golangci-lint` **`run --new-from-rev`** ***`<rev>`***
Issues introduced since a commit
The way to adopt it on a big legacy codebase.

`golangci-lint` **`run --new-from-merge-base main`**
Issues since the branch left main

`golangci-lint` **`run -n`**
Issues in uncommitted changes
Falls back to HEAD~ when the tree is clean; in CI prefer --new-from-rev HEAD~.

`golangci-lint` **`run --new-from-patch`** ***`<file>`***
Issues within a patch file

OUTPUT

`golangci-lint` **`run --output.json.path stdout`**
Machine-readable JSON
Add --output.text.path stderr to keep the human output too.

`golangci-lint` **`run --max-issues-per-linter 0 --max-same-issues 0`**
Show every issue, no caps
By default 50 per linter and 3 with the same text are shown.

FORMAT

`golangci-lint` **`fmt`**
Format files with enabled formatters
Rewrites files in place; with no formatters enabled it uses gofmt.

`golangci-lint` **`fmt -d`**
Show diff, change nothing

`golangci-lint` **`fmt -E goimports`**
Format with a given formatter
Formatters: gofmt, goimports, gofumpt, gci, golines, swaggo.

`golangci-lint` **`formatters`**
List enabled formatters

CONFIG FILE

Searched as .golangci.yml/.yaml/.toml/.json from the linted path up to /, then in $HOME.

CONFIG FILE (cont.)

.golangci.yml

```yaml
version: "2"
linters:
  default: standard
  enable: [gosec, revive, misspell]
  disable: [errcheck]
  settings:
    misspell:
      locale: US
  exclusions:
    generated: lax
    presets: [std-error-handling]
    paths: [third_party/]
    rules:
      - path: _test\.go
        linters: [gosec]
formatters:
  enable: [gofumpt, goimports]
run:
  timeout: 5m
```

`golangci-lint` **`config verify`**
Validate config against the schema

`golangci-lint` **`migrate`**
Convert a v1 config to v2
Rewrites in place, keeps a .bck copy, drops comments.

SUPPRESS

`//nolint:`*`<linter>`*
Silence a linter on this line
No spaces anywhere: // nolint or // nolint: x are ignored.

`//nolint:`*`<linter>`* **`//`** ***`<why>`***
Silence with a reason