# TFLint Terraform linter

## CONCEPTS

TFLint checks Terraform code for mistakes terraform validate misses: bad instance types, deprecated syntax, unused declarations.

**.tflint.hcl** plugins and rules
↓ `tflint --init`
**Plugins** rulesets on disk
↓ `tflint`
**Rules** run on your .tf files
↓ `exit code`
**Issues** error / warning / notice

The terraform ruleset is bundled and on by default; cloud rulesets (aws, azurerm, google) are plugins you must declare and install.

Run tflint from the module directory, or pass --chdir: it reads .tf files and config from there, not from parent dirs.

## SETUP

**`brew install terraform-linters/tap/tflint`**
Install with Homebrew

**`tflint --version`**
Show version and loaded plugins

**`tflint --init`**
Install plugins from the config

**`tflint --recursive --init`**
Install plugins for all directories

**`docker run --rm -v $(pwd):/data -t ghcr.io/terraform-linters/tflint`**
Run the container image

**`export GITHUB_TOKEN=`***`<token>`*
Avoid the --init rate limit

## RUNNING

**`tflint`**
Lint the current directory

**`tflint --chdir=`***`<dir>`*
Lint a different directory

**`tflint --recursive`**
Lint each directory below here

## RUNNING (cont.)

**`tflint --filter=`***`<file>`*
Only report issues in this file or glob

**`tflint --fix`**
Apply automatic fixes

**`tflint --call-module-type=`***`<all|local|none>`*
Choose which module calls to inspect

**`tflint --help`**
List all options

## OUTPUT AND EXIT CODES

**`tflint --format=compact`**
One line per issue

**`tflint --format=json`**
Machine-readable output

**`tflint --format=sarif`**
SARIF for code scanning

**`tflint --no-color`**
Plain output

**`tflint --force`**
Exit 0 even if issues are found

**`tflint --minimum-failure-severity=`***`<error|warning|notice>`*
Fail only at this severity or worse

### Exit codes

| Code | Meaning |
|---|---|
| 0 | No issues |
| 1 | Error while running |
| 2 | Issues found |

## RULES

**`tflint --enable-rule=`***`<rule>`*
Enable a rule for this run

**`tflint --disable-rule=`***`<rule>`*
Disable a rule for this run

**`tflint --only=`***`<rule>`*
Run just this rule

## CONFIG FILE

**`tflint --config=`***`<file>`*
Use this config file

## CONFIG FILE (cont.)

**`tflint --config=$(realpath .tflint.hcl) --recursive`**
Share one config across directories

### Config lookup order

| Order | File |
|---|---|
| 1 | `--config` |
| 2 | `$TFLINT_CONFIG_FILE` |
| 3 | `./.tflint.hcl` |
| 4 | `./.tflint.json` |
| 5 | `~/.tflint.hcl` |
| 6 | `~/.tflint.json` |

### plugin and rule blocks

```
plugin "aws" {
  enabled = true
  version = "0.4.0"
  source  = "github.com/terraform-linters/tflint-ruleset-aws"
}

rule "terraform_typed_variables" {
  enabled = true
}
```

Plugin version must be exact and without a leading v; constraints like >= 0.3 are not supported.

## IGNORING ISSUES

### Ignore one line

```
# tflint-ignore: <rule>
instance_type = "t1.2xlarge"
```

### Ignore a whole file

```
# tflint-ignore-file: <rule>
```

tflint-ignore-file only works at the top of a file; inside a block it is an error. In .tf.json files use a "//" property.

## MODULES AND VARIABLES

**`tflint --var-file=`***`<file>`*
Load a tfvars file

**`tflint --var='`***`<name>`*`=`*`<value>`*`'`
Set a variable

**`tflint --ignore-module=`***`<source>`*
Skip a module by source