# asdf Multi-tool version manager

## CONCEPTS

asdf is one version manager for many tools. Each tool comes from a plugin; versions are pinned per directory in a .tool-versions file.

**Plugin** knows the tool
↓ install
**Installed version** in the data dir
↓ set
**.tool-versions** per directory
↓ shim
**Command** resolved version

Shims in PATH pick the version by looking up from the current directory. After installing a package that adds executables, run asdf reshim if a command is not found.

Version 0.16 removed asdf global and asdf local; use asdf set instead. Older releases still use the old commands.

## PLUGINS

`asdf plugin add <name>`
Add a plugin from the official list

`asdf plugin add <name> <git-url>`
Add a plugin from a Git repo

`asdf plugin list`
List installed plugins

`asdf plugin list --urls --refs`
Show plugin URLs and refs

`asdf plugin list all`
Browse all registered plugins

`asdf plugin update --all`
Update every plugin

`asdf plugin update <name>`
Update one plugin

`asdf plugin remove <name>`
Remove a plugin and its versions

## INSTALL VERSIONS

`asdf list all <name>`
List all available versions

`asdf list all <name> <prefix>`
Filter available versions

## INSTALL VERSIONS (cont.)

`asdf install <name> <version>`
Install a specific version

`asdf install <name> latest`
Install the latest stable

`asdf install <name> latest:<prefix>`
Latest matching a prefix

`asdf install <name>`
Install the version in .tool-versions

`asdf install`
Install everything in .tool-versions

`asdf latest <name>`
Show the latest stable version

`asdf latest --all`
Latest versions of all tools

`asdf uninstall <name> <version>`
Remove an installed version

`asdf help <name> [<version>]`
Show plugin help and notes

## SELECT VERSIONS

`asdf set <name> <version>`
Pin version in ./.tool-versions

`asdf set -u <name> <version>`
Pin in the home .tool-versions

`asdf set -p <name> <version>`
Pin in the nearest parent file

`asdf set <name> <version> <fallback>`
Pin several versions in order

`asdf current`
Show versions in use here

`asdf current <name>`
Show version of one tool

`asdf list <name>`
List installed versions

`asdf list <name> <prefix>`
Filter installed versions

`asdf where <name> [<version>]`
Print the install path

`asdf which <command>`
Print the path to an executable

## SHIMS AND UTILITIES

`asdf reshim <name> <version>`
Rebuild shims for a version

`asdf exec <command>`
Run a shim with the current version

`asdf env <command>`
Print the shim environment of a command

`asdf shimversions <command>`
Which plugins provide a command

`asdf info`
Print OS, shell and asdf debug info

`asdf version`
Print the asdf version

### .tool-versions lines

| Line | Meaning |
|---|---|
| `nodejs 22.4.0` | Exact version |
| `python 3.12.4 3.11.9` | First found wins, rest fallback |
| `ruby latest` | Resolved at use time |
| `golang system` | Use the system binary |
| `# note` | Comment |

Commit .tool-versions so a team and CI use the same tool versions. Pair with mise or direnv for env handling.

## RECIPES

### Set up a tool in a project

```
asdf plugin add nodejs
asdf install nodejs latest:22
asdf set nodejs 22.4.0
asdf current
```

### Bootstrap from a checkout

```
# add every plugin named
in .tool-versions
cut -d' ' -f1 .tool-versions |
grep -v '^#' | xargs -n1 asdf
plugin add
asdf install
```

### Refresh everything

```
asdf plugin update --all
asdf latest --all
```

### Clean out an old version

```
asdf list nodejs
asdf uninstall nodejs 18.20.0
asdf reshim nodejs
```