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
```