# GNU Stow

Symlink farm manager

## CONCEPTS

Each package is a directory that mirrors the target tree. Stow symlinks its contents, so ~/dotfiles/vim/.vimrc becomes ~/.vimrc.

**Stow dir** ~/dotfiles
↓ stow <pkg>
**Package** vim/.vimrc
↓ symlink
**Target dir** ~/.vimrc

The default target is the parent of the stow dir, so keep the repo in ~/dotfiles or pass -t ~.

Stow only removes symlinks it owns and reports a conflict rather than overwriting a real file.

## STOW AND UNSTOW

**stow** *<pkg>...*
Link packages (default action)

**stow -S** *<pkg>*
Explicit stow action

**stow -D** *<pkg>*
Delete a package's links

**stow -R** *<pkg>*
Restow: unlink then link again

## STOW AND UNSTOW (cont.)

**stow -n** *<pkg>*
Simulate, change nothing

**stow -v** *<pkg>*
Verbose output (repeat up to -vvvvv)

**stow --verbose=***<n>* *<pkg>*
Set verbosity level 0-5

**stow -D** *<old>* **-S** *<new>*
Mix actions in one run

## DIRECTORIES

**stow -d** *<dir>* *<pkg>*
Set the stow directory

**stow -t** *<dir>* *<pkg>*
Set the target directory

**stow -t ~** *<pkg>*
Link into your home directory

**STOW_DIR=***<dir>* **stow** *<pkg>*
Stow dir from environment

**stow --dir=***<dir>* **--target=***<dir>* *<pkg>*
Long form of -d and -t

## DOTFILES AND CONFLICTS

**stow --dotfiles** *<pkg>*
Turn dot- prefix into a leading dot

## DOTFILES AND CONFLICTS (cont.)

**stow --adopt** *<pkg>*
Move existing target files into package

**stow --no-folding** *<pkg>*
Link files, never whole directories

**stow --override=***<regex>* *<pkg>*
Take over paths owned by another package

**stow --defer=***<regex>* *<pkg>*
Skip paths already stowed elsewhere

--adopt rewrites the files in your stow dir. Commit first so git diff shows what it took, then git checkout . to keep your repo version.

## IGNORING AND CONFIG

**stow --ignore=***<regex>* *<pkg>*
Skip names ending in a Perl regex

**~/.stowrc**
Default options, one per line

**./.stowrc**
Per-directory default options

## IGNORING AND CONFIG (cont.)

**.stow-local-ignore**
Per-package ignore patterns file

**~/.stow-global-ignore**
Ignore patterns for all packages

**stow -V**
Print version

## TREE FOLDING

### Folding behaviour

| Situation | Result |
|---|---|
| Target dir missing | One symlink to the whole directo |
| Target dir already real | Links go inside it, file by file |
| Second package needs folded dir | Symlink split into real dir, both linked |
| Package removed, one left | Directo refolde to one symlink |
| --no-folding | Always file-level links |

## TREE FOLDING (cont.)

If an app writes new files into a folded directory they land in your repo. Use --no-folding or pre-create the directory.

## RECIPES

### First-time dotfiles setup

```
mkdir -p ~/dotfiles/vim
mv ~/.vimrc ~/dotfiles/vim/.vimrc
cd ~/dotfiles && stow -nv vim
stow vim
```

### New machine

```
git clone <url> ~/dotfiles
cd ~/dotfiles
stow -nv bash vim git   # check conflicts
stow bash vim git
```

### Adopt existing configs safely

```
cd ~/dotfiles && git status
# must be clean
stow --adopt vim
git diff
# see what was adopted
git checkout .
# keep repo version
```

### Install software under /usr/local

```
cd /usr/local/stow
sudo stow -v <pkg-1.0>
sudo stow -D <pkg-1.0>
```