# Devbox Nix dev environments

## CONCEPTS

devbox.json lists the packages a project needs; devbox.lock pins exact versions. Commit both so everyone gets the same tools.

**devbox.json** packages, env, scripts
↓ devbox add
**devbox.lock** pinned versions
↓ devbox shell
**Nix store** installed packages
↓ PATH
**Shell** isolated tools

Devbox wraps Nix: you get reproducible packages without writing Nix code. Nix itself is installed for you on first use.

Flags of devbox run must come before the script or command name.

## PROJECT SETUP

**devbox init**
Create devbox.json in this directory

**devbox add** *<pkg>*
Add a package to the project

**devbox add** *<pkg>*@*<version>*
Add a specific version

**devbox rm** *<pkg>*
Remove a package

**devbox install**
Install all packages without a shell

**devbox search** *<pkg>*
List matching packages and versions

**devbox info** *<pkg>*
Show package and plugin info

**devbox update**
Update all packages within their version tags

**devbox update** *<pkg>*
Update only the named packages

**devbox add** *<pkg>* **-p** *<platform>*
Install only on given platforms

## SHELL AND RUN

**devbox shell**
Start a shell with your packages

**devbox shell --** *<cmd>*
Run one command in the environment

**devbox shell --pure**
Isolated shell, almost no inherited env

**devbox shell -e** *<KEY>*=*<val>*
Set a variable inside the environment

**devbox shell --env-file** *<file>*
Load variables from a file

**devbox run** *<script>*
Run a script from devbox.json

**devbox run** *<cmd>*
Run any command inside the environment

**exit**
Leave the devbox shell

## DEVBOX.JSON

**Packages (list form)**

```
{
  "packages": ["go@latest",
"nodejs@20"]
}
```

**Environment variables**

```
"env": {
  "APP_ENV": "dev",
  "BIN": "$PWD/bin"
}
```

**"env_from": "***<path>***.env"**
Load variables from a .env file

**Init hook**

```
"shell": {
  "init_hook": ["echo Welcome",
"export FOO=bar"]
}
```

**Scripts**

```
"shell": {
  "scripts": {
    "test": "go test ./...",
    "ci": ["go vet ./...", "go
test ./..."]
  }
}
```

init_hook runs every time a shell starts, so keep it fast and idempotent.

## SERVICES

**devbox services ls**
List available services

**devbox services up**
Start all services with process-compose

**devbox services up -b**
Run services in the background

**devbox services stop** *<svc>*
Stop a service (all if none named)

Packages with a plugin (postgresql, redis, nginx, ...) expose ready-made services; others need a process-compose.yaml next to devbox.json.

## GENERATE AND GLOBAL

**devbox generate direnv**
Write an .envrc that loads the environment

**devbox generate dockerfile**
Dockerfile that replicates devbox shell

**devbox global add** *<pkg>*
Install a package for all projects

## RECIPES

**Start a project**

```
devbox init
devbox add python@3.12
postgresql@16
devbox shell
python --version
```

**Auto-load with direnv**

```
devbox generate direnv
direnv allow
# entering the directory now loads
the environment
```

**Scripts and CI**

```
# devbox.json: shell.scripts.test
devbox run test
devbox run -e CI=1 test
```

**Services in the background**

```
devbox services up -b
devbox services ls
devbox services stop
```

**Containerize**

```
devbox generate dockerfile
docker build -t myapp .
```