# Volta Node toolchain manager

**node / npm / tsc** you type a command → `shim on PATH` → **Volta shim** in ~/.volta/bin → `looks up` → **package.json "volta"** else your default → `runs` → **Pinned binary** right Node engine

## CONCEPTS

Volta swaps tool versions per directory: a pin in package.json wins, otherwise your default applies. No shell hook or use command needed.

Global packages are pinned to the Node they were installed with and keep it until you reinstall them.

Commit the "volta" block in package.json so the whole team and CI get the same toolchain.

## INSTALL VOLTA

**`curl https://get.volta.sh | bash`**
Install on Linux, macOS, WSL

**`winget install Volta.Volta`**
Install on Windows

`volta` **`setup`**
Add shims to PATH for your user

`volta` **`--version`**
Show Volta version

## INSTALL VOLTA (cont.)

`volta` **`completions`** *`<shell>`*
Print shell completions

Manual setup: export VOLTA_HOME=$HOME/.volta and put $VOLTA_HOME/bin first on PATH.

## DEFAULT TOOLS

`volta` **`install node`**
Default to the latest LTS Node

`volta` **`install node@`***`<version>`*
Default to an exact or partial version

`volta` **`install npm@`***`<version>`*
Default npm instead of the bundled one

`volta` **`install yarn@`***`<version>`*
Default Yarn

`volta` **`install`** *`<package>`*
Install a global package binary

`volta` **`uninstall`** *`<package>`*
Remove a global package or tool

## DEFAULT TOOLS (cont.)

`volta` **`fetch`** *`<tool>`***`@`***`<version>`*
Download to cache only, no default

install changes your default everywhere outside pinned projects; use pin for a single project.

## PIN PER PROJECT

`volta` **`pin node@`***`<version>`*
Pin Node in package.json

`volta` **`pin node@lts`**
Pin the current LTS Node

`volta` **`pin npm@`***`<version>`*
Pin npm

`volta` **`pin yarn@`***`<range>`*
Pin Yarn

### What pin writes

```
"volta": {
  "node": "20.16.0",
  "npm": "10.8.1"
}
```

pin only handles Node and package managers. Change library versions with npm install or yarn add.

## INSPECT

`volta` **`list`**
Show the active toolchain

`volta` **`list all`**
Everything installed

`volta` **`list node`**
Installed Node versions

`volta` **`list --default`**
Show your defaults only

`volta` **`list`** *`<package>`*
Look up a package or binary

`volta` **`list --format plain`**
Script-friendly output

`volta` **`which`** *`<binary>`*
Real path behind a shim

## RUN ONCE

`volta` **`run --node`** *`<version>`* *`<cmd>`*
Run with another Node

`volta` **`run --npm`** *`<version>`* *`<cmd>`*
Run with another npm

## MONOREPOS AND MIRRORS

### Share pins with extends

```
# packages/cli/package.json
"volta": { "extends":
"../../package.json" }
```

## MONOREPOS AND MIRRORS (cont.)

**`~/.volta/hooks.json`**
System-wide hooks file (mirrors, proxies)

## COMMON OPTIONS

`volta` **`help`** *`<command>`*
Help for one command

## RECIPES

### Set up a project

```
cd my-app
volta pin node@lts
volta pin npm@<version>
git add package.json && git
commit -m "Pin toolchain"
```

### Test on another Node

```
volta run --node 18 npm test
volta run --node 22 npm test
# default and pin stay
unchanged
```

### Fresh machine to working Node

```
curl https://get.volta.sh |
bash
# open a new terminal
volta install node
volta list
```

### Debug the wrong version

```
volta list
volta which node
# project pin in
package.json beats the
default
```