Deno Secure TS runtime

CONCEPTS

Scripts run in a sandbox: no disk, network or env access unless you grant it with --allow-* flags (or answer the prompt).

Specifier jsr: npm: https:
↓ resolve
Cache deno.lock pins it
↓ check
Type-check TypeScript built in
↓ permissions
Run sandboxed by flags

RUN AND PERMISSIONS

deno run *<file>*
Run a script or URL

deno run -A *<file>*
Allow everything (trusted code only)

--allow-read[=*<path>***] / -R**
Allow file reads, optionally scoped

--allow-write[=*<path>***] / -W**
Allow file writes

--allow-net[=*<host>***] / -N**
Allow network access

--allow-env[=*<VAR>***] / -E**
Allow reading env vars

--deny-read=*<path>*
Deny a path even if allowed more broadly

--no-prompt
Fail instead of asking for permission

deno run --watch *<file>*
Restart on file changes

--env-file[=*<path>***]**
Load env vars from a file

deno eval "*<code>***"**
Evaluate a snippet

deno repl
Interactive prompt

deno serve *<file>*
Run a default-export fetch handler as a server

--inspect-brk
Debugger: pause on first line

TASKS AND CONFIG

deno task
List tasks in deno.json

deno task *<name>*
Run a task

deno task "*<prefix>***:*"**
Run all matching tasks in parallel

deno init *<dir>*
New project with main.ts and a test

deno.json task forms

Form	Meaning
`"build": "deno run ..."`	Plain command string
`"command"`	Command in object form
`"description"`	Shown in task list
`"dependencies"`	Tasks run first, in parallel

DEPENDENCIES

deno add *<pkg>*
Add dependencies to the config

deno add jsr:@std/*<name>*
Add a JSR package

deno add npm:*<pkg>*
Add an npm package

deno install
Install all deps from deno.json/ package.json

deno remove *<pkg>*
Remove a dependency

deno outdated
Show newer dependency versions

deno outdated --update
Update within semver-compatible range

deno info [*<file>***]**
Show a module's dependency tree

deno audit
Scan dependencies for known vulnerabilities

TEST AND CHECK

deno test
Run all tests

deno test *<file>*
Run one test file

TEST AND CHECK (cont.)

deno test --filter "*<name>***"**
Run tests matching a name

deno test --coverage
Collect coverage data

deno test --parallel
Run test files on several threads

deno check *<file>*
Type-check without running

A test is Deno.test("name", () ⇒ {...}) in a file named *_test.ts or *.test.ts.

FORMAT AND LINT

deno fmt
Format all files

deno fmt --check
Fail if anything is unformatted

deno lint
Lint all files

deno lint --fix
Auto-fix what rules allow

BUILD AND PUBLISH

deno compile *<file>*
Bundle into a standalone executable

deno compile -o *<name>* *<file>*
Name the output

deno compile --target *<triple>*
Cross-compile for another platform

deno upgrade
Update Deno itself

RECIPES

Script with scoped permissions

```
# read one folder, call one API, load .env
deno run --allow-read=./data --allow-net=api.example.com \
  --env-file main.ts
```

Start a TypeScript project

```
deno init my-app && cd my-app
deno add jsr:@std/assert
deno task dev
deno test
```