readme.md for @git.zone/tspublish

> **Effortlessly publish multiple TypeScript packages from your monorepo**

npm version License: MIT

□□ What is tspublish?

`@git.zone/tspublish` is a powerful CLI tool and library for managing and publishing multiple TypeScript packages from a monorepo. It automates the tedious parts of package publishing — discovery, dependency resolution, building, version validation, and multi-registry publishing — while giving you full control over the process. Whether you're maintaining a suite of microservices, a component library, or any collection of related packages, tspublish makes your life dramatically easier.

Issue Reporting and Security

For reporting bugs, issues, or security vulnerabilities, please visit community.foss.global/. This is the central community hub for all issue reporting. Developers who sign and comply with our contribution agreement and go through identification can also get a code.foss.global/ account to submit Pull Requests directly.

□ Key Features

- □□ **Automatic Package Discovery** — Scans your monorepo for publishable `ts*` directories
- □□ **Beautiful CLI Output** — Color-coded logging with progress bars and status indicators
- □□ **Version Collision Detection** — Prevents accidental overwrites by checking the registry first

- □□ **Build Integration** — Automatically compiles TypeScript before publishing via `@git.zone/tsbuild`
- □□ **Smart Dependency Management** — Inherits dependency versions from your monorepo's `package.json`
- □□ **Multi-Registry Support** — Publish to npm, GitHub Packages, Gitea, or private registries
- □□ **Base Registry Inheritance** — Use `useBase` / `extendBase` to inherit registries from `.smartconfig.json`
- ⚡ **CLI Binary Support** — Automatically generates `cli.js` wrappers for publishable CLI packages
- □□ **Clean Builds** — Creates isolated `dist_publish_*` directories for each package

□□ Installation

```
# Using pnpm (recommended)
pnpm add -D @git.zone/tspublish

# Global installation for CLI usage
pnpm add -g @git.zone/tspublish
```

□□ Quick Start

1□ Structure Your Monorepo

Organize your packages using directories that start with `ts`:

```
my-awesome-monorepo/
├── package.json            # Main monorepo package.json (version is inherited)
├── tsconfig.json           # Shared TypeScript config
├── .smartconfig.json       # Optional: base registry configuration
├── ts_core/                # Core package
│   ├── index.ts            # Entry point
│   ├── readme.md           # Package-specific documentation
│   └── tspublish.json      # Publishing configuration
├── ts_utils/               # Utilities package
│   ├── index.ts
│   ├── readme.md
```

```
│   └── tspublish.json
└── ts_cli/                # CLI package
    ├── index.ts
    ├── readme.md
    └── tspublish.json
```

2️⃣ Configure Each Package

Create a `tspublish.json` in each publishable directory:

```
{
  "name": "@myorg/core",
  "order": 1,
  "dependencies": [
    "@push.rocks/smartpromise",
    "@push.rocks/smartfile"
  ],
  "registries": [
    "registry.npmjs.org:public"
  ],
  "bin": []
}
```

Configuration Options

Field	Type	Description
`name`	`string`	The published package name (e.g., `@myorg/core`)
`order`	`number`	Build order for interdependent packages (lower builds first)
`dependencies`	`string[]`	Dependencies to include — versions are resolved from the monorepo's `package.json`
`registries`	`string[]`	Target registries with access level (format: `"url:accessLevel"`)
`bin`	`string[]`	CLI executable names (generates a `cli.js` wrapper automatically)

3️⃣ Publish

```
# From your monorepo root
npx tspublish
```

That's it! tspublish will discover all `ts*` directories containing `tspublish.json`, build them in order, validate versions against the registry, and publish.

□□ Advanced Usage

Registry Configuration

TSPublish offers three approaches for configuring target registries:

1. Explicit Registries

Define specific registries directly in `tspublish.json`:

```
{
  "registries": [
    "registry.npmjs.org:public",
    "npm.pkg.github.com:private"
  ]
}
```

The format is `"registryUrl:accessLevel"` where `accessLevel` is `public` or `private`.

2. Use Base Configuration (`useBase`)

Inherit registries from your project's `.smartconfig.json` (managed by `@git.zone/cli`):

```
{
  "registries": ["useBase"]
}
```

This reads from `.smartconfig.json` at the key `@git.zone/cli.release.registries`.

3. Extend Base Configuration (`extendBase`)

Start with base registries and add or remove specific ones:

```
{
  "registries": [
    "extendBase",
    "custom-registry.example.com:public",
    "-https://registry.npmjs.org"
  ]
}
```

The `-` prefix excludes a registry from the base configuration. All other entries (besides `extendBase`) are added.

Empty Registries

If `registries` is an empty array `[]`, the package will be built but **not published** — useful for internal-only packages that other packages depend on.

Build Order Management

When packages depend on each other, use the `order` field to control build sequence:

```
// ts_core/tspublish.json — builds first
{
  "name": "@myorg/core",
  "order": 1,
  "dependencies": [],
  "registries": ["useBase"],
  "bin": []
}

// ts_utils/tspublish.json — builds second, depends on core
{
  "name": "@myorg/utils",
  "order": 2,
  "dependencies": ["@myorg/core"],
  "registries": ["useBase"],
  "bin": []
}
```

CLI Binary Packages

For packages that ship CLI tools, specify the binary names in the `bin` array:

```
{
  "name": "@myorg/cli",
  "order": 3,
  "dependencies": ["commander", "@myorg/core"],
  "registries": ["registry.npmjs.org:public"],
  "bin": ["my-cli", "my-tool"]
}
```

TSPublish will:

1. Fetch the standard `cli.js` template from the `@git.zone/cli` assets repository
2. Adjust the import path to point to the correct `dist_*` folder
3. Configure the `bin` field in the generated `package.json`

Programmatic Usage

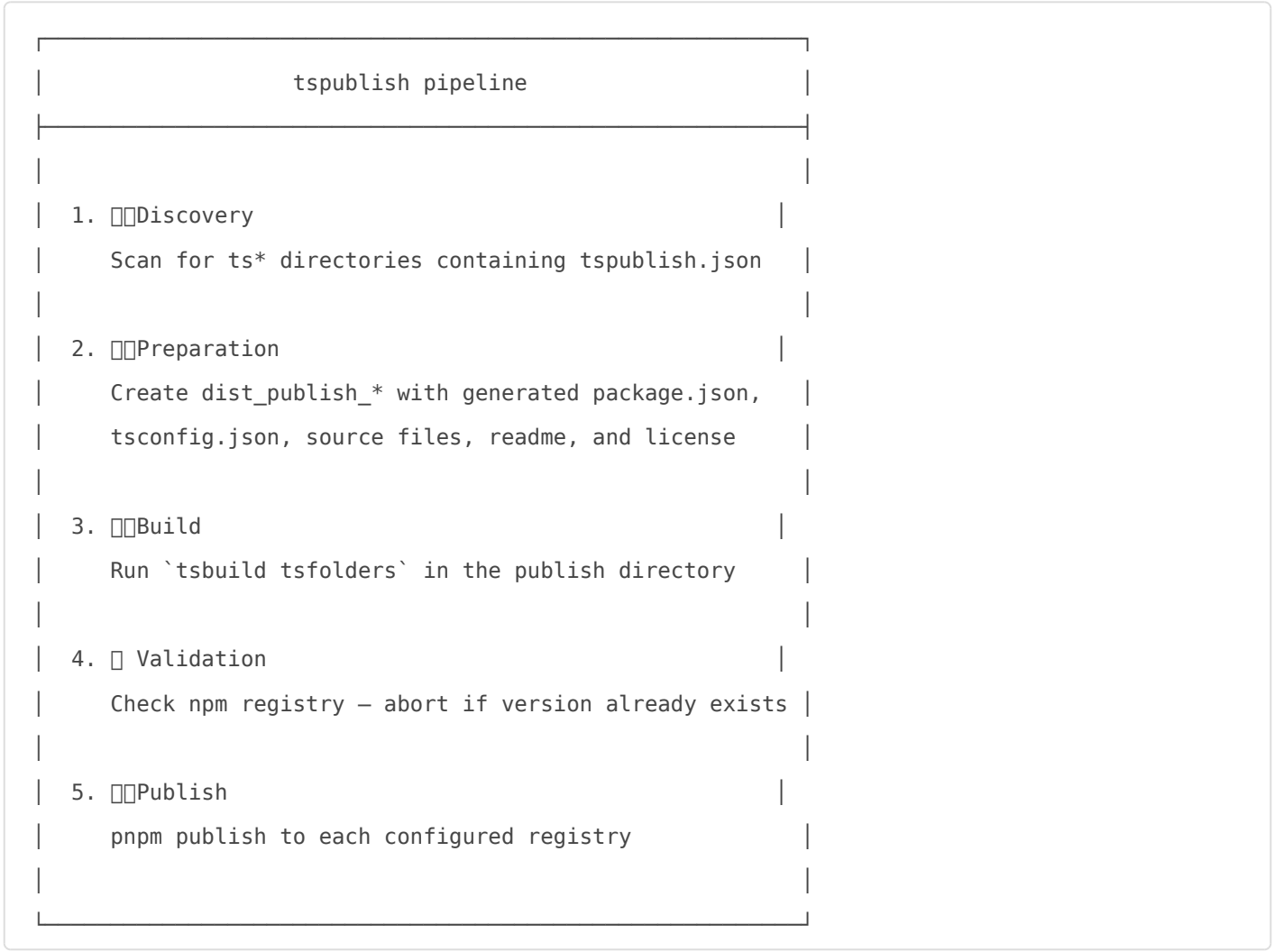
```
import { TsPublish } from '@git.zone/tspublish';

const publisher = new TsPublish();
await publisher.publish(process.cwd());
```

Custom Publishing Pipeline

```
import { TsPublish, PublishModule } from '@git.zone/tspublish';

const publisher = new TsPublish();
const modules = await publisher.getModuleSubDirs('./my-monorepo');

for (const [name, config] of Object.entries(modules)) {
  const mod = new PublishModule(publisher, {
    monoRepoDir: './my-monorepo',
    packageSubFolder: name,
  });

  await mod.init();                    // Resolve deps, validate version
  await mod.createPublishModuleDir(); // Scaffold dist_publish_* directory
  await mod.build();                   // Compile TypeScript
```

```
  await mod.publish();               // Publish to registries
}
```

□□ How It Works



For each discovered module, tspublish:

1. **Discovers** all directories starting with `ts` that contain a `tspublish.json`
2. **Resolves dependencies** from the monorepo's `package.json`, using the monorepo version for packages not found in `dependencies`
3. **Creates an isolated publish directory** (`dist_publish_<folder>`) with a generated `package.json`, `tsconfig.json`, source code copy, readme, and license
4. **Builds** the package using `pnpm run build` (which calls `tsbuild tsfolders`)
5. **Validates** against the target registry — if the name+version already exists, it exits with an error
6. **Publishes** to each configured registry via `pnpm publish`

□□ API Reference

TsPublish

```
class TsPublish {
  /** Publish all discovered modules in a monorepo directory */
  async publish(monorepoDirPath: string): Promise<void>;

  /** Discover and return all publishable modules with their tspublish.json configs */
  async getModuleSubDirs(dirPath: string): Promise<Record<string, ITsPublishJson>>;
}
```

PublishModule

```
class PublishModule {
  /** Initialize: resolve dependencies, validate version against registry */
  async init(): Promise<void>;

  /** Create the dist_publish_* directory with all necessary files */
  async createPublishModuleDir(): Promise<void>;

  /** Build the TypeScript package */
  async build(): Promise<void>;

  /** Publish to all configured registries */
  async publish(): Promise<void>;
}
```

ITsPublishJson

```
interface ITsPublishJson {
  name: string;           // Published package name
  order: number;          // Build sequence (lower = earlier)
  dependencies: string[]; // Dependencies to include from monorepo
  registries: string[];   // Target registries ("url:accessLevel", "useBase", or "extendBase")
```

```
  bin: string[];          // CLI binary names
}
```

GiteaAssets

```
class GiteaAssets {
  constructor(options: { giteaBaseUrl: string; token?: string });

  /** Fetch files from a Gitea repository directory */
  async getFiles(owner: string, repo: string, directory: string, branch?: string):
Promise<IRepoFile[]>;

  /** Get the standard cli.js entry file template */
  async getBinCliEntryFile(): Promise<IRepoFile>;
}
```

□□ Troubleshooting

Problem	Solution
"Package X already exists with version Y"	Bump the version in your monorepo's `package.json`
No publish modules found	Ensure directories start with `ts` and contain a valid `tspublish.json`
Build failures	Check TypeScript errors — tspublish runs `tsbuild tsfolders` in the generated directory
useBase/extendBase error	Ensure `.smartconfig.json` has registries at `@git.zone/cli.release.registries`
Missing dependency versions	Add the dependency to your monorepo's `package.json` `dependencies` field

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