@serve.zone/gitops

easy maintenance of your gitea/gitlab instance.

- readme.md for @serve.zone/gitops
- changelog.md for @serve.zone/gitops

readme.md for @serve.zone/gitops

A unified dashboard for managing Gitea and GitLab instances — browse projects, manage secrets, monitor CI/CD pipelines, stream build logs, sync configurations, and receive webhook notifications, all from a single app. □□

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□ Features

- **Multi-Provider** — Connect to Gitea and GitLab simultaneously via a unified provider abstraction
- **Secrets Management** — View, create, update, and delete CI/CD secrets across projects and groups
- **Managed Secrets** — Define secrets once and push them to multiple providers/scopes automatically
- **Pipeline Monitoring** — Browse pipelines with time-range filtering, view modes, group aggregation, and sorting; view jobs, retry failed builds, cancel running ones
- **Build Log Streaming** — Fetch and display raw job logs with monospace rendering and live polling
- **Sync Configurations** — Define repo sync rules across providers with status tracking
- **Action Log** — Global audit trail of all operations across the system
- **Webhook Integration** — Receive push/PR/pipeline events via `POST /webhook/:connectionId` and broadcast to all connected WebSocket clients in real-time
- **Secrets Cache & Scanning** — Background scan service fetches and caches all secrets every 24h with upsert-based deduplication
- **Secure Token Storage** — Connection tokens stored in OS keychain via `@push.rocks/smartsecret` (encrypted file fallback), never in plaintext on disk

- **Auto-Refresh** — Frontend polls for updates every 30s, with manual refresh available on every view
- **Embedded SPA** — Frontend is bundled (base64-encoded) and served from memory, no static file server needed

□□ Install

Prerequisites

- Deno v2+
- pnpm (for frontend deps and bundling)
- MongoDB-compatible database (auto-provisioned via `@push.rocks/smartmongo`)

Setup

```
# Clone the repository
git clone https://code.foss.global/serve.zone/gitops.git
cd gitops

# Install frontend dependencies
pnpm install

# Build the frontend bundle
pnpm build

# Start the server
deno run --allow-all mod.ts server
```

The app will be available at `http://localhost:3000`.

⚙ Configuration

All configuration is done through environment variables:

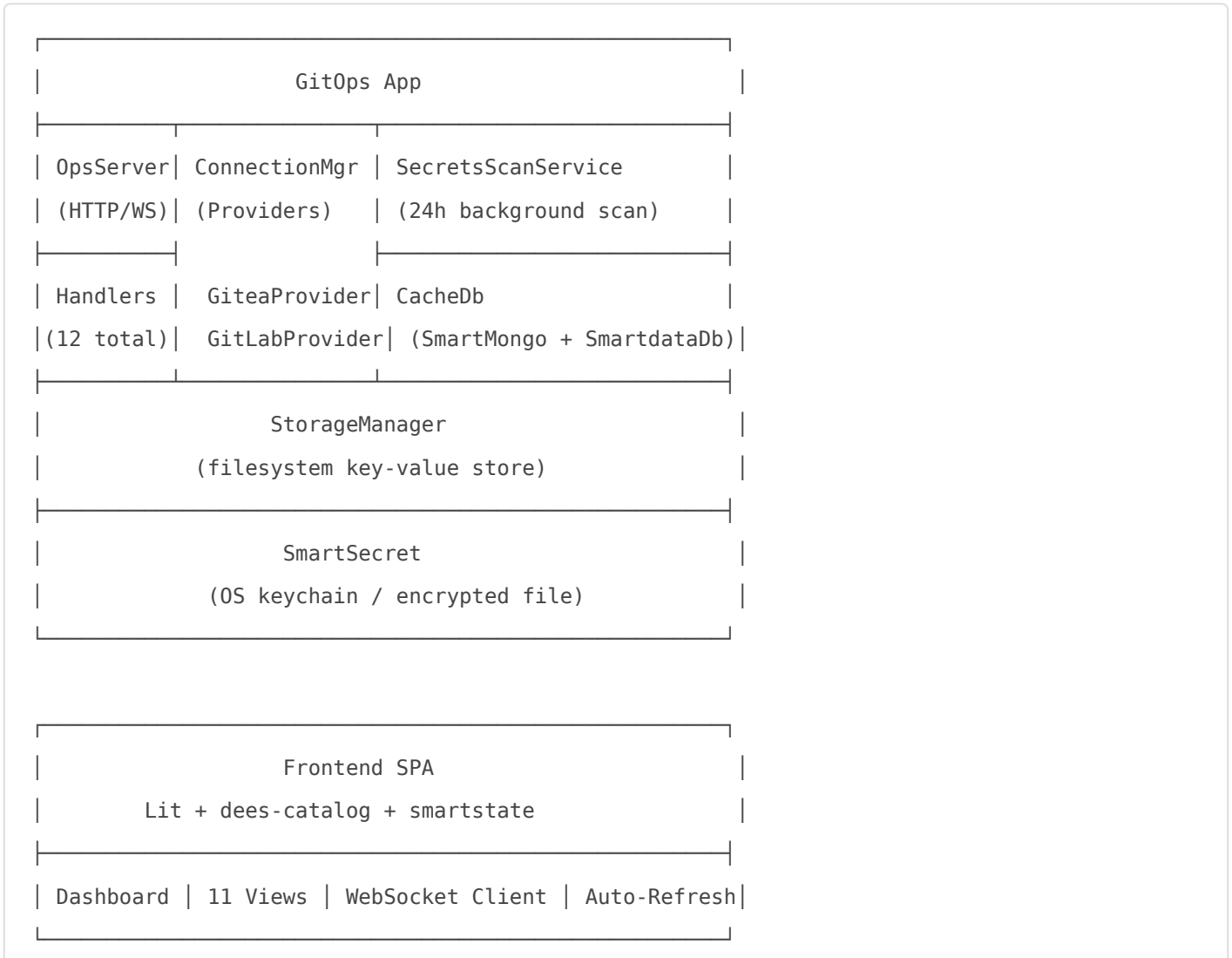
Variable	Default	Description
`GITOPS_PORT`	`3000`	HTTP/WebSocket server port

Variable	Default	Description
`GITOPS_ADMIN_USERNAME`	`admin`	Admin login username
`GITOPS_ADMIN_PASSWORD`	`admin`	Admin login password

Data is stored at `~/.serve.zone/gitops/`:

```
~/.serve.zone/gitops/
├── storage/          # Connection configs (JSON, tokens replaced with keychain refs)
│   └── connections/  # One file per connection
└── tsmdb/            # Embedded MongoDB data (cached secrets, projects)
```

□□ Architecture



Backend (`ts/`)

- **`GitopsApp`** — Main orchestrator. Owns all subsystems, handles startup/shutdown lifecycle.
- **`ConnectionManager`** — CRUD for provider connections. Tokens secured in OS keychain. Background health checks on startup.
- **`BaseProvider`** → **`GiteaProvider`** / **`GitLabProvider`** — Unified interface over both APIs (projects, groups, secrets, pipelines, jobs, logs).
- **`OpsServer`** — TypedServer-based HTTP/WebSocket server with 12 handler modules:
  - `AdminHandler` — JWT-based auth (login/logout/verify)
  - `ConnectionsHandler` — Connection CRUD + test
  - `ProjectsHandler` / `GroupsHandler` — Browse repos and orgs
  - `SecretsHandler` — Cache-first secret CRUD
  - `ManagedSecretsHandler` — Managed secret definitions and push operations
  - `PipelinesHandler` — Pipeline list/jobs/retry/cancel with filtering and aggregation
  - `LogsHandler` — Job log fetch
  - `WebhookHandler` — Custom HTTP route for incoming webhooks
  - `ActionsHandler` — Force scan / scan status
  - `ActionLogHandler` — Global audit trail queries
  - `SyncHandler` — Repo sync configuration and status
- **`SecretsScanService`** — Background scanner with upsert-based deduplication. Runs on startup and every 24h.
- **`CacheDb`** — Embedded MongoDB via `SmartMongo` + `SmartdataDb`. TTL-based expiration with periodic cleanup.
- **`StorageManager`** — Filesystem-backed key-value store with atomic writes.

Frontend (`ts_web/`)

- Built with Lit web components using TC39 standard decorators and @design.estate/dees-catalog UI library
- Reactive state management via `smartstate` (login, connections, data, UI state parts)
- 11 tabbed views: Overview, Connections, Projects, Groups, Secrets, Managed Secrets, Pipelines, Build Log, Actions, Action Log, Sync
- WebSocket client for real-time webhook push notifications
- Bundled to `ts_bundled/bundle.ts` via `@git.zone/tsbundle` (base64-encoded, committed to git)

Shared Types (`ts_interfaces/`)

- `data/` — Data models (`IProject`, `ISecret`, `IPipeline`, `IIdentity`, `IConnection`, `ISyncConfig`, `IManagedSecret`, `IActionLogEntry`, etc.)
- `requests/` — TypedRequest interfaces for all RPC endpoints

□□ API

All endpoints use TypedRequest — a typed RPC protocol over HTTP POST to `/typedrequest`.

Authentication

```
// Login → returns JWT identity
{ method: 'adminLogin', request: { username, password } }
// → { identity: { jwt, userId, role, expiresAt } }

// All other requests require identity
{ method: 'getProjects', request: { identity, connectionId } }
```

Connections

Method	Description
`getConnections`	List all connections (tokens masked)
`createConnection`	Add a new Gitea/GitLab connection
`updateConnection`	Update connection name/URL/token
`testConnection`	Verify connection is reachable
`deleteConnection`	Remove a connection

Data

Method	Description
`getProjects`	List projects (with search/pagination)
`getGroups`	List groups/orgs (with search/pagination)
`getAllSecrets`	Get all secrets for a connection+scope (cache-first)
`getSecrets`	Get secrets for a specific entity (cache-first)
`createSecret` / `updateSecret` / `deleteSecret`	Secret CRUD
`getPipelines`	List pipelines for a project (with time-range filtering)
`getPipelineJobs`	List jobs for a pipeline

Method	Description
`retryPipeline` / `cancelPipeline`	Pipeline actions
`getJobLog`	Fetch raw build log for a job

Managed Secrets

Method	Description
`getManagedSecrets`	List managed secret definitions
`createManagedSecret` / `updateManagedSecret` / `deleteManagedSecret`	Managed secret CRUD

Sync

Method	Description
`getSyncConfigs`	List sync configurations
`createSyncConfig` / `updateSyncConfig` / `deleteSyncConfig`	Sync config CRUD
`getRepoSyncStatus`	Get sync status for repos

Actions

Method	Description
`forceScanSecrets`	Trigger immediate full secrets scan
`getScanStatus`	Get scan status, last result, timestamp
`getActionLog`	Query global audit trail

Webhooks

```
# Register this URL in your Gitea/GitLab webhook settings
POST http://your-server:3000/webhook/<connectionId>
```

Events are parsed from `X-Gitea-Event` / `X-Gitlab-Event` headers and broadcast to all connected WebSocket clients as `webhookNotification`.

□□ Development

```
# Watch mode — auto-rebuilds frontend + restarts backend on changes
pnpm run watch

# Run tests (Deno)
pnpm test

# Build frontend bundle only
pnpm build

# Start server directly
deno run --allow-all mod.ts server
```

Project Structure

```
gitops/
├── mod.ts                    # Entry point
├── deno.json                 # Deno config + import map
├── package.json              # npm metadata + scripts
├── .smartconfig.json         # tsbundle + tswatch config
├── html/index.html           # HTML shell
├── ts/                       # Backend
│   ├── classes/              # GitopsApp, ConnectionManager, SyncManager, ActionLog
│   ├── providers/            # BaseProvider, GiteaProvider, GitLabProvider
│   ├── storage/              # StorageManager
│   ├── cache/                # CacheDb, CacheCleaner, SecretsScanService
│   │   └── documents/        # CachedProject, CachedSecret
│   └── opsserver/            # OpsServer + 12 handlers
│       ├── handlers/         # AdminHandler, SecretsHandler, SyncHandler, etc.
│       └── helpers/          # Guards (JWT verification)
├── ts_interfaces/            # Shared TypeScript types
│   ├── data/                 # IProject, ISecret, IPipeline, etc.
│   └── requests/             # TypedRequest interfaces
├── ts_web/                   # Frontend SPA
│   ├── appstate.ts           # Smartstate store + actions
│   └── elements/             # Lit web components
```

```
│       └── views/            # 11 view components
├── ts_bundled/bundle.ts      # Embedded frontend (base64, committed)
└── test/                     # Deno tests
```

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changelog.md for @serve.zone/gitops

2026-03-28 - 2.13.0 - feat(cache,build,docs)

switch cache storage to SmartMongo and align build configuration with updated dependencies

- replaces LocalTsmDb usage with SmartMongo in the cache layer and related tests
- moves tsbundle and tswatch configuration from npmextra.json to .smartconfig.json
- updates Deno, frontend, and provider dependencies and adds @std/assert imports for tests
- refreshes README to document managed secrets, sync, action log, and the expanded handler and view set

2026-03-02 - 2.12.0 - feat(pipelines)

add pipelines view modes, time-range filtering, group aggregation, sorting, and job log polling

- Add view modes for pipelines: 'current', 'project', 'group', and 'error'; support timeRange and sortBy parameters on getPipelines requests and in the UI.
- Implement aggregated pipeline fetching across projects with batching, deduplication, and active-run prioritization (fetchCurrentPipelines, fetchAggregatedPipelines, fetchGroupPipelines, fetchErrorPipelines).
- Add filtering by time ranges (1h, 6h, 1d, 3d, 7d, 30d) and sorting options (created, duration, status) with status priority ordering.
- Extend BaseProvider API: add IPipelineListOptions (status, ref, source), add getGroupProjects, and update Gitea/GitLab providers to honor new options and include projectName mapping.

- Enhance web UI: new controls/state for viewMode, timeRange, sortBy, group selection, plus job log polling with auto-scroll and cleanup on disconnect.
- Bump dependencies: @apiclient.xyz/gitea 1.3.0 -> 1.4.0 and @apiclient.xyz/gitlab 2.4.0 -> 2.5.0.

2026-03-02 - 2.11.1 - fix(meta)

update repository metadata (non-functional change)

- Change was metadata-only (+1 -1) with no source code changes
- Current package.json version: 2.11.0 — recommend patch bump to 2.11.1

2026-03-02 - 2.11.0 - feat(sync)

add branch & tag listing support and improve sync mirroring and sync log routing

- Bump @apiclient.xyz/gitea to 1.3.0 and @apiclient.xyz/gitlab to 2.4.0
- Add IBranch and ITag interfaces and export them from ts_interfaces
- Add getBranches/getTags to BaseProvider and implement paginated branch/tag listing for Gitea and GitLab providers
- SyncManager now creates a temporary mirrors directory (RAM-backed), auto-cleans it on shutdown, and no longer requires a configured syncMirrorsPath (removed from paths and gitopsapp)
- Add refsMatch in SyncManager to accurately compare local branches/tags with target refs (uses for-each-ref and ls-remote) to avoid unnecessary pushes
- Introduce avatarUploadCache and other internal sync manager improvements
- Change log channel/tagging: sync log messages use 'sync' (was 'git') and TypedSocket broadcasts use a new 'syncLogClient' tag; web client now sets that tag when creating the socket

2026-02-28 - 2.10.0 - feat(managed-secrets)

add centrally managed secrets with GITOPS_ prefix pushed to multiple targets

- Add IManagedSecret, IManagedSecretTarget, IManagedSecretStored interfaces and TypedRequest contracts for CRUD + push operations

- Add ManagedSecretsManager with keychain-backed storage, upsert push logic, target diff on update, and best-effort delete
- Add ManagedSecretsHandler with 7 endpoints wired into OpsServer with auth guards and action logging
- Add frontend state part, 6 appstate actions, and Managed Secrets view with table, target picker, and push/edit/delete modals
- Add Managed Secrets tab to dashboard after Secrets
- Extend action log types with 'managed-secret' entity and 'push' action

2026-02-28 - 2.9.0 - feat(sync)

remove target avatar when source has none to keep avatars fully in sync

- Add removeProjectAvatar and removeGroupAvatar methods for GitLab and Gitea APIs
- In syncProjectMetadata, remove target project avatar when source has no avatar and no group fallback applies
- When useGroupAvatarsForProjects is enabled but the group also has no avatar, remove the target avatar
- In syncGroupMetadata, remove target group avatar when source group has no avatar

2026-02-28 - 2.8.0 - feat(sync)

add sync subsystem: SyncManager, OpsServer sync handlers, Sync UI and state, provider groupFilter support, and realtime sync log streaming via TypedSocket

- Introduce SyncManager and wire it into GitopsApp (init/stop) with a new syncMirrorsPath
- Add typedrequest SyncHandler with endpoints to create/update/delete/pause/trigger/preview sync configs and fetch repo statuses/logs
- Add sync data interfaces (ISyncConfig, ISyncRepoStatus, ISyncLogEntry) and action log integration for sync operations
- Add web UI: gitops-view-sync, appstate sync actions/selectors, and preview/status/modals for sync configs
- Add groupFilter and groupFilterId to connection model; migrate legacy baseGroup/baseGroupId to groupFilter fields on load
- Providers (Gitea/GitLab) and BaseProvider now accept groupFilterId and scope project/group listings accordingly (auto-pagination applies)
- Logging: add sync log buffer, getSyncLogs API, and broadcast sync log entries to connected clients via TypedSocket; web client listens and displays entries
- Update dependencies: bump @apiclient.xyz/gitea and gitlab versions and add @api.global/typedsocket
- Connections UI: expose Group Filter field and pass through on create/update

2026-02-24 - 2.7.1 - fix(repo)

update file metadata (mode/permissions) without content changes

- One file changed: metadata-only (+1,-1).
- No source or behavior changes — safe to bump patch version.
- Change likely involves file mode/permission or metadata update only.

2026-02-24 - 2.7.0 - feat(secrets)

add ability to fetch and view all secrets across projects and groups, include scopeName, and improve frontend merging/filtering

- Add new typed request and handler getAllSecrets to opsserver to bulk-fetch secrets across projects or groups (batched and using Promise.allSettled for performance).
- Extend ISecret with scopeName and update provider mappings (Gitea/GitLab) and secret return values to include scopeName.
- Frontend: add fetchAllSecretsAction, add an "All" option in the Secrets view, filter table by selected entity or show all, and disable "Add Secret" when "All" is selected.
- Create/update actions now merge only the affected entity's secrets into state instead of replacing the entire list; delete now filters by key+scope+scopeId to avoid removing unrelated secrets.
- UI: table now shows a Scope column using scopeName (or fallback to scopeId), selection changes trigger reloading of entities and secrets.

2026-02-24 - 2.6.2 - fix(meta)

update file metadata only (no source changes)

- One file changed: metadata-only (e.g. permissions/mode) with no content modifications.
- No code, dependency, or API changes detected; safe patch release recommended.
- Bump patch version from 2.6.1 to 2.6.2.

2026-02-24 - 2.6.1 - fix(package.json)

apply metadata-only update (no functional changes)

- Change is metadata-only (+1 -1) in a single file — no code or behavior changes
- Current package.json version is 2.6.0; recommend a patch bump to 2.6.1

2026-02-24 - 2.6.0 - feat(webhook)

add webhook endpoint and client push notifications, auto-refresh UI, and gitea id mapping fixes

- Add WebhookHandler with POST /webhook/:connectionId that parses provider-specific headers and broadcasts webhookNotification via TypedSocket to connected clients
- Frontend: add auto-refresh toggle, refresh-interval action, dashboard auto-refresh timer, and views subscribing to gitops-auto-refresh events to refresh data
- Frontend: add WebSocket client with reconnect logic to receive push notifications and trigger auto-refresh on webhook events
- Gitea provider: prefer repository full_name and organization name when mapping project and group ids to ensure stable identifiers
- Bump devDependencies: @git.zone/tsbundle ^2.9.0 and @git.zone/tswatch ^3.2.0
- Add ts_bundled/bundle.js and bundle.js.map to .gitignore

2026-02-24 - 2.5.0 - feat(gitea-provider)

auto-paginate Gitea repository and organization listing; respect explicit page option and default perPage to 50

- getProjects and getGroups now auto-fetch all pages when opts.page is not provided
- When opts.page is provided, the provider respects it and does not auto-paginate
- Defaults perPage to 50 for paginated requests
- Dependency @design.estate/dees-catalog bumped from ^3.43.0 to ^3.43.3

2026-02-24 - 2.4.0 - feat(opsserver)

serve embedded frontend bundle from committed ts_bundled instead of using external dist_serve directory

- Switch server to use bundledContent from committed ts_bundled bundle (base64ts) instead of pointing at a serveDir
- Update bundler config to emit ./ts_bundled/bundle.ts with outputMode 'base64ts' and includeFiles mapping
- Remove dist_serve from .gitignore and commit ts_bundled (embedded frontend bundle)
- Bump devDependency @git.zone/tsbundle to ^2.8.4 and deno dependency @api.global/typedserver to ^8.3.1

2026-02-24 - 2.3.0 - feat(storage)

add StorageManager and cache subsystem; integrate storage into ConnectionManager and GitopsApp, migrate legacy connections, and add tests

- Add StorageManager with filesystem and memory backends, key normalization, atomic writes and JSON helpers (getJSON/setJSON).
- ConnectionManager now depends on StorageManager, persists each connection as /connections/<id>.json, and includes a one-time migration from legacy .nogit/connections.json.
- Introduce cache subsystem: CacheDb (LocalTsmDb + Smartdata), CacheCleaner, CachedDocument and CachedProject for TTL'd cached provider data, plus lifecycle management in GitopsApp.
- GitopsApp now initializes StorageManager, wires ConnectionManager to storage, starts/stops CacheDb and CacheCleaner, and uses resolved default paths via resolvePaths.
- Export smartmongo and smartdata in plugins and add corresponding deps to deno.json.
- Add comprehensive tests: storage unit tests, connection manager integration using StorageManager, and a tsmdb + smartdata spike test.

2026-02-24 - 2.2.1 - fix(ts_bundled)

add generated bundled JavaScript and source map for ts build (bundle.js and bundle.js.map)

- Added ts_bundled/bundle.js (≈168 KB) - compiled/bundled output from ts sources
- Added ts_bundled/bundle.js.map (≈309 KB) - source map referencing ../ts/index.ts and ../ts_web/index.ts
- This is generated build output (deno bundle) and does not change runtime API

2026-02-24 - 2.2.0 - feat(opsserver)

Serve bundled frontend from a dedicated dist_serve directory and update frontend UI/packaging

- Serve static site using UtilityWebsiteServer with serveDir set to ./dist_serve and pass port into server.start()
- Update bundler config: output bundle to ./dist_serve/bundle.js, change outputMode to 'bundle', and include html/index.html
- Move root index.html into html/index.html and update .gitignore to ignore dist_serve/ (replace ts_bundled)
- Frontend enhancements: add iconName to view tabs and resolvedViewTabs, add Lucide icons for each tab, replace manual stats markup with dees-statsgrid using IStatsTile tiles
- Adjust shared CSS: center content, set max-width 1280px and adjust padding
- Add npm test script and rename/update tests (test.basic.ts -> test.basic_test.ts)

2026-02-24 - 2.1.0 - feat(opsserver)

switch to TypedServer and serve bundled UI assets; add index.html; update bundling output and dev watch configuration

- Replace UtilityWebsiteServer with TypedServer and load bundledContent from ts_bundled/bundle.ts; enable cors, spaFallback, injectReload, watch, and compression
- Add a minimal index.html SPA entry and include it in the bundle so it is served from the bundled assets
- Change tsbundle output to ./ts_bundled/bundle.ts with outputMode 'base64ts' and includeFiles ['./index.html']
- Add a tswatch bundle config and replace the previous watcher with a backend watcher that runs the server via 'deno run --allow-all mod.ts server' (restart enabled)
- Bump devDependency @git.zone/tswatch from ^2.3.13 to ^3.1.0 and update .gitignore to ignore ts_bundled/

2026-02-24 - 2.0.0 - BREAKING CHANGE(providers)

switch GitLab and Gitea providers to use @apiclient.xyz client libraries and export clients via plugins

- Add new dependencies: @apiclient.xyz/gitea@^1.0.3 and @apiclient.xyz/gitlab@^2.0.3 in deno.json
- Export giteaClient and gitlabClient from ts/plugins.ts
- Refactor GiteaProvider to use plugins.giteaClient.GiteaClient for all API interactions and update mapping types/fields
- Refactor GitLabProvider to use plugins.gitlabClient.GitLabClient for all API interactions and update mapping types/fields
- Remove BaseProvider.apiFetch helper and setAuthHeader abstract method (breaking change to BaseProvider API)
- Adjust mapping logic: simplify Gitea visibility, change group name/path and webUrl construction, update GitLab topics and projectCount handling

2026-02-24 - 1.0.0 - initial release

Initial commit and first release of the project.

- Project initialized with the initial codebase and repository scaffold.
- Base files and basic configuration added.
- Tagged first release as 1.0.0.