

@apiclient.xyz/gitlab

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Documentation for @apiclient.xyz/gitlab

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readme.md for @apiclient.xyz/gitlab

A powerful, fully-typed TypeScript client for the GitLab API 📖

[npm version](#) [license](#)

`@apiclient.xyz/gitlab` gives you a clean, object-oriented interface to the GitLab REST API. It wraps projects, groups, pipelines, jobs, CI/CD variables, branches, tags, protected branches, and test reports into rich domain classes with full auto-pagination support. Works with any GitLab instance -- cloud or self-hosted.

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Install

```
npm install @apiclient.xyz/gitlab
# or
pnpm install @apiclient.xyz/gitlab
```

Quick Start ↗

```
import { GitLabClient } from '@apiclient.xyz/gitlab';

const client = new GitLabClient('https://gitlab.example.com', 'your-private-token');
```

```

// Verify connectivity
const { ok, error } = await client.testConnection();
console.log(ok ? '✅ Connected!' : `❌ ${error}`);

// Grab all your projects
const projects = await client.getProjects();
for (const project of projects) {
  console.log(`${project.name} - ${project.webUrl}`);
}

```

That's it. No boilerplate, no callback soup, just straightforward async/await.

Core Concepts

Rich Domain Objects

Every API response is wrapped in a **domain class** that exposes typed properties and chainable methods. You never deal with raw JSON unless you want to -- every class has a `.toJSON()` escape hatch.

```

GitLabClient
├─ GitLabGroup      → .getProjects(), .getVariables(), .update(), .delete(), ...
├─ GitLabProject   → .getPipelines(), .getBranches(), .getVariables(),
.triggerPipeline(), ...
|   └─ GitLabBranch
|   └─ GitLabTag
|   └─ GitLabProtectedBranch
|   └─ GitLabVariable
├─ GitLabPipeline  → .getJobs(), .getTestReport(), .retry(), .cancel(), .delete()
|   └─ GitLabJob    → .getLog(), .retry(), .cancel(), .play(), .erase()
|   └─ GitLabPipelineVariable
|   └─ GitLabTestReport
|       └─ GitLabTestSuite
|           └─ GitLabTestCase
└─ GitLabVariable

```

Auto-Pagination

List endpoints automatically page through **all** results by default. Need just one page? Pass `{ page: N }` explicitly.

```
// Fetches ALL groups (auto-paginates transparently)
const allGroups = await client.getGroups();

// Fetches only page 2, 10 per page
const page2 = await client.getGroups({ page: 2, perPage: 10 });
```

The `autoPaginate` helper is also exported if you want to use it in custom integrations.

Usage

Creating a Client

```
import { GitLabClient } from '@apiclient.xyz/gitlab';

const client = new GitLabClient('https://gitlab.example.com', 'your-private-token');
```

The constructor takes the base URL of your GitLab instance and a personal access token (or project/group token) for `PRIVATE-TOKEN` header authentication.

Testing the Connection

```
const result = await client.testConnection();

if (result.ok) {
  console.log('Connected successfully.');
```

```
} else {
  console.error('Connection failed:', result.error);
}
```

Groups

List All Groups

```
const groups = await client.getGroups();

// Search by name
const devGroups = await client.getGroups({ search: 'platform' });

for (const group of devGroups) {
  console.log(`${group.id} - ${group.fullPath} (${group.visibility})`);
}
```

Get a Single Group

```
const group = await client.getGroup('my-org/my-team');
console.log(group.name, group.webUrl);
```

Create a Group

```
const newGroup = await client.createGroup('backend-team', 'backend-team');

// Create a sub-group under an existing parent
const subGroup = await client.createGroup('api-squad', 'api-squad', parentGroup.id);
```

Group Operations

```
// Update properties
await group.update({ description: 'The backend crew 🚀', visibility: 'internal' });

// Upload / remove avatar
await group.setAvatar(imageBytes, 'logo.png');
await group.deleteAvatar();

// Transfer to another parent group
await group.transfer(targetGroupId);

// List descendant sub-groups
const children = await group.getDescendantGroups();

// List projects inside the group
const projects = await group.getProjects({ search: 'api' });

// Delete
```

```
await group.delete();
```

Projects

List All Projects

```
const projects = await client.getProjects();

// Search with pagination
const matches = await client.getProjects({ search: 'my-service', perPage: 20 });

for (const p of matches) {
  console.log(`${p.id} - ${p.fullPath} [${p.defaultBranch}]`);
}
```

Get a Single Project

```
// By numeric ID
const project = await client.getProject(42);

// By full path
const project = await client.getProject('my-org/my-repo');
```

Create a Project

```
const project = await client.createProject('new-service', {
  namespaceId: group.id,
  visibility: 'internal',
  description: 'Our shiny new microservice',
});
```

Project Operations

```
// Update properties
await project.update({
  description: 'Updated description',
  defaultBranch: 'develop',
  topics: ['typescript', 'api'],
});
```

```
});

// Avatar management
await project.setAvatar(imageBytes, 'project-logo.png');
await project.deleteAvatar();

// Transfer to a different namespace
await project.transfer(otherNamespaceId);

// Delete
await project.delete();
```

Branches & Tags ☐☐

```
// List all branches (auto-paginated)
const branches = await project.getBranches();
for (const b of branches) {
  console.log(`${b.name} @ ${b.commitSha}`);
}

// List all tags
const tags = await project.getTags();
for (const t of tags) {
  console.log(`${t.name} @ ${t.commitSha}`);
}
```

Protected Branches ☐☐

```
const protectedBranches = await project.getProtectedBranches();
for (const pb of protectedBranches) {
  console.log(`${pb.name} - force push: ${pb.allowForcePush}`);
}

// Remove branch protection
await project.unprotectBranch('develop');
```

CI/CD Variables

Variables work identically on both projects and groups.

Project Variables

```
// List all
const vars = await project.getVariables();

// Create
const dbVar = await project.createVariable('DATABASE_URL', 'postgres://localhost/db', {
  protected: true,
  masked: true,
  environment_scope: 'production',
});

// Update
await project.updateVariable('DATABASE_URL', 'postgres://newhost/db', {
  protected: true,
});

// Delete
await project.deleteVariable('DATABASE_URL');
```

Group Variables

```
const groupVars = await group.getVariables();

await group.createVariable('NPM_TOKEN', 'tok-xxx', {
  protected: false,
  masked: true,
  environment_scope: '*',
});

await group.updateVariable('NPM_TOKEN', 'tok-yyy');
await group.deleteVariable('NPM_TOKEN');
```

Each `GitLabVariable` instance exposes typed properties:

```
console.log(dbVar.key);           // 'DATABASE_URL'
console.log(dbVar.value);         // 'postgres://...'
console.log(dbVar.variableType); // 'env_var'
console.log(dbVar.protected);     // true
console.log(dbVar.masked);        // true
console.log(dbVar.environmentScope); // 'production'
```

Pipelines

List & Filter Pipelines

```
// Recent pipelines (auto-paginated)
const pipelines = await project.getPipelines();

// Advanced filtering
const failed = await project.getPipelines({
  status: 'failed',
  ref: 'main',
  source: 'push',
  orderBy: 'updated_at',
  sort: 'desc',
  updatedAfter: '2025-01-01T00:00:00Z',
});

for (const p of failed) {
  console.log(`Pipeline #${p.id} [${p.status}] on ${p.ref} - ${p.webUrl}`);
}
```

Trigger a Pipeline

```
const pipeline = await project.triggerPipeline('main', [
  { key: 'DEPLOY_ENV', value: 'staging' },
]);
console.log(`Triggered pipeline #${pipeline.id}`);
```

Pipeline Actions

```
// Retry all failed jobs
const retried = await pipeline.retry();

// Cancel a running pipeline
const cancelled = await pipeline.cancel();

// Delete a pipeline
await pipeline.delete();
```

Pipeline Variables & Test Reports

```
// Get variables used in a pipeline run
const pipelineVars = await pipeline.getVariables();
for (const v of pipelineVars) {
  console.log(`${v.key} = ${v.value} (${v.variableType})`);
}

// Get the test report
const report = await pipeline.getTestReport();
console.log(`Tests: ${report.totalCount} total, ${report.successCount} passed,
${report.failedCount} failed`);

for (const suite of report.testSuites) {
  console.log(` Suite "${suite.name}": ${suite.totalCount} tests (${suite.failedCount}
failures)`);
  for (const tc of suite.testCases) {
    if (tc.status === 'failed') {
      console.log(`   ❌ ${tc.name}: ${tc.systemOutput}`);
    }
  }
}
}
```

Jobs

```
// Get all jobs for a pipeline
const jobs = await pipeline.getJobs();

// Filter by scope
```

```
const failedJobs = await pipeline.getJobs({ scope: ['failed'] });

for (const job of jobs) {
  console.log(`Job "${job.name}" (${job.stage}) - ${job.status} [${job.duration}s]`);
}
```

Job Actions

```
// Read the raw log output
const log = await job.getLog();
console.log(log);

// Retry a failed job
const retriedJob = await job.retry();

// Cancel a running job
const cancelledJob = await job.cancel();

// Trigger a manual job
const played = await job.play();

// Erase job artifacts and trace
await job.erase();
```

Job Properties

Each `GitLabJob` exposes rich metadata:

```
job.id           // number
job.name         // 'build'
job.stage        // 'test'
job.status       // 'success' | 'failed' | 'running' | ...
job.ref          // 'main'
job.tag          // false
job.webUrl       // full URL to the job
job.duration     // seconds
job.queuedDuration // seconds waiting in queue
job.coverage     // code coverage percentage
job.allowFailure // whether failure is acceptable
job.failureReason // reason for failure, if any
```

API Reference

GitLabClient

Method	Returns	Description
<code>new GitLabClient(baseUrl, token)</code>	<code>GitLabClient</code>	Create a client instance
<code>.testConnection()</code>	<code>Promise<ITestConnectionResult></code>	Verify token and connectivity
<code>.getGroups(opts?)</code>	<code>Promise<GitLabGroup[]></code>	List all accessible groups (auto-paginated)
<code>.getGroup(fullPath)</code>	<code>Promise<GitLabGroup></code>	Get a single group by full path
<code>.createGroup(name, path, parentId?)</code>	<code>Promise<GitLabGroup></code>	Create a new group
<code>.getProjects(opts?)</code>	<code>Promise<GitLabProject[]></code>	List your projects (auto-paginated)
<code>.getProject(idOrPath)</code>	<code>Promise<GitLabProject></code>	Get a single project by ID or path
<code>.createProject(name, opts?)</code>	<code>Promise<GitLabProject></code>	Create a new project

GitLabGroup

Method	Returns	Description
<code>.getProjects(opts?)</code>	<code>Promise<GitLabProject[]></code>	List projects in the group
<code>.getDescendantGroups(opts?)</code>	<code>Promise<GitLabGroup[]></code>	List descendant sub-groups
<code>.getVariables()</code>	<code>Promise<GitLabVariable[]></code>	List CI/CD variables
<code>.createVariable(key, value, opts?)</code>	<code>Promise<GitLabVariable></code>	Create a CI/CD variable
<code>.updateVariable(key, value, opts?)</code>	<code>Promise<GitLabVariable></code>	Update a CI/CD variable
<code>.deleteVariable(key)</code>	<code>Promise<void></code>	Delete a CI/CD variable
<code>.update(data)</code>	<code>Promise<void></code>	Update group properties
<code>.setAvatar(imageData, filename)</code>	<code>Promise<void></code>	Upload avatar image
<code>.deleteAvatar()</code>	<code>Promise<void></code>	Remove avatar
<code>.transfer(parentGroupId)</code>	<code>Promise<void></code>	Transfer to another parent group
<code>.delete()</code>	<code>Promise<void></code>	Delete the group
<code>.toJSON()</code>	<code>IGitLabGroup</code>	Serialize to raw interface

GitLabProject

Method	Returns	Description
<code>.getBranches(opts?)</code>	<code>Promise<GitLabBranch[]></code>	List repository branches
<code>.getTags(opts?)</code>	<code>Promise<GitLabTag[]></code>	List repository tags
<code>.getProtectedBranches()</code>	<code>Promise<GitLabProtectedBranch[]></code>	List protected branches
<code>.unprotectBranch(name)</code>	<code>Promise<void></code>	Remove branch protection
<code>.getVariables()</code>	<code>Promise<GitLabVariable[]></code>	List CI/CD variables
<code>.createVariable(key, value, opts?)</code>	<code>Promise<GitLabVariable></code>	Create a CI/CD variable
<code>.updateVariable(key, value, opts?)</code>	<code>Promise<GitLabVariable></code>	Update a CI/CD variable
<code>.deleteVariable(key)</code>	<code>Promise<void></code>	Delete a CI/CD variable
<code>.getPipelines(opts?)</code>	<code>Promise<GitLabPipeline[]></code>	List pipelines (with rich filtering)
<code>.triggerPipeline(ref, variables?)</code>	<code>Promise<GitLabPipeline></code>	Trigger a new pipeline
<code>.update(data)</code>	<code>Promise<void></code>	Update project properties
<code>.setAvatar(imageData, filename)</code>	<code>Promise<void></code>	Upload avatar image
<code>.deleteAvatar()</code>	<code>Promise<void></code>	Remove avatar
<code>.transfer(namespaceId)</code>	<code>Promise<void></code>	Transfer to another namespace
<code>.delete()</code>	<code>Promise<void></code>	Delete the project
<code>.toJSON()</code>	<code>IGitLabProject</code>	Serialize to raw interface

GitLabPipeline

Method	Returns	Description
<code>.getJobs(opts?)</code>	<code>Promise<GitLabJob[]></code>	List jobs (with scope filtering)
<code>.getVariables()</code>	<code>Promise<GitLabPipelineVariable[]></code>	Get pipeline variables
<code>.getTestReport()</code>	<code>Promise<GitLabTestReport></code>	Get the test report
<code>.retry()</code>	<code>Promise<GitLabPipeline></code>	Retry failed jobs
<code>.cancel()</code>	<code>Promise<GitLabPipeline></code>	Cancel the pipeline
<code>.delete()</code>	<code>Promise<void></code>	Delete the pipeline
<code>.toJSON()</code>	<code>IGitLabPipeline</code>	Serialize to raw interface

GitLabJob

Method	Returns	Description
<code>.getLog()</code>	<code>Promise<string></code>	Get raw job trace/log
<code>.retry()</code>	<code>Promise<GitLabJob></code>	Retry the job
<code>.cancel()</code>	<code>Promise<GitLabJob></code>	Cancel the job
<code>.play()</code>	<code>Promise<GitLabJob></code>	Trigger a manual job
<code>.erase()</code>	<code>Promise<void></code>	Erase artifacts and trace
<code>.toJSON()</code>	<code>IGitLabJob</code>	Serialize to raw interface

Value Classes

Class	Key Properties
<code>GitLabBranch</code>	<code>name</code> , <code>commitSha</code>
<code>GitLabTag</code>	<code>name</code> , <code>commitSha</code>
<code>GitLabProtectedBranch</code>	<code>id</code> , <code>name</code> , <code>allowForcePush</code>
<code>GitLabVariable</code>	<code>key</code> , <code>value</code> , <code>variableType</code> , <code>protected</code> , <code>masked</code> , <code>environmentScope</code>
<code>GitLabPipelineVariable</code>	<code>key</code> , <code>value</code> , <code>variableType</code>
<code>GitLabTestReport</code>	<code>totalTime</code> , <code>totalCount</code> , <code>successCount</code> , <code>failedCount</code> , <code>skippedCount</code> , <code>errorCount</code> , <code>testSuites</code>
<code>GitLabTestSuite</code>	<code>name</code> , <code>totalTime</code> , <code>totalCount</code> , <code>successCount</code> , <code>failedCount</code> , <code>skippedCount</code> , <code>errorCount</code> , <code>testCases</code>
<code>GitLabTestCase</code>	<code>status</code> , <code>name</code> , <code>classname</code> , <code>executionTime</code> , <code>systemOutput</code> , <code>stackTrace</code>

TypeScript Interfaces

All raw GitLab API shapes are exported as TypeScript interfaces so you can use them in your own type definitions.

`IListOptions`

```
interface IListOptions {
  search?: string; // Filter results by keyword
  page?: number; // Page number (default: 1)
```

```
    perPage?: number; // Items per page (default: 50)
  }
```

IPipelineListOptions

Extends `IListOptions` with pipeline-specific filters:

```
interface IPipelineListOptions extends IListOptions {
  status?: string;           // Filter by pipeline status
  ref?: string;              // Filter by branch/tag ref
  source?: string;          // Filter by trigger source (push, web, schedule, api, ...)
  scope?: string;           // Filter by scope (running, pending, finished, branches, tags)
  username?: string;        // Filter by the triggering user
  updatedAfter?: string;     // ISO 8601 date – only pipelines updated after this
  updatedBefore?: string;    // ISO 8601 date – only pipelines updated before this
  orderBy?: string;         // Order by field (id, status, ref, updated_at, user_id)
  sort?: string;            // Sort direction (asc, desc)
}
```

IJobListOptions

```
interface IJobListOptions extends IListOptions {
  scope?: string[]; // Filter by job scope(s): created, pending, running, failed, success,
  ...
}
```

IVariableOptions

```
interface IVariableOptions {
  protected?: boolean; // Only expose to protected branches/tags
  masked?: boolean;    // Mask the value in job logs
  environment_scope?: string; // Environment scope (default: '*')
}
```

ITestConnectionResult

```
interface ITestConnectionResult {
    ok: boolean;
    error?: string; // Present when ok is false
}
```

All raw data interfaces (`IGitLabProject`, `IGitLabGroup`, `IGitLabPipeline`, `IGitLabJob`, `IGitLabVariable`, `IGitLabBranch`, `IGitLabTag`, `IGitLabProtectedBranch`, `IGitLabPipelineVariable`, `IGitLabTestReport`, `IGitLabTestSuite`, `IGitLabTestCase`, `IGitLabUser`) are also exported for advanced use cases.

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changelog.md for @apiclient.xyz/gitlab

2026-03-02 - 2.5.0 - feat(gitlab)

add pipelines and jobs API support, including list/get/trigger/delete/retry/cancel operations, job controls, and related types and list options

- Add new pipeline methods: `getPipelines` (with filtering, ordering and pagination), `getPipeline`, `triggerPipeline`, `deletePipeline`, `retryPipeline`, `cancelPipeline`, `getPipelineVariables`, `getPipelineTestReport`
- Add new job methods: `getPipelineJobs` (with scope filtering and pagination), `getJob`, `retryJob`, `cancelJob`, `playJob`, `eraseJob`; preserve `getJobLog`
- Introduce `IPipelineListOptions` and `IJobListOptions` for richer listing filters
- Extend and add interfaces: `IGitLabPipeline` (additional metadata fields), `IGitLabJob` (expanded fields including pipeline, runner, artifacts), `IGitLabPipelineVariable`, `IGitLabTestReport`, `IGitLabTestSuite`, `IGitLabTestCase` and other minor interface reorganizations
- Export the new interfaces from the package entry (`ts/index.ts`)

2026-03-02 - 2.4.0 - feat(gitlab)

add repository branches and tags endpoints and corresponding types

- Add `getRepoBranches(projectId, opts?)` to list repository branches (supports pagination with `page` and `perPage`; defaults to `page=1`, `perPage=50`).
- Add `getRepoTags(projectId, opts?)` to list repository tags (supports pagination with `page` and `perPage`; defaults to `page=1`, `perPage=50`).
- Introduce `IGitLabBranch` and `IGitLabTag` interfaces and export them from `ts/index.ts`.

2026-02-28 - 2.3.0 - feat(gitlab)

add support for GitLab protected branches (list and unprotect)

- Added IGitLabProtectedBranch interface
- Added GitLabClient.getProtectedBranches(projectId) returning IGitLabProtectedBranch[]
- Added GitLabClient.unprotectBranch(projectId, branchName) to remove branch protection
- Exported IGitLabProtectedBranch from index.ts
- Non-breaking API additions; recommended minor version bump

2026-02-28 - 2.2.0 - feat(gitlabclient)

add deleteProject method to delete a project using GitLab API DELETE /api/v4/projects/:id

- Adds GitlabClient.deleteProject(projectId: number | string): Promise.
- Implements DELETE /api/v4/projects/:id and URL-encodes the projectId.
- Non-breaking API addition — bump minor version.

2026-02-28 - 2.1.0 - feat(gitlab)

add group- and project-management methods to GitLab client

- Adds getGroupByPath(fullPath) to fetch a group by full path
- Adds getGroupProjects(groupId, opts?) to list projects in a group (include_subgroups=true, default perPage=50, optional search)
- Adds getDescendantGroups(groupId, opts?) to list descendant subgroups (paginated, default perPage=50, optional search)
- Adds createGroup(name, path, parentId?) to create groups (defaults to private visibility)
- Adds createProject(name, opts?) to create projects with optional path, namespaceId, visibility (default private) and description

2026-02-24 - 2.0.3 - fix()

no changes detected; nothing to commit

- No files changed in the provided diff
- No updates to source, dependencies, or package files

2026-02-24 - 2.0.2 - fix()

no changes detected in diff; no version bump required

- No files changed in this commit/diff.
- No code or dependency changes detected; no release necessary.

2026-02-24 - 2.0.1 - fix()

no changes detected; no version bump required

- No files changed in diff
- package.json current version is 2.0.0

2026-02-24 - 2.0.0 - gitlab

Renamed package to @apiclient.xyz/gitlab and introduced a new ESM TypeScript GitLabClient API. Breaking release that replaces the legacy @mojoio/gitlab client.

- BREAKING CHANGE: package renamed to @apiclient.xyz/gitlab and API migrated to a new GitLabClient (v2.0.0).
- New modern ESM TypeScript client with support for projects, groups, CI/CD variables, and pipelines.
- fix(core): add npm release registry configuration (release tooling improvement).

2021-10-05 - 1.0.4..1.0.10 - core maintenance

Series of patch releases containing maintenance updates and small fixes across the 1.0.x line.

- Multiple "fix(core): update" commits applying minor fixes and internal updates across 1.0.4-1.0.10.
- Mostly patch-level changes and version bumps; no documented breaking or feature changes.

2017-06-10 - 1.0.1..1.0.3 - initial release & docs

Initial project setup and first releases.

- 1.0.1 — initial commit.
- 1.0.2 — add README.
- 1.0.3 — patch/versioned release.