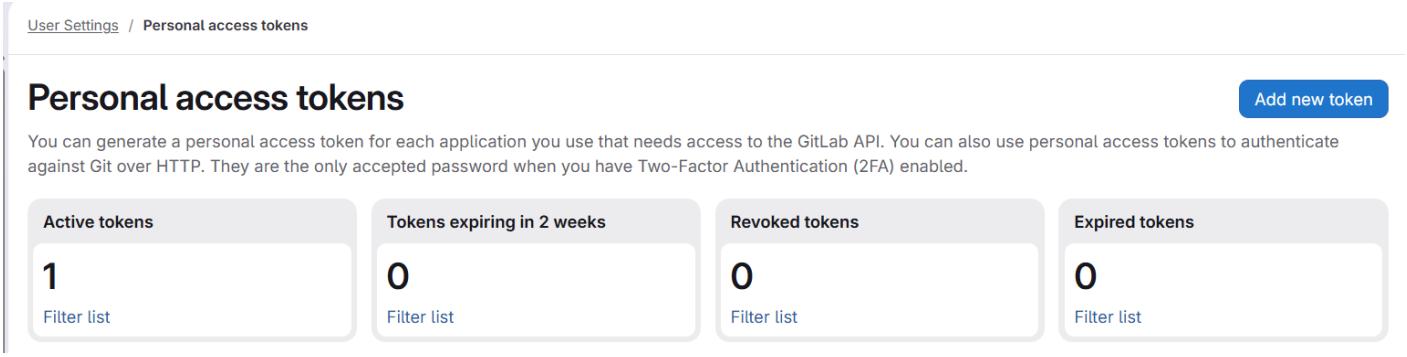
GitLab Self-Hosted Personal Access Token Setup

When connecting a self-hosted GitLab instance to Elestio CI/CD, you must provide a **Personal Access Token (PAT)** with the `api` scope. This guide explains exactly how to create it and why that specific scope is required.

Step-by-step: Create a Personal Access Token

1. Sign in to your self-hosted GitLab instance.
2. Click your avatar (top-right) → **Preferences** → **Access Tokens**
   (or go directly to `/-/profile/personal_access_tokens`)
3. Fill in:
   - **Token name** — e.g. `elestio-cicd`
   - **Expiration date** — optional, depending on your team's policy
4. Under **"Select scopes,"** enable **only** the `api` scope (details below).
5. Click **Create personal access token**.
6. **Copy the token immediately** — GitLab will not display it again.



Required scope: `api` (mandatory, no substitutes)

Scope	Why it is needed
`api`	**Mandatory.** Grants full REST API read/write access. Elestio requires this for creating and deleting **webhooks** (to track pushes), managing **deploy keys** (SSH access for CI runners), creating **projects from templates**, listing projects and groups, reading repository content, and performing git-over-HTTPS operations (`oauth2:<token>@...`) during deployments.

Why narrower scopes are not enough

It may seem possible to combine smaller scopes, but in practice, they do not cover what CI/CD needs:

Scope	What it covers	What it is missing
`read_api`	Read-only REST API	No write access
`read_repository`	`git clone` over HTTPS	No API access
`write_repository`	`git push` over HTTPS	No API access
`read_user`	Basic user info (`GET /api/v4/user`)	No repo/project access

Even combining all of the above **still does not allow the following:**

- Creating webhooks
- Managing deploy keys
- Creating projects

These require **REST API write permissions**, which are only available via the `api` scope.

If you attempt to use limited scopes, deployments will fail with the following:

```
insufficient_scope
```

GitLab version note

Elestio verifies token scopes using the following:

```
GET /api/v4/personal_access_tokens/self
```

This endpoint was introduced in **GitLab 13.5 (October 2020)**.

- On newer versions → scope is validated directly
- On older versions → validation is skipped

However, **the `api` scope is still required** for CI/CD to function correctly, regardless of version.

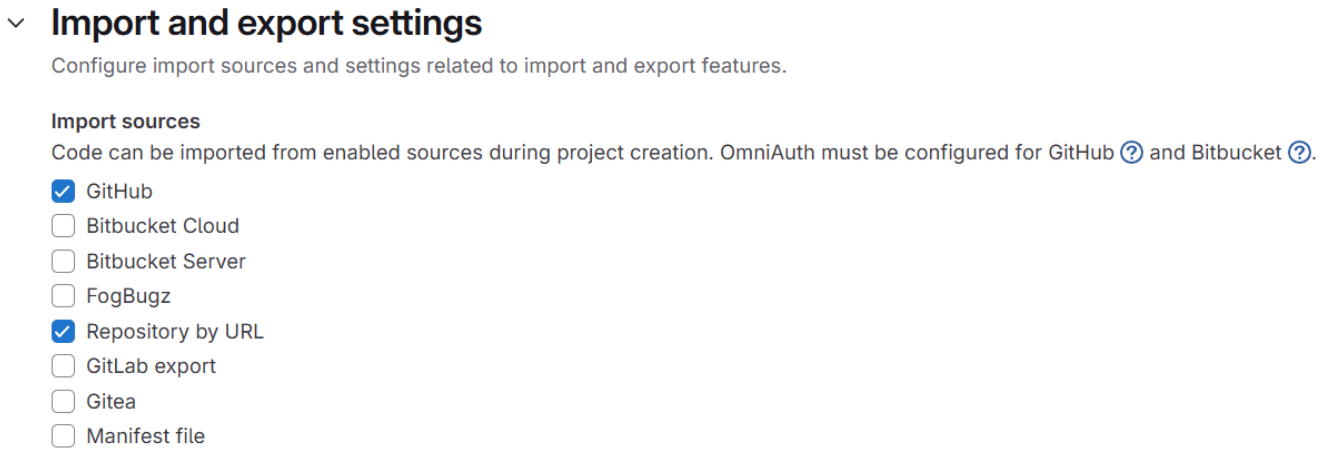
Admin settings required for template-based project creation

If you use **“Create repo from Elestio template,"** GitLab must allow imports from external URLs.

Enable this setting:

1. Go to **Admin Area**

2. Navigate to **Settings → General**
3. Expand **Import and export settings**
4. Enable **Allow imports from external URLs**
5. Save changes



If disabled, GitLab may return the following:

- `insufficient_scope`
- `404`

Even when your token is correctly configured.

⚠️ This is **not a token issue**, but a GitLab instance configuration restriction.

Troubleshooting

Symptom	Likely cause	Fix
`AUTH_FAILED` at connection	Wrong token or instance URL	Verify URL format (`http://` or `https://`, no trailing slash) and re-copy token
`INSUFFICIENT_SCOPES` at connection	Missing `api` scope	Edit or recreate the token with only `api`
`insufficient_scope` during deployment (project creation)	Using limited scopes	Recreate the token with `api`
`insufficient_scope` during template import	Import setting disabled	Enable “Allow imports from external URLs."
Repositories not loading	Missing or expired token	Reconnect with a valid token
Webhook not created	No `api` scope	`read_api` is not sufficient
Deploy fails at git clone	Missing `api` scope	Use `api` (covers HTTPS git access too)

Key takeaway

For GitLab + Elestio CI/CD integrations:

> **Always use a Personal Access Token with the `api` scope nothing else will fully work.**

Trying to minimize scopes here will break core deployment functionality.

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