

Generic Packages in CI/CD

Forgejo (and Gitea) provide a **generic package registry** that allows you to publish arbitrary files from CI/CD pipelines — ideal for distributing compiled binaries, configuration files, or any static assets.

Authentication

Forgejo requires **Basic authentication** for the generic packages API. This differs from the standard REST API which accepts `Authorization: token` headers.

```
curl --user "<username>:<PAT>" ...
```

Where `<PAT>` is a Personal Access Token with the `write:package` scope.

Publishing Files

Upload a single file

```
curl -X PUT \  
  --user "<username>:<PAT>" \  
  --upload-file ./mybinary \  
  https://git.example.com/api/packages/<owner>/generic/<repo>/<version>/<filename>
```

Path components:

Component	Description
<code><owner></code>	Your username or organization name
<code><repo></code>	Repository name (used as package namespace)
<code><version></code>	Version string (e.g. <code>v1.0.0</code> , <code>0.2.1-rc1</code>)
<code><filename></code>	The actual file to upload

Upload multiple files for the same version

```
curl -X PUT \  
  --user "<username>:<PAT>" \  
  --upload-file ./linux-binary \  
  https://git.example.com/api/packages/<owner>/generic/<repo>/<version>/linux-binary  
  
curl -X PUT \  
  --user "<username>:<PAT>" \  
  --upload-file ./macos-binary \  
  https://git.example.com/api/packages/<owner>/generic/<repo>/<version>/macos-binary
```

Each file is stored independently under the same version path.

Downloading Files

Direct download with authentication

```
curl -fsSL --user "<username>:<PAT>" \  
  https://git.example.com/api/packages/<owner>/generic/<repo>/<version>/<filename> \  
  --output ./downloaded-binary
```

The `-fsSL` flags:

- `-f`: Fail silently on HTTP errors
- `-s`: Silent mode (no progress meter)
- `-S`: Show errors if silent mode is used
- `-L`: Follow redirects

Without authentication (public packages)

If the package repository is public, you can download without credentials:

```
curl -fsSL \  
  https://git.example.com/api/packages/<owner>/generic/<repo>/<version>/<filename> \  
  --output ./downloaded-binary
```

GitHub Actions Workflow Example

```
name: Release
on:
  push:
    tags:
      - "v*"

permissions:
  contents: write
  packages: write

jobs:
  release:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v4

      - name: Build release binary
        run: cargo build --release

      - name: Upload to generic registry
        env:
          GITEA_TOKEN: ${ secrets.PACKAGE_TOKEN }
        run: |
          curl -X PUT \
            --user "${ github.actor }:${ GITEA_TOKEN}" \
            --upload-file target/release/myapp \
            https://git.example.com/api/packages/${ github.repository_owner
            }/generic/myapp/${ github.ref_name }/myapp
```

Gitea Actions Workflow Example

```
name: Release
on:
  push:
    tags:
      - "v*"

```

```

jobs:
  release:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v4

      - name: Build release binary
        run: cargo build --release

      - name: Upload to generic registry
        env:
          GITEA_TOKEN: ${ secrets.PACKAGE_TOKEN }
        run: |
          curl -X PUT \
            --user "username:$GITEA_TOKEN" \
            --upload-file target/release/myapp \
            https://git.example.com/api/packages/${ github.repository_owner
          }}/generic/myapp/${ github.ref_name }}/myapp

```

Troubleshooting

Error	Cause	Solution
401 Unauthorized	Missing or invalid PAT	Verify token has <code>write:package</code> scope
403 Forbidden	Insufficient permissions	Ensure user has write access to the repository
404 Not Found	Wrong path or private package	Check owner/repo/version/filename; use auth for private packages
405 Method Not Allowed	Wrong HTTP method	Use <code>PUT</code> , not <code>POST</code>
500 Internal Server Error	Content-Type mismatch	Remove <code>Content-Type: application/json</code> ; let curl auto-detect

Key Differences: Forgejo vs Gitea

Both Forgejo and Gitea support generic packages, but authentication differs:

Endpoint	Gitea Auth	Forgejo Auth
<code>/api/v1/...</code> (REST)	<code>Authorization: token <PAT></code>	<code>Authorization: token <PAT></code>

Endpoint	Gitea Auth	Forgejo Auth
<code>/api/packages/...</code> (packages)	Authorization: token <PAT>	Basic auth (<code>--user user:token</code>)

Always use Basic auth for the packages API to ensure compatibility across both platforms.

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