CodeArts Artifact

User Guide

Issue	01
Date	2023-11-30

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Contents

1 Release Repo

1.1 Overview

CodeArts Artifact is a general, unified repository used to manage software artifacts in different formats. In addition to basic storage functions, it also provides important functions such as build and deployment tool integration, version control, access permission control. It is a standardized way for enterprises to process all artifact types generated during software development.

Operations pertaining to a release repo include:

- Basic operations: You can upload, download, edit, search for, and delete software packages, as well as create, edit, search for, and delete folders.
- Viewing and editing software package details: Software package details include basic, constructing metadata, and build packages. The folder name, software package name and status, and release version are editable.
- Managing the recycle bin: After a software package is deleted, it is moved to the recycle bin. You can restore the package to the folder before the deletion or permanently delete the package from the recycle bin.

1.2 Accessing a Release Repo

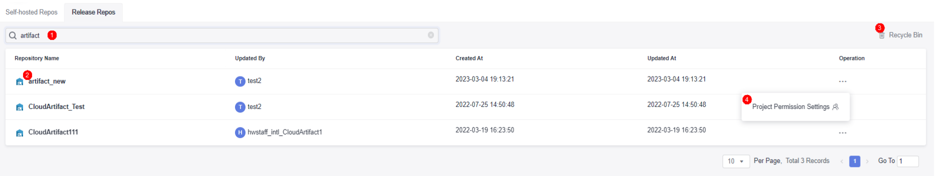
You can access the release repo page in either of the following ways: homepage entry and project entry.

Accessing Through the Homepage

Step 1 Log in to CodeArts.

Step 2 Choose **Services** > **Artifact**.

Step 3 View the project name list of the current tenant. You can perform the following operations as required:



Repository Name	Updated By	Created At	Updated At	Operation
artifact_new	T test2	2023-03-04 19:13:21	2023-03-04 19:13:21	...
CloudArtifact_Test	T test2	2022-07-25 14:50:48	2022-07-25 14:50:48	
CloudArtifact111	H hwstaff_intl_CloudArtifact1	2022-03-19 16:23:50	2022-03-19 16:23:50	...

No.	Operation	Description
1	Search for repos	Enter the project name in the search box to find the existing software release repo of the project.
2	View folder details	Click any folder to view the list of archived software packages in the folder or folders. You can upload, download, and edit software packages or folders.
3	Manage recycle bin	Click **Recycle Bin** to go to the recycle bin page. You can delete or restore the software package or folder as required.
4	Set project permissions	Click ··· to go to the **Set Project Permissions** page and edit member permissions. For details, see **Setting Permissions**.

NOTE

On the **Release Repos** page, you will view a project list, but you cannot upload files or create folders there. To perform such operations, click a project name to access the specific project first.

----End

Accessing Through a Specific Project

Step 1 Log in to the CodeArts homepage and click a card to access a project.

Step 2 Choose **Artifact** > **Release Repos**.

Step 3 The list of software packages and folders archived in the current project is displayed.

Perform the operations described in the following sections as required.

----End

1.3 Performing Basic Operations

Follow instructions in Accessing Through a Specific Project to access the release repo homepage. You can upload, create, download, edit, search for, and delete software packages.

Creating a Folder

Step 1 On the **Release Repos** tab page, click **Create Folder** on the right of the page to create a folder. Folders can be nested.

Click ✎ to change a folder name.

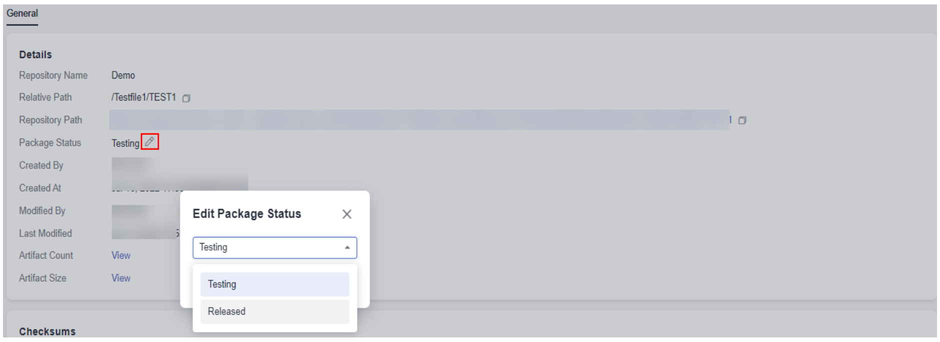
Click 🗑 to delete a folder and software package in the folder. You can choose to permanently delete the folder or move the deleted folder to the recycle bin.

Step 2 Select a folder and click **Create Folder** to create a level-2 folder.

----End

Setting Status

Step 1 After entering a level-1 folder, you can click ✎ next to **Package Status** and select a status from a drop-down list to change the status of a level-2 folder (**Testing** by default).



General

Details

Repository Name Demo

Relative Path /Testfile1/TEST1

Repository Path

Package Status Testing

Created By

Created At

Modified By

Last Modified

Artifact Count View

Artifact Size View

Checksums

Edit Package Status

Testing

If the folder status is **Released**, the folder cannot be changed or edited (changing the folder name, changing the file name in the folder, uploading the folder, changing the version number, or creating a subfolder). You can only download or delete it.

NOTICE

The folder status can be changed from **Not Released** to **Released**, but such change is irreversible. Exercise caution when performing this operation.

----End

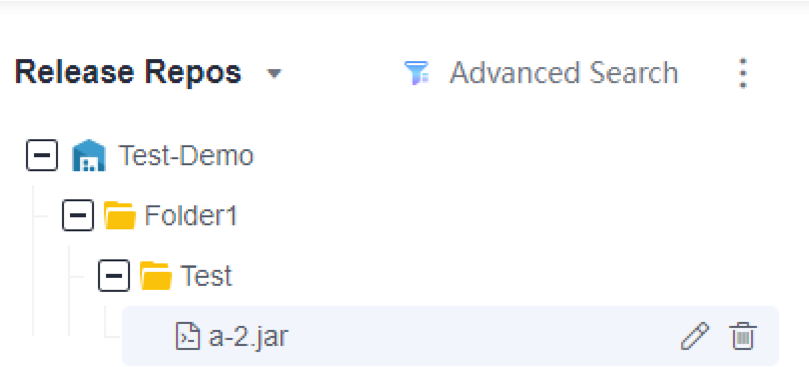
Uploading a Software Package

Step 1 Click **Upload** in the upper right corner of the page to manually upload local software packages to the release repo.

After selecting a folder, click **Upload** to manually upload a local software package to the corresponding folder.

Step 2 Click ✎ to change a software package name.

Click 🗑 to delete the software package permanently or move it to the recycle bin.



NOTE

You are advised not to upload files containing sensitive information such as plaintext accounts and passwords to the release repo.

----End

Searching

Step 1 Access the release repo by following instructions in **Accessing Through a Specific Project**.

Step 2 Enter a keyword (a folder or file name) in the search box on the left of the page to search for the software package whose name contains the keyword.

Step 3 Click a file name to go to the file details page.

----End

Downloading a Software Package

Step 1 Follow instructions in **Accessing Through a Specific Project** to access the release repo, select the software package to be downloaded, and click **Download**.

Step 2 In the displayed dialog box, select a method to download.

- **Local Download**: Download the software package to a local PC.
- **QR Code Download**: Use a mobile phone to scan the QR code to download the file.

----End

1.4 Viewing or Editing Software Package Details

On the release repo page, you can view or edit software package details, including basic information, constructing metadata information, and build packages.

Follow instructions in **Accessing Through a Specific Project** to access the release repo and click the software package name. The details about the selected software package are displayed. The software package details are displayed on tab pages: **Basic Information**, **Constructing Metadata**, **Build Packages**.

- **Basic Information**: displays the repository name, relative path, download address, released version, creator, creation time, size, and checksum.

  Click ✎ to change the release version of the software package. (The release version archived by CodeArts Build is the build sequence number by default.)
- **Constructing Metadata**: displays the build task, size, sequence number, builder, code repo, and code branch of the generated software package. Click **Build Task** to link to the task in CodeArts Build.
- **Build Packages**: displays the archiving records of software packages uploaded through build tasks. You can click ⤓ to download a package.

1.5 Managing the Recycle Bin

Software packages or folders deleted from the release repo are moved to the recycle bin, where you can manage them.

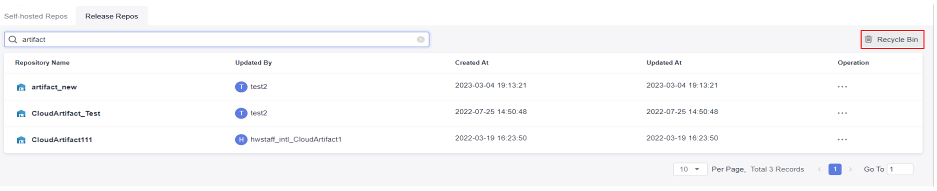
CodeArts Artifact provides an **overall recycle bin** and **project-level recycle bins**.

Overall Recycle Bin

In the overall recycle bin, you can manage software packages and folders deleted from all projects.

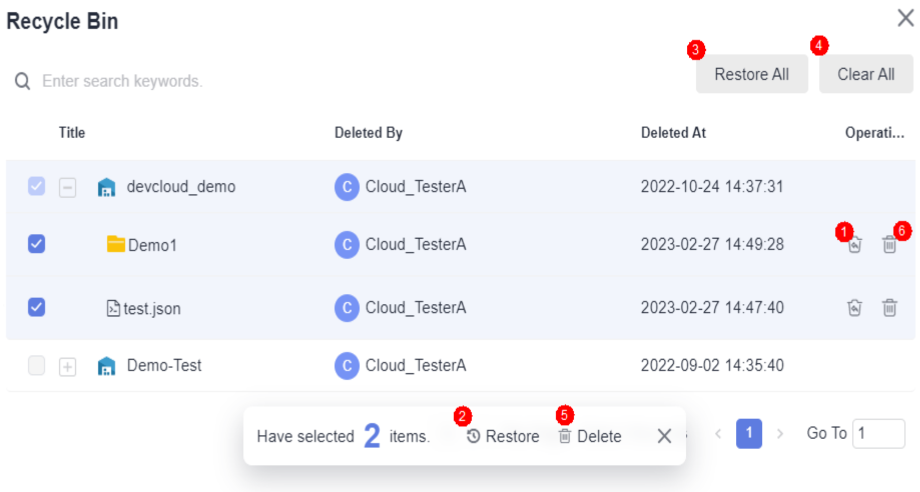
Step 1 Log in to CodeArts and choose **Services** > **Artifact**.

Step 2 Click the **Release Repos** tab and click **Recycle Bin**.



Repository Name	Updated By	Created At	Updated At	Operation
artifact_new	test2	2023-03-04 19:13:21	2023-03-04 19:13:21	...
CloudArtifact_Test	test2	2022-07-25 14:50:48	2022-07-25 14:50:48	...
CloudArtifact111	hwstaff_intl_CloudArtifact1	2022-03-19 16:23:50	2022-03-19 16:23:50	...

Step 3 The deleted files of different projects are displayed on the page. Perform the following operations on the software package or folder as required:



Recycle Bin

Enter search keywords.

Restore All | Clear All

Title	Deleted By	Deleted At	Operati...
☑ ⊟ devcloud_demo	Cloud_TesterA	2022-10-24 14:37:31	
☑ Demo1	Cloud_TesterA	2023-02-27 14:49:28	
☑ test.json	Cloud_TesterA	2023-02-27 14:47:40	
□ ⊞ Demo-Test	Cloud_TesterA	2022-09-02 14:35:40	

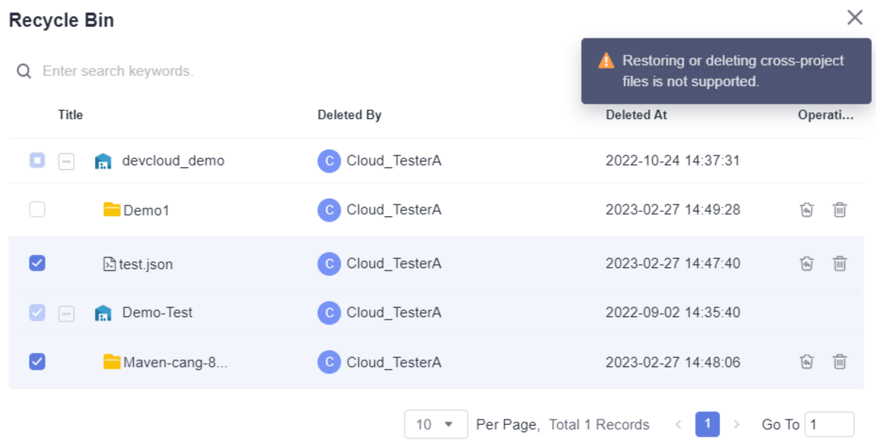
Have selected 2 items. Restore Delete ✕

1 Go To 1

No.	Operation	Description
1	Restore	Click ⟲ in the **Operation** column to restore a software package or folder.
2	Batch restore	Select multiple software packages or folders and click **Restore** below the list to restore all the selected software packages or folders.
3	Restore all	Click **Restore All** to restore all software packages or folders in the recycle bin by one click.
4	Clear recycle bin	Click **Clear All** to delete all software packages or folders from the recycle bin.
5	Batch delete	Select multiple software packages or folders and click **Delete** below the list to delete all the selected software packages or folders.
6	Delete	Click 🗑 in the **Operation** column to delete a software package or folder.

NOTICE

1. If you choose to delete a software package or folder in the recycle bin, it cannot be retrieved anymore. Exercise caution when performing this operation.
2. When selecting multiple files to restore or delete in batches, the overall recycle bin does not allow you to restore or delete files across projects.



Recycle Bin

Enter search keywords.

Restoring or deleting cross-project files is not supported.

Title	Deleted By	Deleted At	Operati...
■ ⊟ devcloud_demo	Cloud_TesterA	2022-10-24 14:37:31	
□ Demo1	Cloud_TesterA	2023-02-27 14:49:28	
☑ test.json	Cloud_TesterA	2023-02-27 14:47:40	
☑ ⊟ Demo-Test	Cloud_TesterA	2022-09-02 14:35:40	
☑ Maven-cang-8...	Cloud_TesterA	2023-02-27 14:48:06	

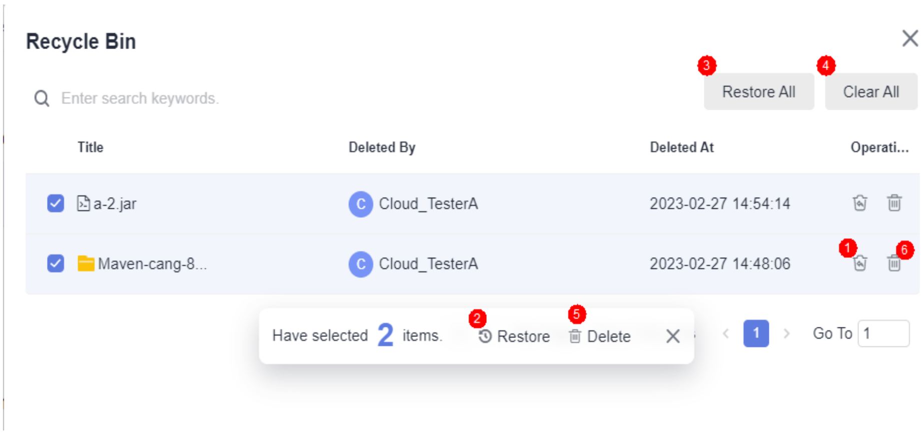
----End

Recycle Bin in a Project

You can process deleted software packages or folders in a project.

Step 1 Follow instructions in **Accessing Through a Specific Project** to access the **Release Repos** page and click **Recycle Bin** in the lower left corner of the page.

Step 2 The deleted files of this project are displayed on the page. Perform the following operations on the software package or folder as required:



Recycle Bin

Enter search keywords.

Title	Deleted By	Deleted At	Operati...
☑ a-2.jar	Cloud_TesterA	2023-02-27 14:54:14	
☑ Maven-cang-8...	Cloud_TesterA	2023-02-27 14:48:06	

Have selected 2 items.

No.	Operation	Description
1	Restore	Click ♲ in the **Operation** column to restore a software package or folder.
2	Batch restore	Select multiple software packages or folders and click **Restore** below the list to restore all the selected software packages or folders.
3	Restore all	Click **Restore All** to restore all software packages or folders in the recycle bin by one click.
4	Clear recycle bin	Click **Clear All** to delete all software packages or folders from the recycle bin.
5	Batch delete	Select multiple software packages or folders and click **Delete** below the list to delete all the selected software packages or folders.
6	Delete	Click 🗑 in the **Operation** column to delete a software package or folder.

NOTICE

If you choose to delete a software package or folder in the recycle bin, it cannot be retrieved anymore. Exercise caution when performing this operation.

----End

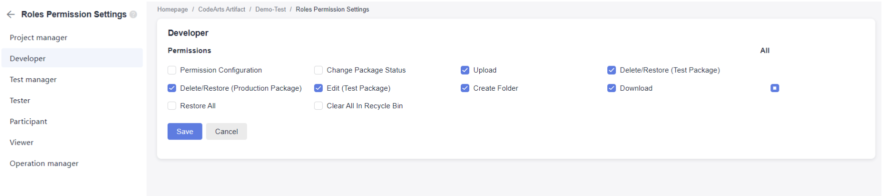
1.6 Setting Permissions

In the release repo, project roles have different operation permissions. Members who have the **Permission Settings** permission can edit the permission scope.

Step 1 Access the release repo by following instructions in **Accessing Through a Specific Project**.

Step 2 Click ⋮ in the upper left corner of the page and choose **Set Project Permissions** from the drop-down list.

Step 3 Click the role for which you want to set permissions, select the permissions as required, and click **Save**.



Homepage / CodeArts Artifact / Demo-Test / Roles Permission Settings

Developer

Permissions

- □ Permission Configuration
- □ Change Package Status
- ☑ Upload
- ☑ Delete/Restore (Test Package)
- ☑ Delete/Restore (Production Package)
- ☑ Edit (Test Package)
- ☑ Create Folder
- ☑ Download
- □ Restore All
- □ Clear All In Recycle Bin

All ■

The table below lists the default permission matrix provided by a release repo.

Operation/ Role	Project Creator	Project Manager	Developer	Test Manager	Tester	O&M Manager	Participant	Viewer
Set permissions	√	√	-	-	-	-	-	-
Change the package status	√	√	-	-	-	√	-	-
Upload	√	√	√	√	√	√	-	-
Delete/ Restore (test package)	√	√	√	√	-	√	-	-
Delete/ Restore (production package)	√	-	-	-	-	√	-	-
Edit (test package)	√	√	√	√	-	√	-	-
Create a folder	√	√	√	√	√	√	-	-
Download	√	√	√	√	√	√	√	√
Restore all	√	√	-	√	-	-	-	-
Clear recycle bin	√	√	-	√	-	-	-	-

NOTE

- By default, the project creator has all operation permissions and is not displayed on the page. The creator's permission scope cannot be changed.
- Viewers have only the download permission. A viewer's permission scope cannot be changed.

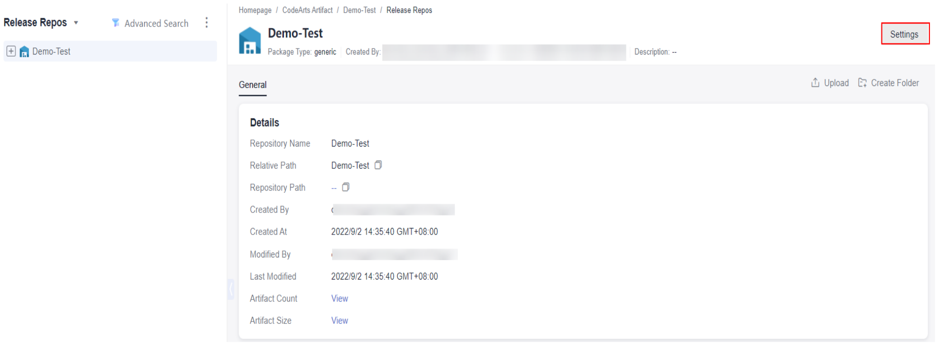
----End

1.7 Clearing Policies

A release repo automatically clear files on a scheduled basis. You can set a clearing policy to move expired files from the repository to the recycle bin or delete them permanently from the recycle bin based on the specified retention periods.

Step 1 Access the release repo by following instructions in **Accessing Through a Specific Project**.

Step 2 Click **Settings** at the upper right corner of the page. The **Clearing Policies** page is displayed.



Release Repos ▾ Advanced Search
Demo-Test

Homepage / CodeArts Artifact / Demo-Test / Release Repos

Demo-Test
Package Type: generic Created By: [redacted] Description: --

Settings

General Upload Create Folder

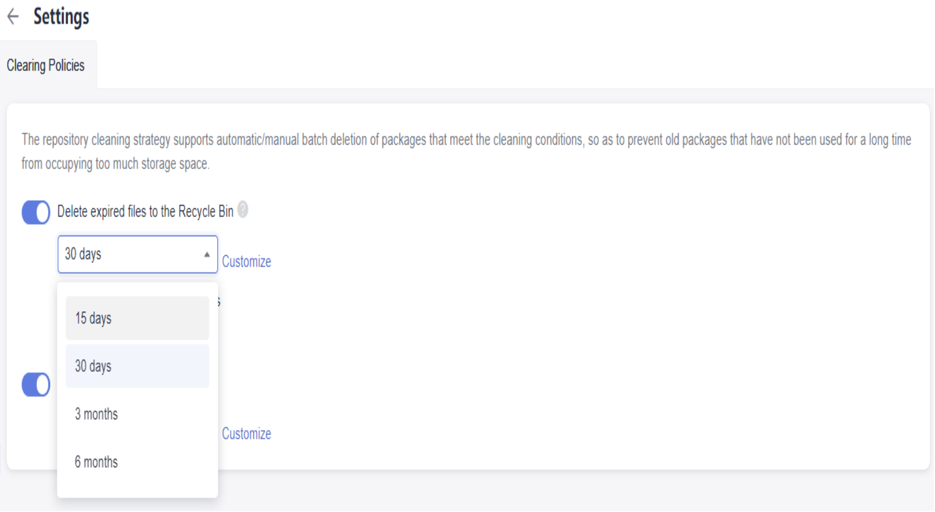
Details

Repository Name	Demo-Test
Relative Path	Demo-Test
Repository Path	--
Created By	[redacted]
Created At	2022/9/2 14:35:40 GMT+08:00
Modified By	[redacted]
Last Modified	2022/9/2 14:35:40 GMT+08:00
Artifact Count	View
Artifact Size	View

Step 3 Enable **Move expired files to the Recycle Bin** or **Clear from Recycle Bin** as required, and select a retention period from the drop-down list.

Default retention periods:

- **Move expired files to the Recycle Bin**: 30 days
- **Clear from Recycle Bin**: 30 days



← Settings

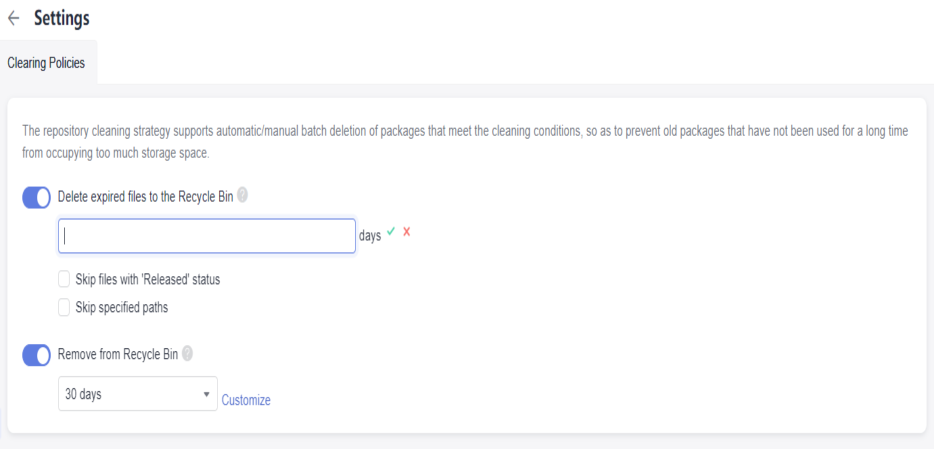
Clearing Policies

The repository cleaning strategy supports automatic/manual batch deletion of packages that meet the cleaning conditions, so as to prevent old packages that have not been used for a long time from occupying too much storage space.

Delete expired files to the Recycle Bin

30 days Customize

You can also customize a period. Click **Customize**, enter a number, and click **√** to save.



Settings

Clearing Policies

The repository cleaning strategy supports automatic/manual batch deletion of packages that meet the cleaning conditions, so as to prevent old packages that have not been used for a long time from occupying too much storage space.

Delete expired files to the Recycle Bin

days ✓ ✗

□ Skip files with 'Released' status

□ Skip specified paths

Remove from Recycle Bin

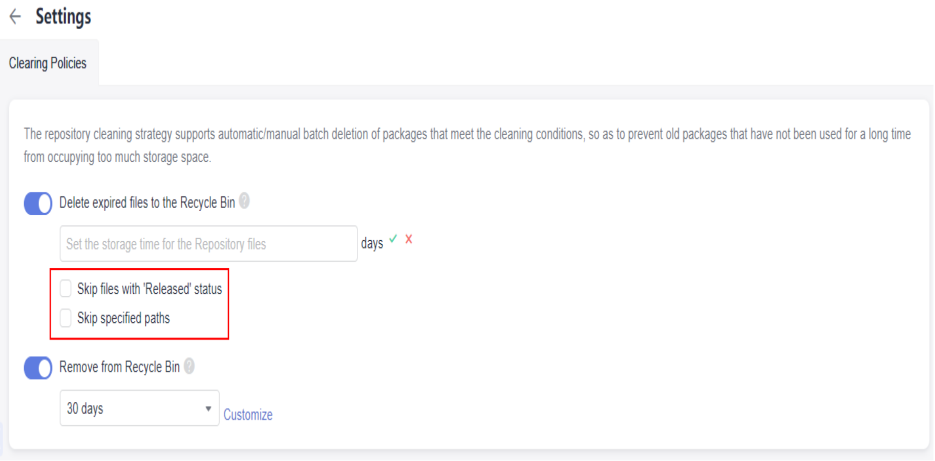
30 days

Customize

NOTE

Parameters below are optional.

- **Skip Released files**: The system retains files in the production package state when deleting files. For details, see **Setting Status**.
- **Skip specified paths**: When cleaning up files, the system retains the software package that matches the file path set by the user. You can set multiple file paths (starting with a slash (/) and separated by semicolons (;)).



Settings

Clearing Policies

The repository cleaning strategy supports automatic/manual batch deletion of packages that meet the cleaning conditions, so as to prevent old packages that have not been used for a long time from occupying too much storage space.

Delete expired files to the Recycle Bin

Set the storage time for the Repository files days ✓ ✗

□ Skip files with 'Released' status

□ Skip specified paths

Remove from Recycle Bin

30 days

Customize

----End

2 Self-hosted Repo

2.1 Introduction

A self-hosted repo manages private components, supporting Maven, npm, Go, PyPI, RPM, Debian, Conan, and NuGet.

A self-hosted repo provides the following functions:

- Repository management: includes creating a repository, editing basic repository information, managing repository permissions, and connecting the repository to the local development environment.
- Private component management: includes uploading, downloading, searching for, and deleting private components, and managing the recycle bin.

2.2 Accessing a Self-hosted Repo

You can access the self-hosted repo page in either of the following ways: homepage entry and project entry.

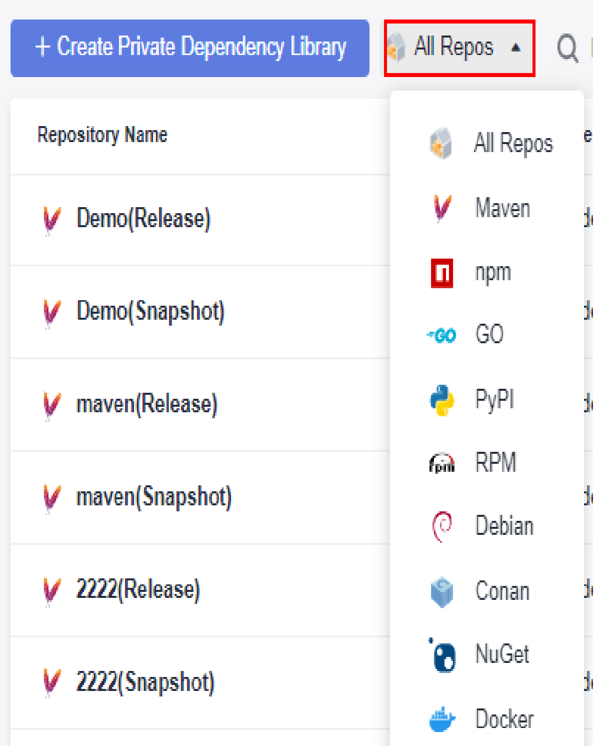
Accessing Through the Homepage

Step 1 Log in to CodeArts.

Step 2 Choose **Services** > **Artifact**.

Step 3 Click the **Self-hosted Repos** tab. All self-hosted repos created for the service are displayed.

Click the filter drop-down list box above to view repos by types.



Click the name of a repository to go to the self-hosted repo page of the project where the repository is located.

----End

Accessing Through a Specific Project

Step 1 Log in to the CodeArts homepage and click a card to access a project.

Step 2 Choose **Artifact** > **Self-hosted Repos**.

Step 3 View the list of different types of repositories archived in the current project.

Perform the operations described in the following sections as required.

----End

2.3 Creating a Self-hosted Repo

If you use this service for the first time, you need to create a repo. Only tenant administrators have the permission to create self-hosted repos.

- Follow instructions in **Accessing Through the Homepage** to access the self-hosted repo. You can click **Create Self-hosted Repo** in the upper left corner of the page.
- Follow instructions in **Accessing Through a Specific Project** to access the self-hosted repo. You can click ⊕ in the upper left corner of the page.

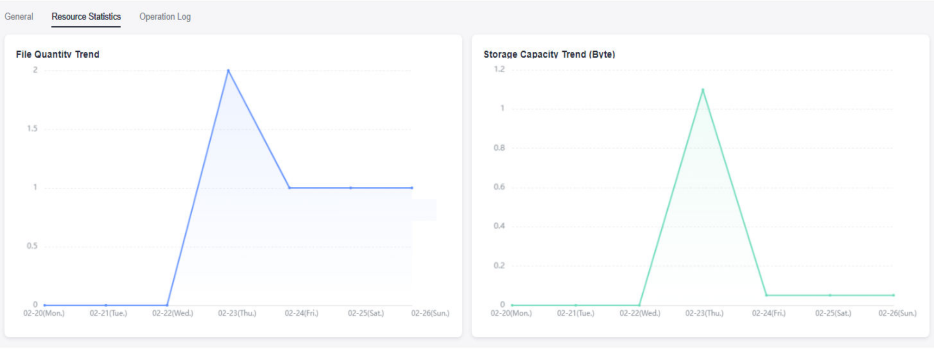
Step 1 The **Create Self-hosted Repo** page is displayed.

Step 2 Configure basic information and click **OK**.

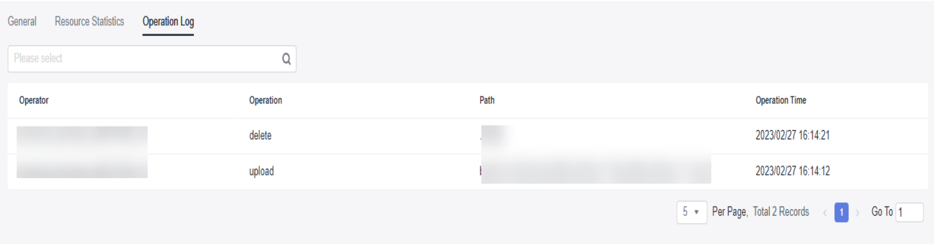
Configuration Item	Required	Description
Name	Yes	Enter up to 20 characters: letters, numbers, underscores (_), hyphens (-), and periods (.). **NOTE** After a self-hosted repo is created, the repository name cannot be changed.
Package Type	Yes	: supports Maven, npm, Go, PyPI, RPM, Debian, Conan, and NuGet artifact repositories. Complete the configuration for the selected format by following instructions in **Configuring Repository Items**.
Project	Yes	Select a project for the created repository. After the setting is complete, the project to which the user belongs cannot be changed.
Description	No	Enter up to 200 characters.

Step 3 View the name of the created self-hosted repo displayed in the list on the left of the page. Click the repository name to view the repository details. The repository details are displayed on the **General**, **Resources**, and **Operation Logs** tab pages.

- **General**: displays the repository name, repository type, repository path, relative path, creator, creation time, modifier, modification time, artifact count, and artifact size.
- **Resources**: collects statistics on artifacts uploaded to the repository by **File Counts** and **Storage Capacity (Byte)**.



- **Operation Logs**: displays the operation history of uploading, deleting, and restoring data from the recycle bin in the repository.



Operator	Operation	Path	Operation Time
[redacted]	delete	[redacted]	2023/02/27 16:14:21
[redacted]	upload	[redacted]	2023/02/27 16:14:12

----End

Configuring Repository Items

The following table describes the configuration items specific to each type of repository.

Type	Configuration Item	Required	Description
Maven	Storage repositories	Yes	The options are **Release** and **Snapshot**. You are advised to select both. If so, two repositories will be generated: **Release** and **Snapshot**. If you select one, a **Release** or **Snapshot** repository will be generated.
	Include patterns	No	Enter the required path, and click **+**. During package builds, only the Maven files whose path starts with this path can be uploaded to the self-hosted repo.
npm	Include patterns	No	Enter the required path, and click **+**. During package builds, only the npm files whose path starts with this path can be uploaded to the self-hosted repo.

Type	Configuration Item	Required	Description
Go	Include patterns	No	Enter the required path, and click **+**. During package builds, only the Go files whose path starts with this path can be uploaded to the self-hosted repo.
PyPI	Include patterns	No	Enter the required path, and click **+**. During package builds, only the PyPI dependency packages in which the **name** value in the **setup.py** file matches this path can be uploaded to the self-hosted repo.
RPM	Include patterns	No	Enter the required path, and click **+**. During package builds, only the RPM binary files whose path starts with this path can be uploaded to the self-hosted repo.
Conan	Include patterns	No	Enter the required path, and click **+**. Only the Conan files whose path starts with this path can be uploaded from a local client to the self-hosted repo.

2.4 Managing Self-hosted Repos

You can edit repository descriptions, add paths, delete repositories, and manage user permissions.

Editing Repository Descriptions and Paths

Step 1 Access the self-hosted repo homepage. In the left pane, click the name of the repository to be edited.

Step 2 Click **Settings** on the right of the page to display the basic information about a repository.

Step 3 Edit the repository description as required and click **Submit**.

NOTE

On the basic information page, the repository name, package type, home project, and permission scope cannot be modified.

On the **Basic Information** page of the repository, enter the path and click + to add paths for the Maven, npm, Go, PyPI, RPM and Conan repositories.

Click 🗑 to delete a path.

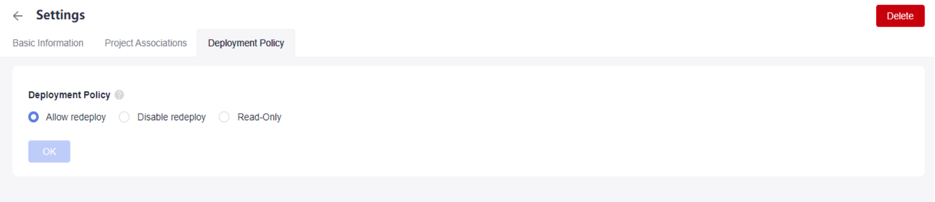
----End

Configuring Deployment Policies

The self-hosted repo supports three version policies: **Allow redeploy**, **Disable redeploy**, and **Read-only**. You can set whether to allow artifacts in the same path to be uploaded and overwrite the original package.

Step 1 Access the self-hosted repo homepage. In the left pane, click the repository name.

Step 2 Click **Settings** on the right of the page. The basic information about the repository is displayed. Click the **Deployment Policies** tab.



Deployment Policy

● Allow redeploy ○ Disable redeploy ○ Read-Only

- **Allow redeploy** (selected by default): Artifacts in the same path can be uploaded. After being uploaded, the original package will be overwritten.
- **Disable redeploy**: Artifacts in the same path cannot be uploaded.
- **Read-only**: Artifacts cannot be uploaded, updated, or deleted. You can download an uploaded artifact.

Step 3 Click **OK**.

----End

Deleting a Repository

You can delete a self-hosted repo. Deleted repositories are moved to the recycle bin.

Step 1 Access the self-hosted repo homepage. In the left pane, click the name of the repository to be deleted.

Step 2 Click **Settings** on the right of the page to display the basic information about a repository.

Step 3 Click **Delete**. Check that the deleted repository is no longer displayed in the repository list in the left pane.

----End

Managing Repository Permissions

After a repository is created, the mapping between project members and repository roles is as follows:

- The project creator and project manager are repository administrators.
- The developer, test manager, tester, and O&M manager are repository developers.

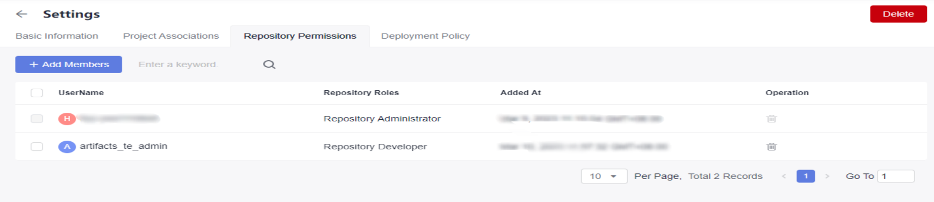
- The participant, viewer, and customized roles are repository viewers.

To add or delete permissions for self-hosted repo members, perform the following steps:

Step 1 Go to the self-hosted repo page and select the target repository from the list.

Step 2 Click **Settings** on the right of the page.

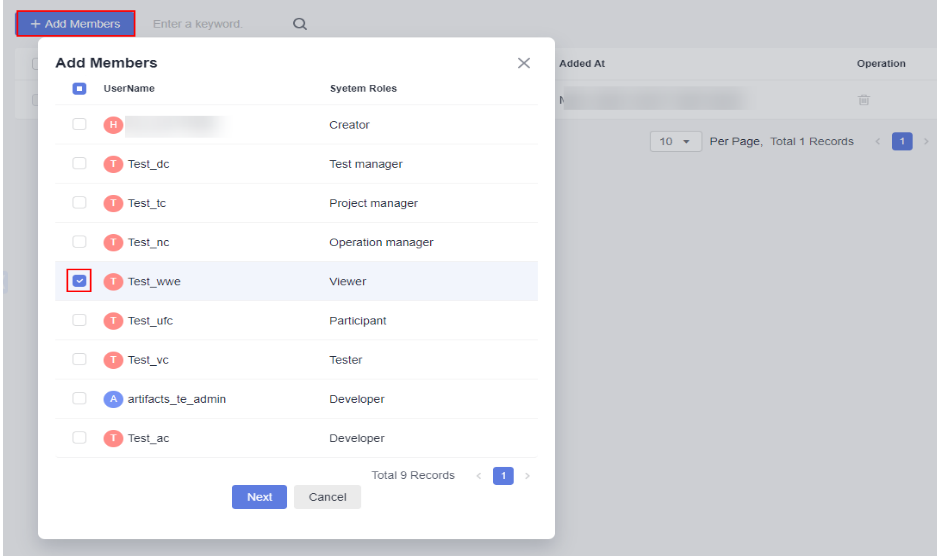
Step 3 Click the **Repository Permissions** tab. The added repository members are displayed in the list.



UserName	Repository Roles	Added At	Operation
H [redacted]	Repository Administrator	[redacted]	🗑
A artifacts_te_admin	Repository Developer	[redacted]	🗑

Step 4 Add members.

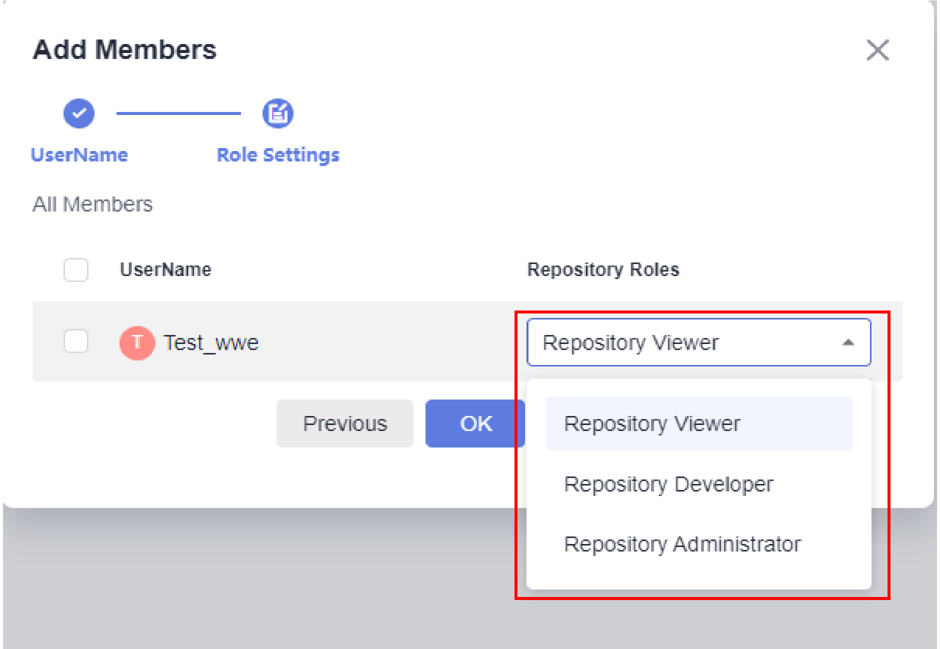
Click **Add Members** in the upper left corner, select a member, and click **Next**.



☐	UserName	Syetem Roles
☐	H [redacted]	Creator
☐	T Test_dc	Test manager
☐	T Test_tc	Project manager
☐	T Test_nc	Operation manager
☑	T Test_wwe	Viewer
☐	T Test_ufc	Participant
☐	T Test_vc	Tester
☐	A artifacts_te_admin	Developer
☐	T Test_ac	Developer

Step 5 Assign roles to the member.

Select **Repository Administrator**, **Repository Developer**, or **Repository Viewer** from the **Repository Roles** drop-down list.



Add Members

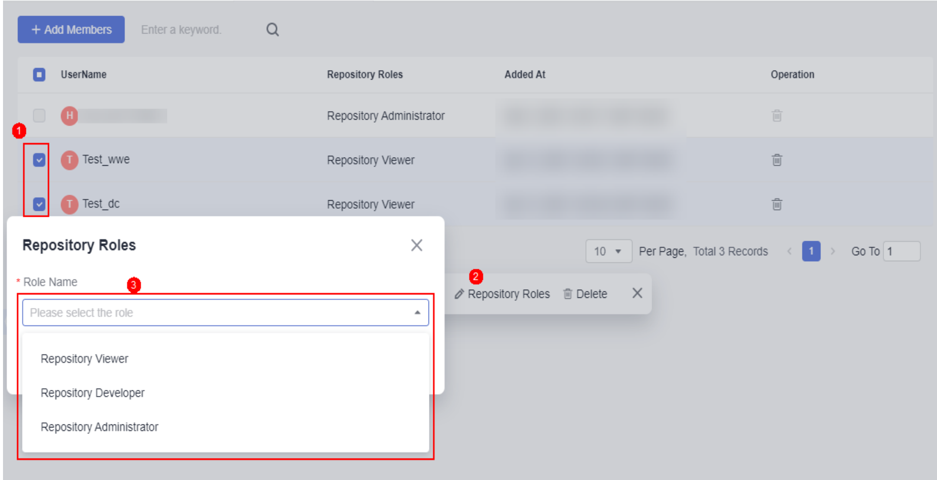
UserName — Role Settings

All Members

	UserName	Repository Roles
□	Test_wwe	Repository Viewer

Step 6 Click **OK**. The repository member is added and the repository role is configured. The newly added member is displayed in the list.

Step 7 In the member list, select multiple repository members and click **Repository Roles** to configure repository roles in batches.



	UserName	Repository Roles	Added At	Operation
□	[redacted]	Repository Administrator	[redacted]	
☑	Test_wwe	Repository Viewer	[redacted]	
☑	Test_dc	Repository Viewer	[redacted]	

----End

The following table lists the operations of each repository permission.

Operation/Role	Tenant Administrator			Non-Tenant Administrator		
	Repository Administrator	Developer	Viewer	Repository Administrator	Developer	Viewer

Create a self-hosted repo	√	√	√	×	×	×
Edit a self-hosted repo	√	√	√	×	×	×
Manage the association between repositories and projects	√	√	√	×	×	×
Upload a private component	√	√	×	√	√	×
Download a component	√	√	√	√	√	√
Delete a component	√	√	×	√	√	×
Restore a component	√	√	×	√	√	×
Permanently delete a component	√	√	×	√	√	×
Delete a repository	√	×	×	×	×	×
Restore a repository	√	√	×	√	√	×

Permanently delete a repository	√	×	×	×	×	×
Clear recycle bin	√	√	√	×	×	×
Restore all	√	√	√	×	×	×
Manage user permissions	√	√	√	√	×	×

Set-Up

You can connect the self-hosted repo to a local development environment so that private components in the self-hosted repo can be used during local development.

Step 1 Access the self-hosted repo homepage. In the left pane, click the name of the repository to be connected to the local development environment.

Step 2 Click **Set Me Up** on the right of the page.

Step 3 In the displayed dialog box, click **Download Configuration File** to download the configuration file to your local directory.

Step 4 Copy the downloaded file to the corresponding directory based on the instructions in the **Information** dialog box.

----End

Resetting the Repository Password

You can reset the password in the self-hosted repo configuration file. After the password is reset, download the configuration file again to replace the original file.

Step 1 Access the self-hosted repo homepage. Click ⋮ above the repository list on the left and choose **Reset Repository Password**.

Step 2 In the displayed dialog box, click **OK**. Check that a message is displayed indicating the password has been reset.

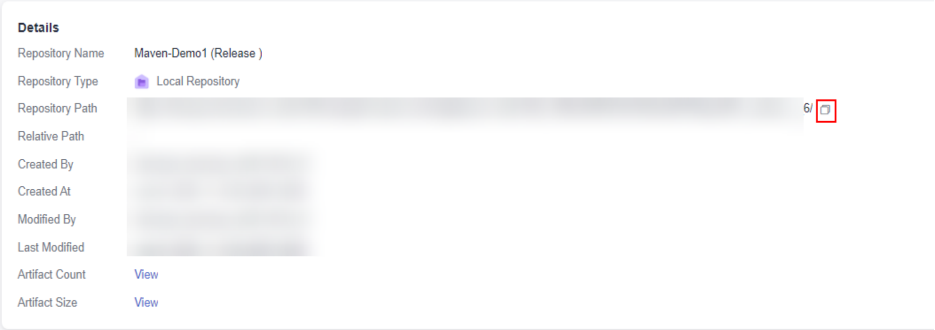
----End

Obtaining the Self-hosted Repo Path

The path of the self-hosted repo will be used when you connect the repository to the local development environment. You can perform the following operations to obtain the path:

Step 1 Access the self-hosted repo homepage. In the left pane, click the repository name.

Step 2 The path of the self-hosted repo is displayed in the repository details on the page. You can click ❐ to obtain the path.



Details

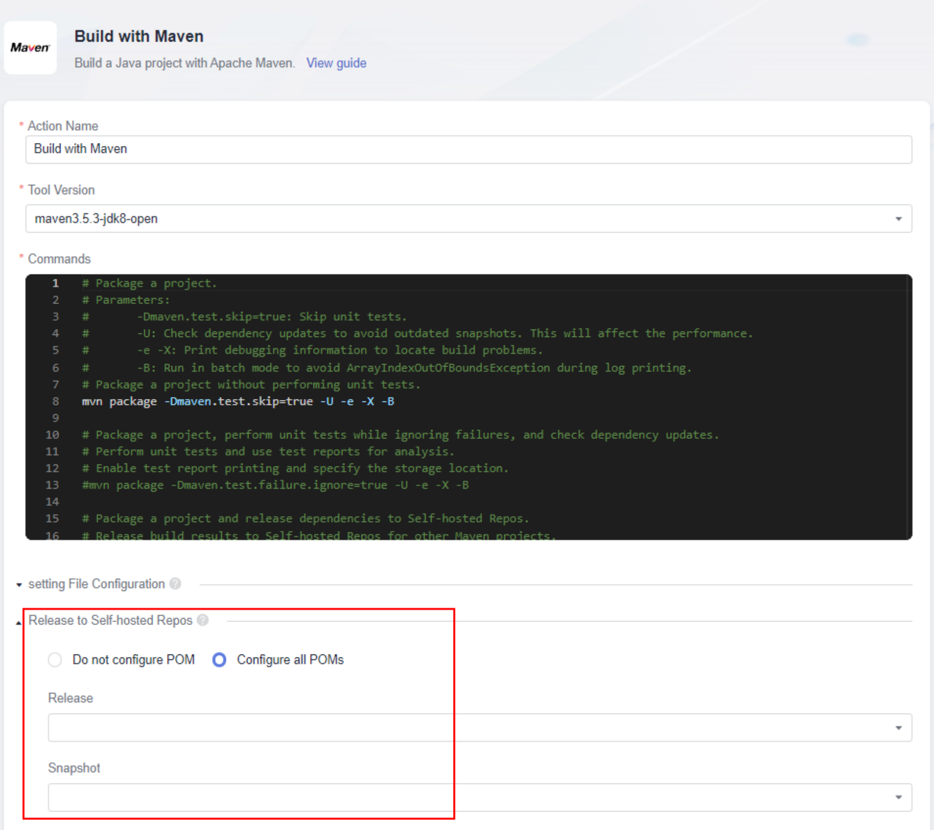
Repository Name	Maven-Demo1 (Release)
Repository Type	Local Repository
Repository Path	[redacted] 6/ ❐
Relative Path	
Created By	[redacted]
Created At	[redacted]
Modified By	[redacted]
Last Modified	[redacted]
Artifact Count	View
Artifact Size	View

----End

Obtaining the Association Between the Self-hosted Maven Repo and Project

When uploading a Maven component to the self-hosted repo through a build task, specify the repository path in the **Build with Maven** step.

- **Do not configure POM**: The dependency package is not released to the self-hosted repo.
- **Configure all POMs**: If you run the **mvn deploy** command, the dependency package is released to the specified release repository and snapshot repository.



Build with Maven

Build a Java project with Apache Maven. View guide

* Action Name

Build with Maven

* Tool Version

maven3.5.3-jdk8-open

* Commands

```
# Package a project.
# Parameters:
#       -Dmaven.test.skip=true: Skip unit tests.
#       -U: Check dependency updates to avoid outdated snapshots. This will affect the performance.
#       -e -X: Print debugging information to locate build problems.
#       -B: Run in batch mode to avoid ArrayIndexOutOfBoundsException during log printing.
# Package a project without performing unit tests.
mvn package -Dmaven.test.skip=true -U -e -X -B

# Package a project, perform unit tests while ignoring failures, and check dependency updates.
# Perform unit tests and use test reports for analysis.
# Enable test report printing and specify the storage location.
#mvn package -Dmaven.test.failure.ignore=true -U -e -X -B

# Package a project and release dependencies to Self-hosted Repos.
# Release build results to Self-hosted Repos for other Maven projects.
```

setting File Configuration

Release to Self-hosted Repos

○ Do not configure POM ● Configure all POMs

Release

Snapshot

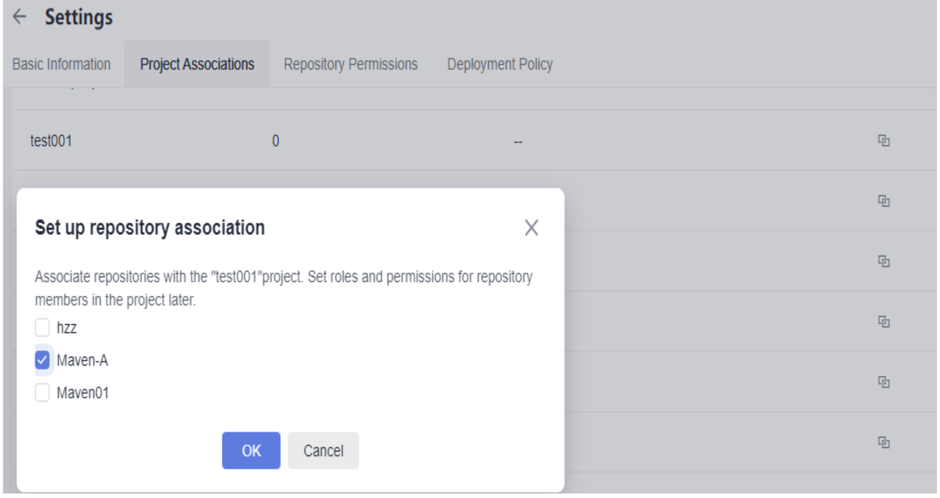
After the self-hosted Maven repo is associated with a project, you can select the repository in the build step of the build task in the project.

Step 1 Access the self-hosted repo homepage. In the left pane, click the name of a self-hosted Maven repo.

Step 2 Click **Settings** on the right of the page, and choose **Project Associations**.

Step 3 In the **Operation** column of the target project in the self-hosted Maven repo, click ⧉.

Step 4 In the displayed dialog box, select the repository name, and click **OK**.



Set up repository association

Associate repositories with the "test001"project. Set roles and permissions for repository members in the project later.

□ hzz
☑ Maven-A
□ Maven01

After an "Operation successful" message is displayed, the value of **Associated Repositories** for the project will be updated according to the number of selected repositories.

----End

2.5 Configuring the Artifact Cleanup Strategy

You can automatically and manually delete artifacts that meet deletion conditions in batches. When a user creates a self-hosted Maven repo, the storage repositories include **Release** and **Snapshot**.

The snapshot of a Maven artifact is a special version that specifies a copy of the current development progress, and is different from a common version. Maven checks a new snapshot in the remote repository during each build and provides the maximum number of snapshot versions that can be retained and the function of automatically clearing expired snapshot versions.

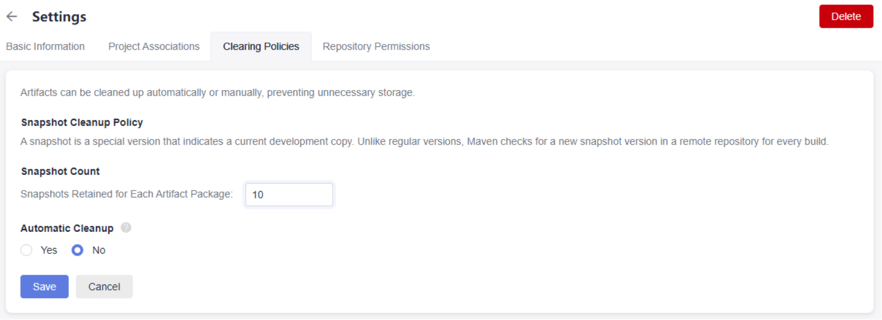
The artifact cleanup strategy reduces the waste of storage space, makes artifacts in the repository clear, and ensures that artifacts are transferred in order during development, testing, deployment, and release.

Procedure

Step 1 Access the self-hosted repo by following instructions in **Accessing Through a Specific Project**.

Step 2 Select the corresponding **Snapshot** self-hosted Maven repo from the repository list on the left and click **Settings** in the upper right corner of the page.

Step 3 Click the **Clearing Policies** tab.



Artifacts can be cleaned up automatically or manually, preventing unnecessary storage.

Snapshot Cleanup Policy

A snapshot is a special version that indicates a current development copy. Unlike regular versions, Maven checks for a new snapshot version in a remote repository for every build.

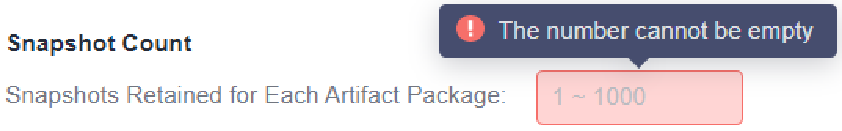
Snapshot Count

Snapshots Retained for Each Artifact Package: 10

Automatic Cleanup

○ Yes ● No

Step 4 Set the maximum number of **Snapshot Count**. The value ranges from 1 to 1000.



Snapshot Count

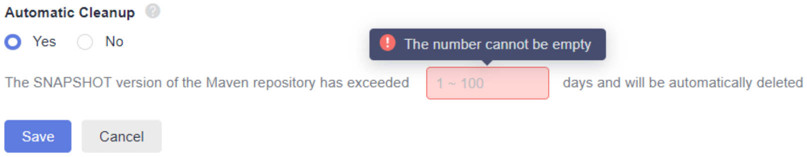
The number cannot be empty

Snapshots Retained for Each Artifact Package: 1 ~ 1000

When the version of an artifact package exceeds this value, the package of the earliest version is overwritten by the package of the latest version.

Step 5 Enable automatic cleanup (**No** by default). Click **Yes** and enter the number of days. Snapshot versions that have been stored for more than the specified number of days will be automatically cleaned up.

The automatic cleanup time cannot be less than 1 day or greater than 100 days.



Automatic Cleanup

● Yes ○ No

The number cannot be empty

The SNAPSHOT version of the Maven repository has exceeded 1 ~ 100 days and will be automatically deleted

Step 6 Click **Save** to complete configuration.

----End

2.6 Uploading a Private Component

Only repository administrators and developers can upload private components. You can set repository roles on the **Repository Permissions** page.

Procedure

Step 1 Access the self-hosted repo homepage. In the left pane, choose the repository to which the private component is to be uploaded.

Step 2 Click **Upload**.

Step 3 Set the component parameters, select the file, and click **Upload**. The detailed configuration for each type of component is described below.

NOTE

1. The maximum size of a file uploaded to the self-hosted repo is 100 MB for the Maven/npm/PyPI/RPM/Debian and 20 MB for the NuGet.
2. You are advised not to upload files containing sensitive information such as plaintext accounts and passwords to the self-hosted repo.

----End

Introduction to Maven Components

- POM: Project Object Model (POM) is the basic working unit of a Maven project. It is an XML file that contains basic project information to describe how to build a project and declare project dependencies. When a build task is executed, Maven searches for POM in the current directory, reads the POM, obtains the required configuration information, and constructs the target component.
- Maven coordinates: X, Y, and Z are used to uniquely identify a point in the three-dimensional space. In Maven, GAV is used to identify a unique Maven component package. GAV is short for **groupId**, **artifactId**, and **version**. **groupId** indicates a company or organization. For example, Maven core components are in the **org.apache.maven** organization. **artifactId** indicates the name of a component package. **version** indicates the version of the component package.
- Maven dependency: The dependency list is the cornerstone of POM. The building and running of most projects depend on the dependency on other components. Add the dependency list to the POM file. If the App component depends on the App-Core and App-Data components, the configuration is as follows:

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
  http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.companyname.groupname</groupId>
    <artifactId>App</artifactId>
    <version>1.0</version>
    <packaging>jar</packaging>
    <dependencies>
      <dependency>
        <groupId>com.companyname.groupname</groupId>
        <artifactId>App-Core</artifactId>
        <version>1.0</version>
      </dependency>
    </dependencies>
    <dependencies>
      <dependency>
        <groupId>com.companyname.groupname</groupId>
        <artifactId>App-Data</artifactId>
        <version>1.0</version>
      </dependency>
    </dependencies>
</project>
```

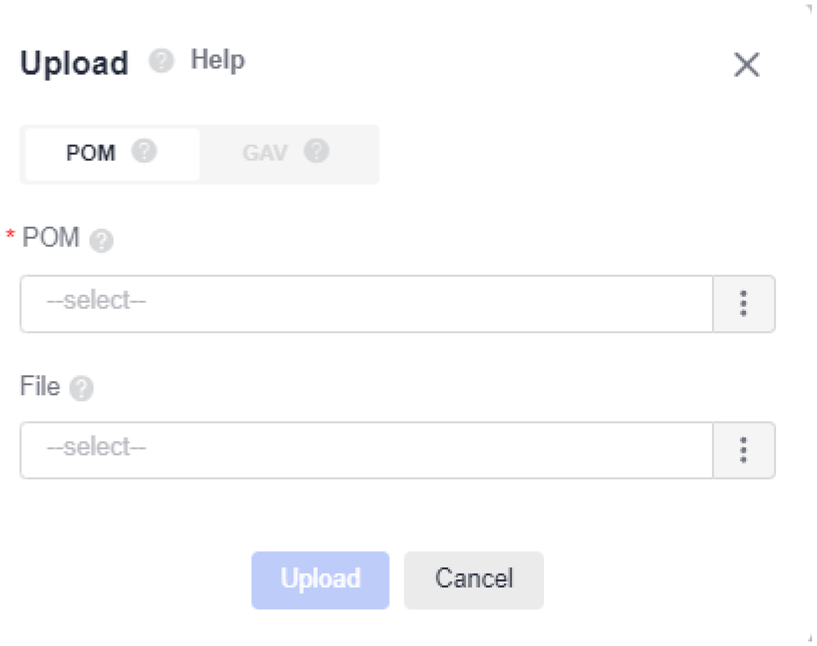
Uploading a Maven Component

A self-hosted repo supports two upload modes: POM and GAV.

Upload Mode	Description
POM	GAV parameters are obtained from the POM file. The system retains transitive dependencies of components.
GAV	GAV, short for **Group ID**, **Artifact ID**, and **Version**, is the unique identifier of a JAR package. In this mode, GAV parameters are manually specified. The system automatically generates a POM file without any transitive dependency.

- POM

  In POM mode, you can upload only the POM file or upload the POM file and related components. The name of the uploaded file must be the same as the **artifactId** value and **version** value in the POM file. As shown in the following figure, the **artifactId** value is **demo** and the **version** value is **1.0** in the POM. The uploaded file must be **demo-1.0.jar**.



The POM file structure is as follows:

```
<project>
  <modelVersion>4.0.0</modelVersion>
  <groupId>demo</groupId>
  <artifactId>demo</artifactId>
  <version>1.0</version>
</project>
```

NOTE

The **modelVersion** tag must exist and the value must be **4.0.0**, indicating that **Maven2** is used.

If you upload files in both the **POM** and **File** area, the **artifactId** and **version** parameter values in the uploaded POM file must match the name of the file uploaded in the **File** area. For example, if **artifactId** is **demo** and **version** is **1.0** in the POM file, the name of the file to be uploaded in the **File** area must be **demo-1.0**. Otherwise, the upload will fail.

- GAV

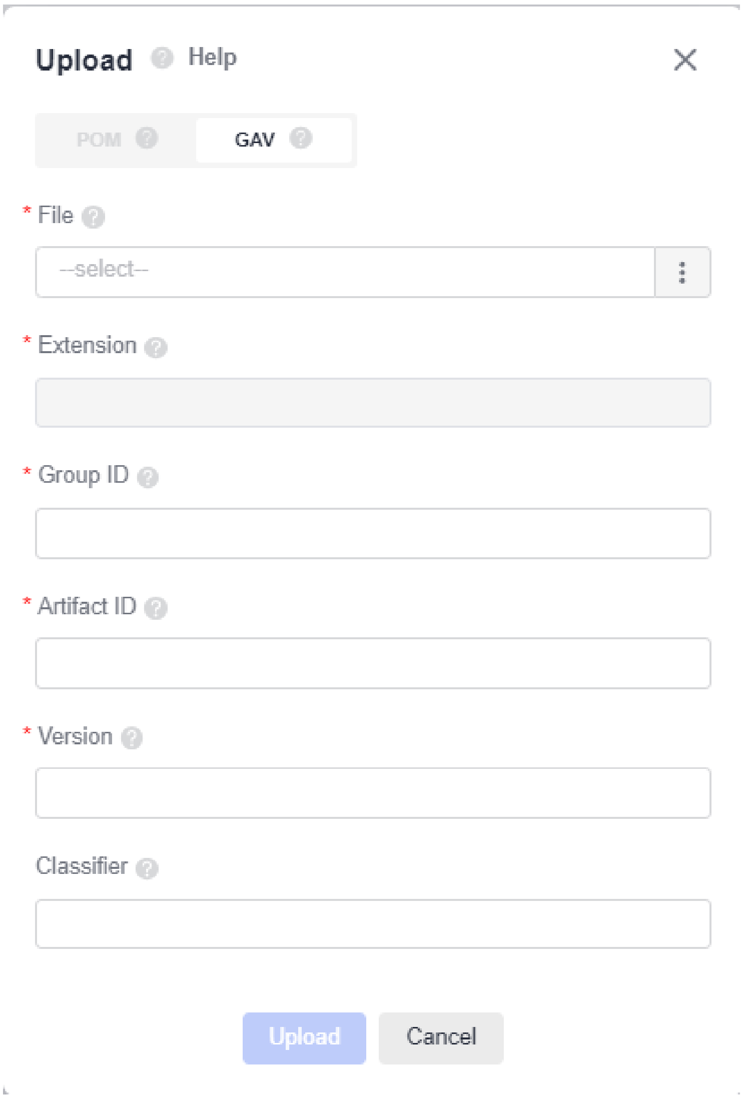
  In the GAV mode, the **Group ID**, **Artifact ID**, and **Version** parameters must be manually specified and they determine the name of the file to be uploaded. **Extension** indicates the packaging type, which determines the type of the file to be uploaded.

  Classifiers are used to distinguish artifacts that are constructed from the same POM and have different contents. This field is optional. It can contain letters, digits, underscores (_), hyphens (-), and dots (.). If you enter a value, it will be appended to the file name.

  Common Usage Scenario

  – Differentiate versions by names, such as **demo-1.0-jdk13.jar** and **demo-1.0-jdk15.jar**.

  – Differentiate usage by names, such as **demo-1.0-javadoc.jar** and **demo-1.0-sources.jar**.



Introduction to npm Components

Node Package Manager (npm) is a JavaScript package management tool. The npm component package is the object managed by the npm, and the self-hosted npm repo is for managing and storing the npm component package.

The npm component package consists of the structure and file description.

- Package structure: organizes various files in a package, such as source code files and resource files.
- Description file: describes package information. Example: **package.json**, **bin**, and **lib** files

The **package.json** file in the package is a description file of a project or module package. It contains information such as the name, description, version, and author. The **npm install** command downloads all dependent modules based on this file.

An example of the **package.json** file is as follows:

```
{
  "name": "third_use",            //Package name
  "version": "0.0.1",            //Version number
"description": "this is a test project", // Description
  "main": "index.js",             //Entry file
  "scripts": {                    //Script commands
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [                    //Keyword
    "show"
  ],
  "author": "f",                //Developer name
  "license": "ISC",               //License agreement
  "dependencies": {               //Project production dependencies
    "jquery": "^3.6.0",
    "mysql": "^2.18.1"
  },
  "devDependencies": {            //Project development dependencies
    "less": "^4.1.2",
    "sass": "^1.45.0"
  }
}
```

The **name** and **version** are the most important fields and must exist. Otherwise, the current package cannot be installed. The two attributes together form the unique identifier of an **npm** package.

name indicates the name of a package. The first part of the name, such as **@scope**, is used as the namespace. The other part is **name**. Generally, you can search for the **name** field to install and use the required package.

```
{
  "name": "@scope/name"
}
```

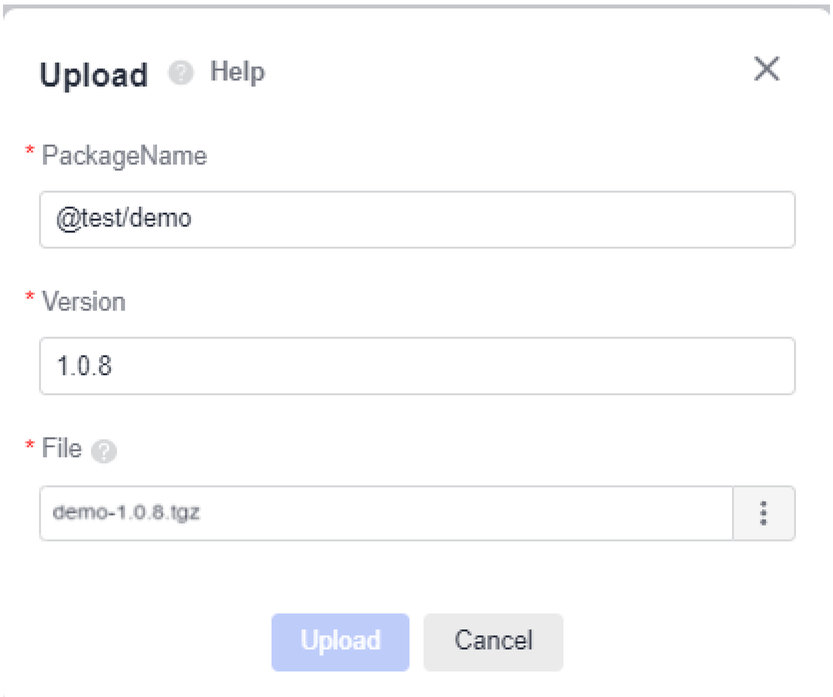
version indicates the version of a package, which is in the x.y.z format.

```
{
  "version": "1.0.0"
}
```

Uploading an npm Component

A self-hosted repo allows you to upload npm component packages in .tgz format. When uploading a package, you need to set the following parameters.

Parameter	Description
PackageName	The value must be the same as the value of **name** in the **package.json** file.
Version	The value must be the same as that of **version** in the **package.json** file.



Upload Help

* PackageName

@test/demo

* Version

1.0.8

* File

demo-1.0.8.tgz

NOTE

When uploading a component, ensure that the package name starts with a path in the path list added during repository creation. For details, see **Configuring Repository Items** in the help guide.

Example:

The path **@test** is added during the creation of an npm repository.

When uploading an npm component to the repository, make sure that the value of **PackageName** starts with **@test**. If a path outside the path list is used, for example, **@npm**, the upload will fail.

After the upload is successful, you can view the component package in .tgz format in the repository component list and the corresponding metadata is generated in the **.npm** directory.

Uploading a Go Component

Go (also called Golang) is a programming language developed by Google. Golang 1.11 and later versions support modular package management tools. A module is a unit for source code exchange and versioning of Go. A MOD file is used to identify and manage a module. A ZIP file is a source code package. There are two types of Go modules: v2.0 and later versions and v2.0 and earlier versions. The management of the Go module is different between the two versions.

To upload a Go component, upload a ZIP file and a MOD file. You need to set the following parameters.

Parameter	Description
Zip Path	Complete path of the ZIP file. Valid path formats are: ● Versions earlier than v2.0: {moduleName}/@v/{version}.zip ● Versions later than v2.0: – If the ZIP file contains **go.mod** and the path ends with **/vN**, the file path format is: {moduleName}/vX/@v/vX.X.X.zip – If the ZIP file does not contain **go.mod** or the first line in **go.mod** does not end with **/vN**, the file path format is: {moduleName}/@v/vX.X.X+incompatible.zip
Zip File	Directory structure of the ZIP file. Valid directory structure formats are: ● Versions earlier than v2.0: {moduleName}@{version} ● Versions later than v2.0: – If the ZIP file contains **go.mod** and the path ends with **/vN**, the directory structure format is: {moduleName}/vX@{version} – If the ZIP file does not contain **go.mod** or the first line in **go.mod** does not end with **/vN**, the directory structure format is: {moduleName}@{version}+incompatible
Mod Path	Complete path of the MOD file. Valid path formats are: ● Versions earlier than v2.0: {moduleName}/@v/{version}.mod ● Versions later than v2.0: – If the ZIP file contains **go.mod** and the path ends with **/vN**, the file path format is: {moduleName}/vX/@v/vX.X.X.mod – If the ZIP file does not contain **go.mod** or the first line in **go.mod** does not end with **/vN**, the file path format is: {moduleName}/@v/vX.X.X+incompatible.mod

Parameter	Description
Mod File	MOD file content. Valid content formats are: ● Versions earlier than v2.0: module {moduleName} ● Versions later than v2.0: – If the ZIP file contains **go.mod** and the path ends with **/vN**, the content format is: module {moduleName}/vX – If the ZIP file does not contain **go.mod** or the first line in **go.mod** does not end with **/vN**, the content format is: module {moduleName}

Uploading a PyPI Component

You are advised to go to the project directory (which must contain the **setup.py** configuration file) and run the following command to compress the components to be uploaded into a wheel (.whl) installation package. By default, the installation package is generated in the **dist** directory of the project directory. The Python software package management tool pip supports only wheel installation packages.

```
python setup.py sdist bdist_wheel
```

You need to set the following parameters.

Parameter	Description
PackageName	The value must be the same as the value of **name** in the **setup.py** file.
Version	The value must be the same as the value of **version** in the **setup.py** file.

After the upload is successful, you can view the installation package in **.whl** format in the repository component list. In addition, the corresponding metadata is generated in the **.pypi** directory, which can be used for pip installation.

Uploading an RPM Component

Introduction to RPM

- Red Hat Package Manager (RPM) is proposed by Red Hat and used by many Linux distributions. It is a software management mechanism that installs required software to Linux in database recording mode.
- You are advised to package and name the RPM binary file according to the following rules:

Software name-*Main version number of the software*.*Minor version number of the software*.*Software revision number*-*Number of software compilation times*.*Hardware platform suitable for the software***.rpm**

For example, **hello-0.17.2-54.x86_64.rpm**. **hello** is the software name, **0** is the major version number of the software, **17** is the minor version number, **2** is the revision number, **54** is the number of times that the software is compiled, and **x86_64** is the hardware platform suitable for the software.

Software Name	Major Version	Minor Version	Revision No.	Compilation Times	Applicable Hardware Platform
hello	0	17	2	54	x86_64

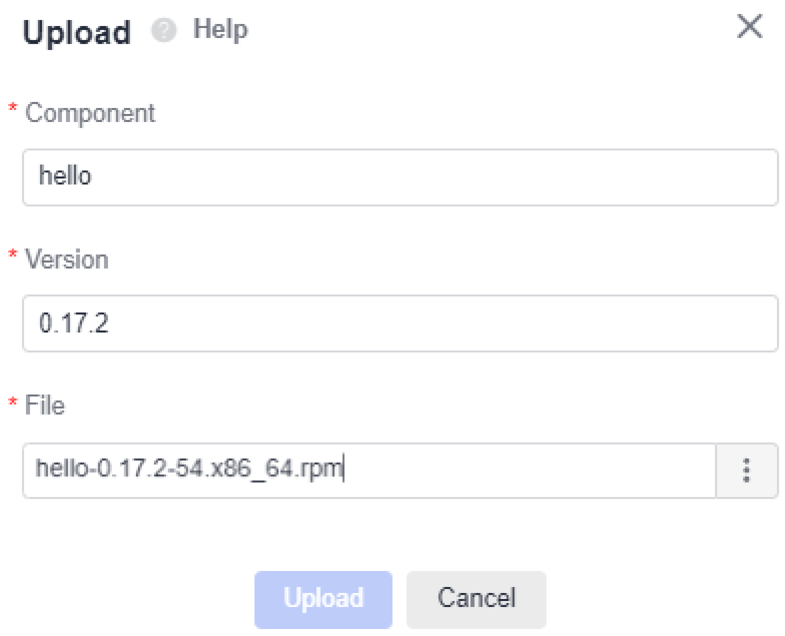
Note: You need to set the following parameters when uploading components.

Parameter	Description
Component	Component name
Version	Version of the RPM binary package

Step 1 Access the self-hosted repo homepage. In the left pane, choose the repository to which the private component is to be uploaded.

Step 2 Click **Upload**.

Step 3 Set the component parameters, select the file, and click **Upload**.



Upload Help

* Component: hello

* Version: 0.17.2

* File: hello-0.17.2-54.x86_64.rpm

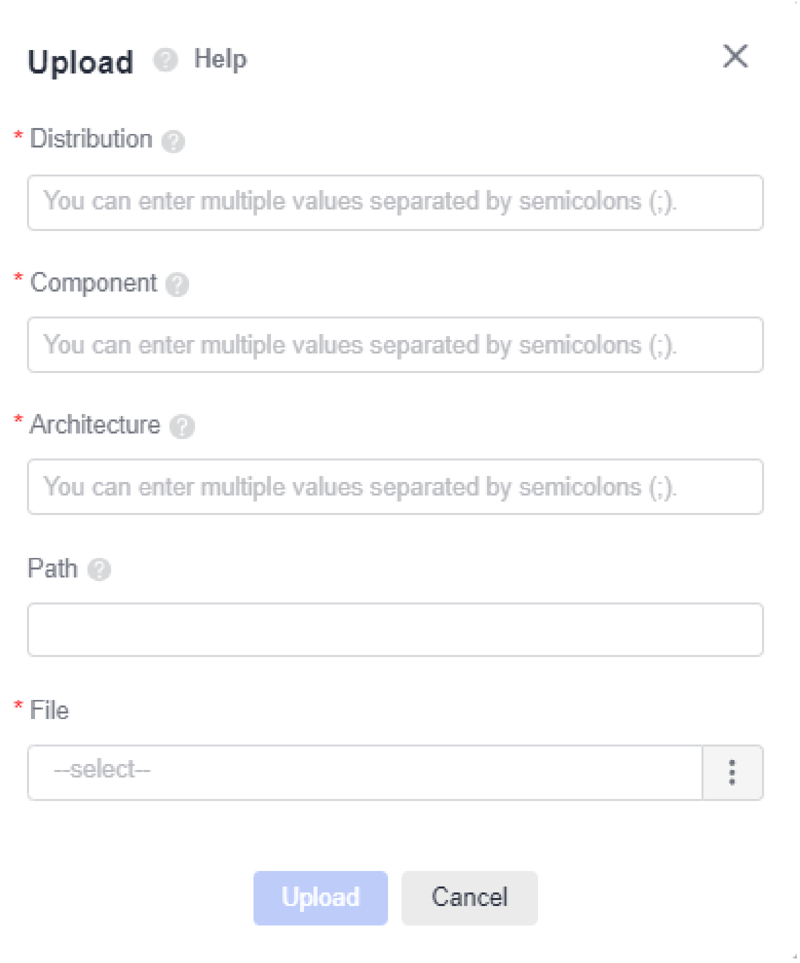
----End

After the upload is successful, you can view the RPM binary package in the repository component list and the corresponding metadata **repodata** directory is generated in the component name directory. You can use Yum to install the component.

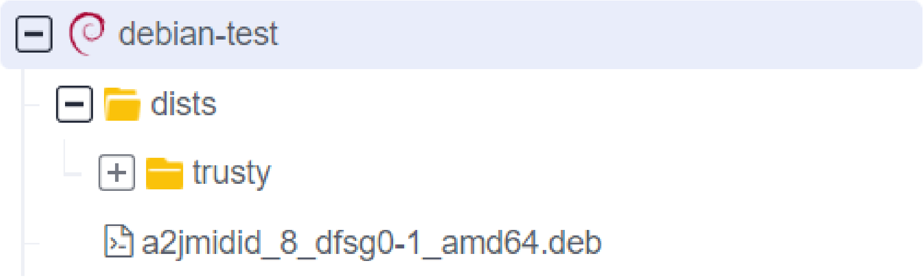
Uploading a Debian Component

When uploading a Debian component, you need to set the following parameters:

Parameter	Description
Distribution	Release version of the software package
Component	Name of a software package component
Architecture	Software package architecture
Path	Path for storing the software package. By default, the software package is uploaded to the root path.
File	Local storage path of the software package


Upload
Help
* Distribution
You can enter multiple values separated by semicolons (;).
* Component
You can enter multiple values separated by semicolons (;).
* Architecture
You can enter multiple values separated by semicolons (;).
Path
* File
--select--
Upload
Cancel

After the upload is successful, you can view the installation package in **.deb** format in the repository component list. In addition, the corresponding metadata is generated in the **dists** directory, which can be used for Debian installation.



debian-test
dists
trusty
a2jmidid_8_dfsg0-1_amd64.deb

Uploading a NuGet Component

The NuGet package is a single ZIP file with the .nupkg extension. As a shareable unit of code, developers can publish it to a dedicated server to share it with other members of the team.

CodeArts Artifact creates a self-hosted NuGet repo to host the NuGet package.

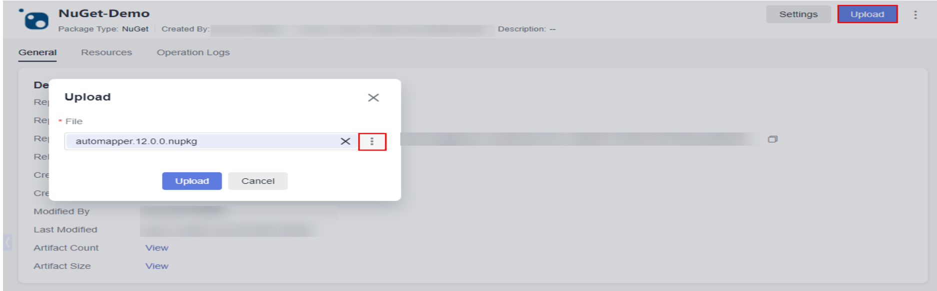
- You are advised to package and name the NuGet file according to the following rules:

  ***Software name-Major version number of the software*.nupkg**

  Example: automapper.12.0.0.nupkg

Step 1 Access the self-hosted repo homepage. In the left pane, choose the NuGet repository to which the private component is to be uploaded.

Step 2 Click **Upload**, select the NuGet file to be uploaded from the local host, and click **Upload**.



NuGet-Demo
Package Type: NuGet Created By: Description: --

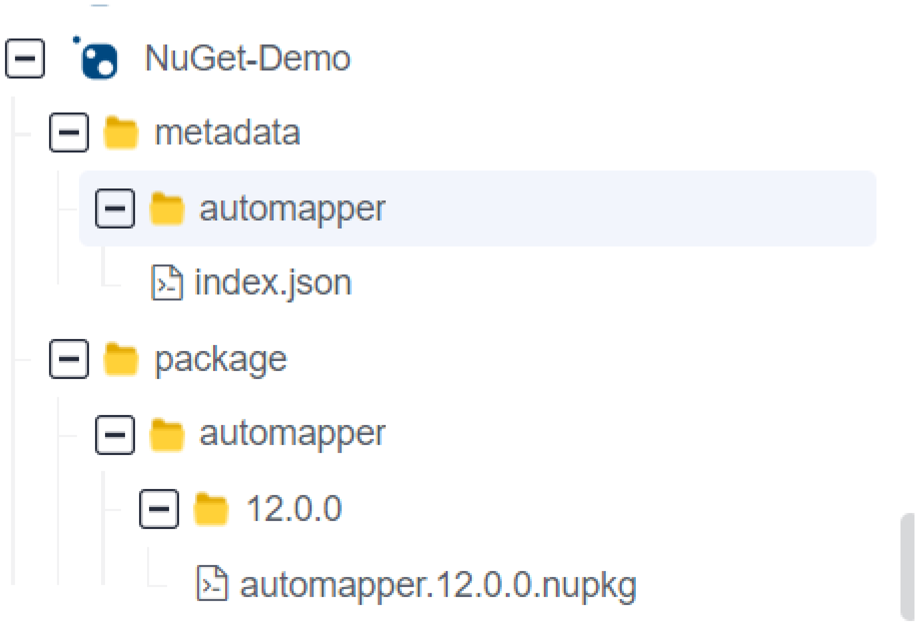
Upload

* File

automapper.12.0.0.nupkg

Modified By
Last Modified
Artifact Count View
Artifact Size View

Step 3 View components that are successfully uploaded in the repository list.



NuGet-Demo
- metadata
  - automapper
    - index.json
- package
  - automapper
    - 12.0.0
      - automapper.12.0.0.nupkg

metadata stores metadata and is named after the component name. **metadata** cannot be deleted. It will be deleted or added when the corresponding component is deleted or restored.

package stores components.

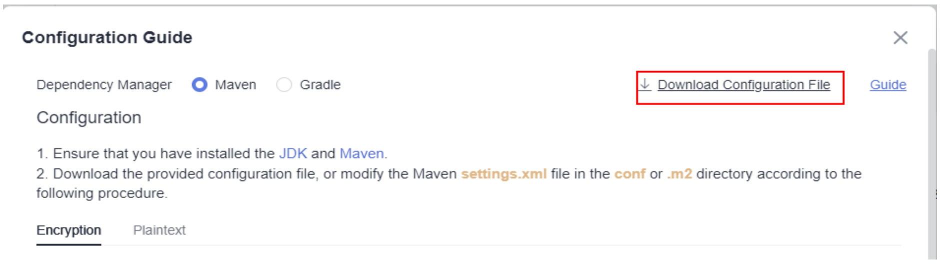
----End

2.7 Uploading and Downloading Private Components

Uploading a Maven Component

- The client tool is Maven. Ensure that the JDK and Maven have been installed.

  a. Download the **settings.xml** file from a self-hosted repo page and replace the downloaded configuration file with the new one or modify the **settings.xml** file of Maven as prompted.



Configuration Guide

Dependency Manager ● Maven ○ Gradle Download Configuration File Guide

Configuration

1. Ensure that you have installed the JDK and Maven.
2. Download the provided configuration file, or modify the Maven settings.xml file in the conf or .m2 directory according to the following procedure.

Encryption Plaintext

  b. Run the following command to upload a component on the client:

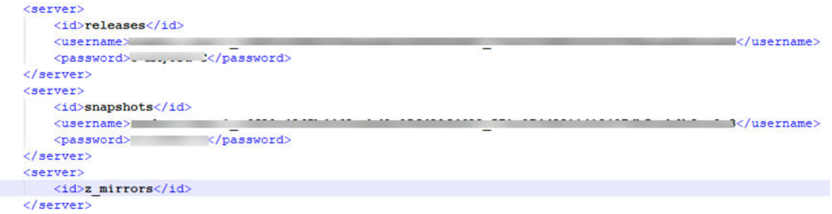
NOTE

Run the following commands in the directory where the uploaded POM file is located:

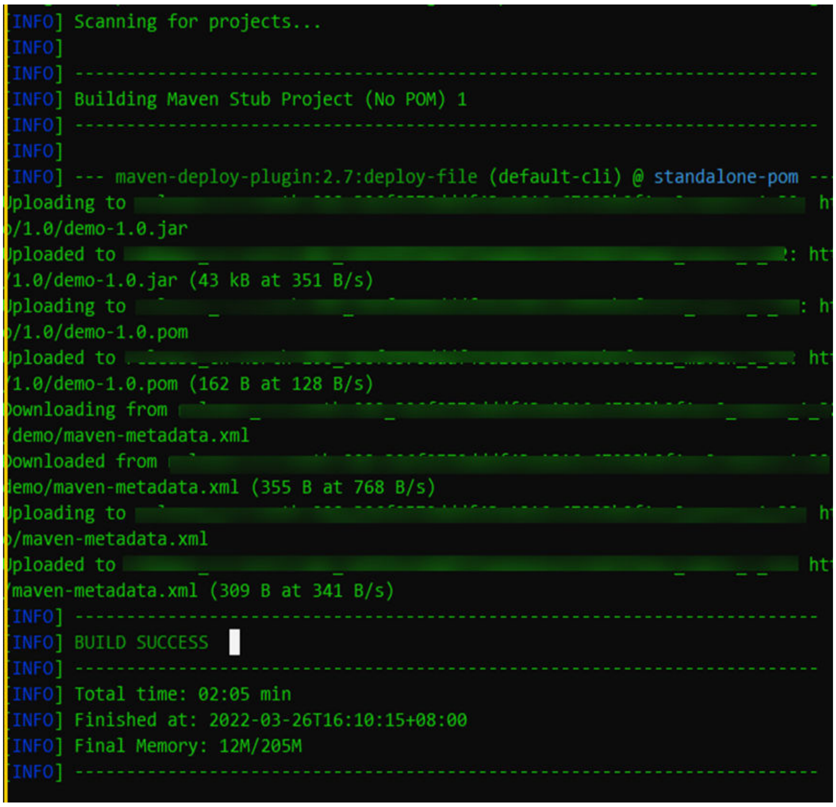
```
mvn deploy:deploy-file -DgroupId={groupId} -DartifactId={artifactId} -Dversion={version} -
Dpackaging=jar -Dfile={file_path} -DpomFile={pom_path} -Durl={url} -
```

```
DrepositoryId={repositoryId} -s {settings_path} -Dmaven.wagon.http.ssl.insecure=true -
Dmaven.wagon.http.ssl.allowall=true -Dmaven.wagon.http.ssl.ignore.validity.dates=true
```

- **Description**
  - **DgroupId**: uploaded group ID
  - **DartifactId**: uploaded artifact ID
  - **Dversion**: version of the uploaded file
  - **Dpackaging**: type of the package to be uploaded, such as JAR, ZIP, and WAR
  - **Dfile**: path of the uploaded entity file
  - **DpomFile**: path of the entity POM file to be uploaded. (For a release version, if this parameter does not exist, the system automatically generates a POM file. If there are special requirements for the POM file, specify this parameter.)
  - The values of **DgroupId**, **DartifactId**, and **Dversion** in the POM file must be the same as those outside the POM file. Otherwise, error 409 is reported.
  - Select either **DpomFile** or one of **DgroupId**, **DartifactId**, and **Dversion**.
  - **Durl**: path for uploading files to the repository.
  - **DrepositoryId**: ID corresponding to the username and password configured in Settings, as shown in the following figure.



```
<server>
    <id>releases</id>
    <username>[redacted]</username>
    <password>[redacted]</password>
</server>
<server>
    <id>snapshots</id>
    <username>[redacted]</username>
    <password>[redacted]</password>
</server>
<server>
    <id>z_mirrors</id>
</server>
```

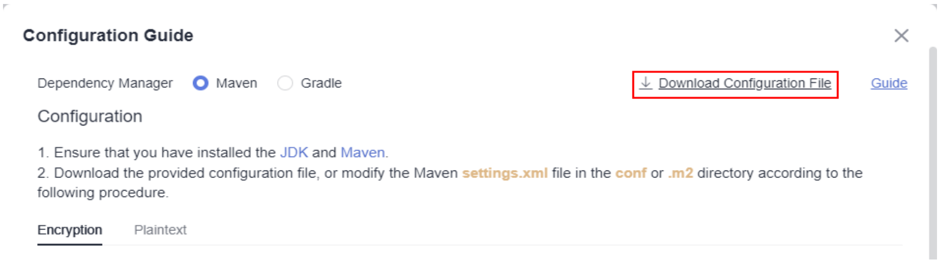


```
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building Maven Stub Project (No POM) 1
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] --- maven-deploy-plugin:2.7:deploy-file (default-cli) @ standalone-pom ---
Uploading to [redacted] h
o/1.0/demo-1.0.jar
Uploaded to [redacted]: ht
/1.0/demo-1.0.jar (43 kB at 351 B/s)
Uploading to [redacted]: h
o/1.0/demo-1.0.pom
Uploaded to [redacted]: ht
/1.0/demo-1.0.pom (162 B at 128 B/s)
Downloading from [redacted]
/demo/maven-metadata.xml
Downloaded from [redacted]
demo/maven-metadata.xml (355 B at 768 B/s)
Uploading to [redacted] h
o/maven-metadata.xml
Uploaded to [redacted] ht
/maven-metadata.xml (309 B at 341 B/s)
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 02:05 min
[INFO] Finished at: 2022-03-26T16:10:15+08:00
[INFO] Final Memory: 12M/205M
[INFO] ------------------------------------------------------------------------
```

Downloading a Maven Component

- The client tool is Maven. Ensure that the JDK and Maven have been installed.

  1. Download the **settings.xml** file from a self-hosted repo page and replace the downloaded configuration file with the new one or modify the **settings.xml** file of Maven as prompted.



Configuration Guide

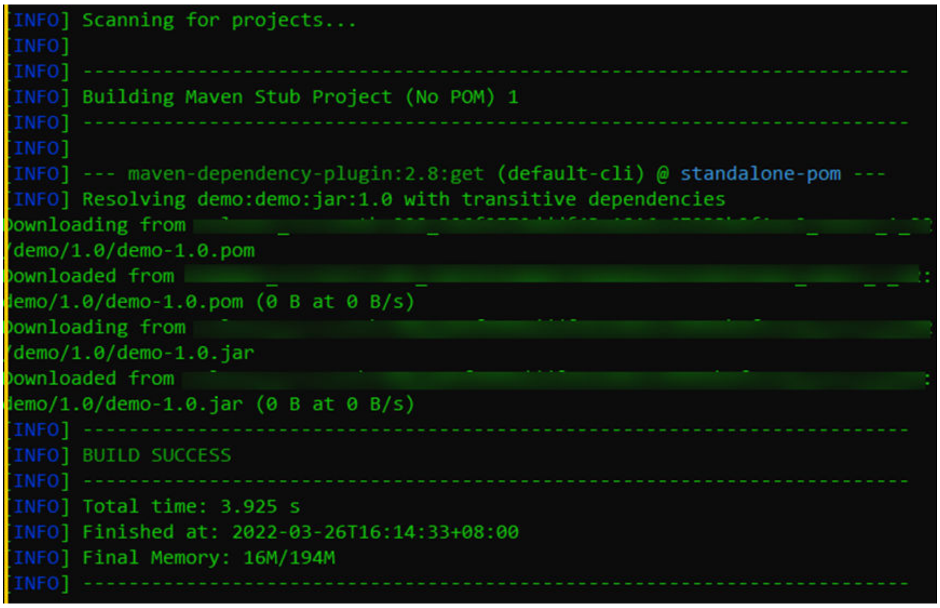
Dependency Manager ● Maven ○ Gradle

Configuration

1. Ensure that you have installed the JDK and Maven.
2. Download the provided configuration file, or modify the Maven settings.xml file in the conf or .m2 directory according to the following procedure.

  2. Run the following commands to download the client:

```
mvn dependency:get -DremoteRepositories={repo_url} -DgroupId={groupId} -DartifactId={artifactId} -Dversion={version} -Dmaven.wagon.http.ssl.insecure=true -Dmaven.wagon.http.ssl.allowall=true -Dmaven.wagon.http.ssl.ignore.validity.dates=true
```

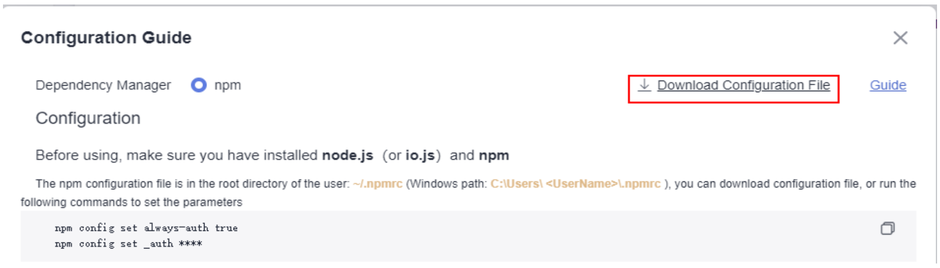


```
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] Building Maven Stub Project (No POM) 1
[INFO] ------------------------------------------------------------------------
[INFO]
[INFO] --- maven-dependency-plugin:2.8:get (default-cli) @ standalone-pom ---
[INFO] Resolving demo:demo:jar:1.0 with transitive dependencies
Downloading from [redacted]
/demo/1.0/demo-1.0.pom
Downloaded from [redacted]
demo/1.0/demo-1.0.pom (0 B at 0 B/s)
Downloading from [redacted]
/demo/1.0/demo-1.0.jar
Downloaded from [redacted]
demo/1.0/demo-1.0.jar (0 B at 0 B/s)
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 3.925 s
[INFO] Finished at: 2022-03-26T16:14:33+08:00
[INFO] Final Memory: 16M/194M
[INFO] ------------------------------------------------------------------------
```

Uploading an npm Component

- The client tool is npm. Ensure that **node.js** (or **io.js**) and npm have been installed.

  1. Download the NPMRC file from the self-hosted repo page and save the downloaded NPMRC file as a **.npmrc** file.

  Configuration

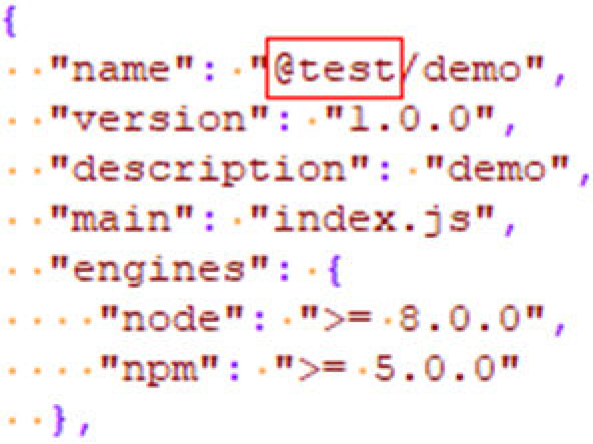
  Before using, make sure you have installed **node.js** (or **io.js**) and **npm**

  The npm configuration file is in the root directory of the user: ~/.npmrc (Windows path: C:\Users\ <UserName>\.npmrc), you can download configuration file, or run the following commands to set the parameters

  ```
  npm config set always-auth true
  npm config set _auth ****
  ```

  2. Copy the file to the user directory. In Linux, the path is **~/.npmrc** (C:\Users \<*UserName*>\.npmrc).

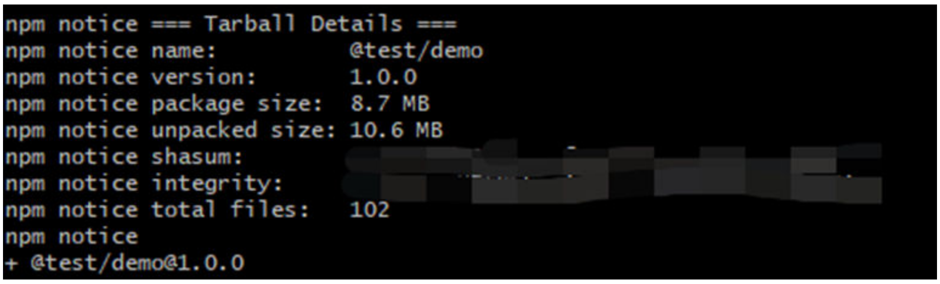
  3. Go to the npm project directory (where the **package.json** file is stored), open the **package.json** file, and add the path information entered during repository creation to the value of the name field.

  ```
  {
    "name": "@test/demo",
    "version": "1.0.0",
    "description": "demo",
    "main": "index.js",
    "engines": {
      "node": ">= 8.0.0",
      "npm": ">= 5.0.0"
    },
  ```

4. Run the following commands to upload the npm component to the repository:

```
npm config set strict-ssl false
npm publish
```

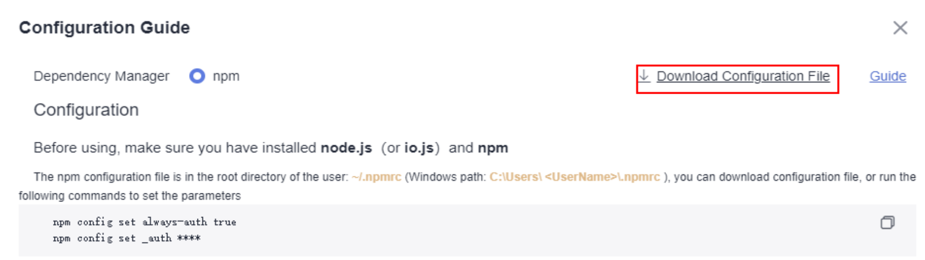


```
npm notice === Tarball Details ===
npm notice name:          @test/demo
npm notice version:       1.0.0
npm notice package size:  8.7 MB
npm notice unpacked size: 10.6 MB
npm notice shasum:        [redacted]
npm notice integrity:     [redacted]
npm notice total files:   102
npm notice
+ @test/demo@1.0.0
```

Downloading an npm Component

- The client tool is npm. Ensure that **node.js** (or **io.js**) and npm have been installed.

  1. Download the NPMRC file from the self-hosted repo page and save the downloaded NPMRC file as a **.npmrc** file.



Before using, make sure you have installed **node.js** (or **io.js**) and **npm**

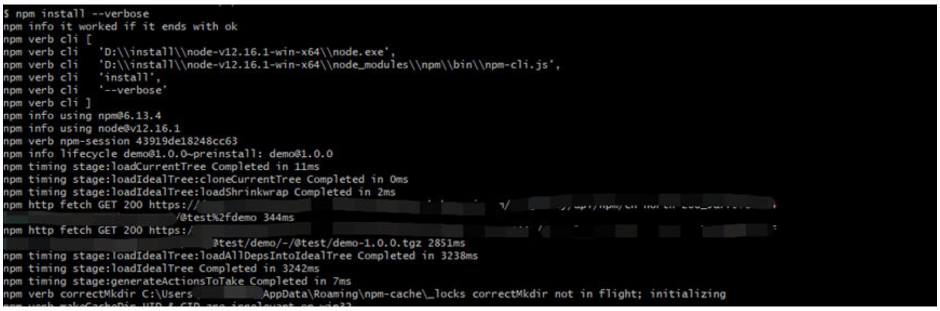
The npm configuration file is in the root directory of the user: ~/.npmrc (Windows path: C:\Users\ <UserName>\.npmrc), you can download configuration file, or run the following commands to set the parameters

```
npm config set always-auth true
npm config set _auth ****
```

2. Copy the file to the user directory. In Linux, the path is **~/.npmrc**. In Windows, the path is **C:\Users\<*UserName*>\.npmrc**.

3. Go to the npm project directory (where the **package.json** file is stored) and run the following commands to download the npm dependent component:

```
npm config set strict-ssl false
npm install ––verbose
```

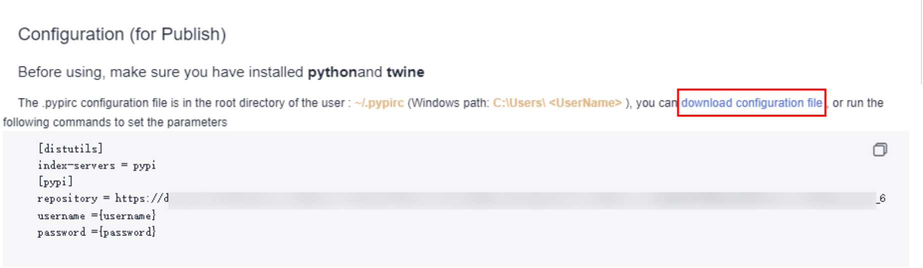


```
$ npm install --verbose
npm info it worked if it ends with ok
npm verb cli [
npm verb cli   'D:\\install\\node-v12.16.1-win-x64\\node.exe',
npm verb cli   'D:\\install\\node-v12.16.1-win-x64\\node_modules\\npm\\bin\\npm-cli.js',
npm verb cli   'install',
npm verb cli   '--verbose'
npm verb cli ]
npm info using npm@6.13.4
npm info using node@v12.16.1
npm verb npm-session 43919de18248cc63
npm info lifecycle demo@1.0.0~preinstall: demo@1.0.0
npm timing stage:loadCurrentTree Completed in 11ms
npm timing stage:loadIdealTree:cloneCurrentTree Completed in 0ms
npm timing stage:loadIdealTree:loadShrinkwrap Completed in 2ms
npm http fetch GET 200 https://[redacted]
[redacted]/@test%2fdemo 344ms
npm http fetch GET 200 https:/[redacted]
[redacted]@test/demo/-/@test/demo-1.0.0.tgz 2851ms
npm timing stage:loadIdealTree:loadAllDepsIntoIdealTree Completed in 3238ms
npm timing stage:loadIdealTree Completed in 3242ms
npm timing stage:generateActionsToTake Completed in 7ms
npm verb correctMkdir C:\Users[redacted]AppData\Roaming\npm-cache\_locks correctMkdir not in flight; initializing
npm verb makeCacheDir UID & GID are irrelevant on win32
```

Uploading a PyPI Component

- The client tools are python and twine. Ensure that python and twine have been installed.

  1. Download the PYPIRC file from the self-hosted repo page and save the downloaded PYPIRC file as a **.pypirc** file.



Configuration (for Publish)

Before using, make sure you have installed **python**and **twine**

The .pypirc configuration file is in the root directory of the user : ~/.pypirc (Windows path: C:\Users\ <UserName>), you can download configuration file , or run the following commands to set the parameters

```
[distutils]
index-servers = pypi
[pypi]
repository = https://d[redacted]_6
username ={username}
password ={password}
```

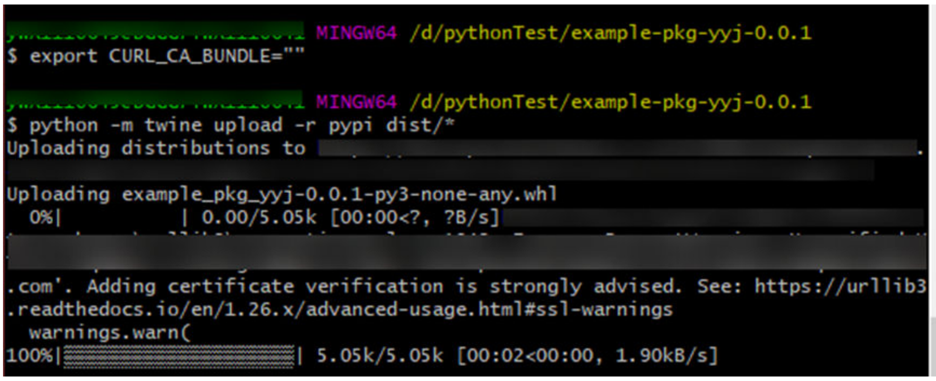
2. Copy the file to the user directory. In Linux, the path is **~/.pypir**c. In Windows, the path is **C:\Users\<***UserName***>\.pypirc**.

3. Go to the Python project directory and run the following command to compress the Python project into a **.whl** package:

```
python setup.py bdist_wheel
```

4. Run the following command to upload the file to the repository:

```
python -m twine upload -r pypi dist/*
```



```
[redacted] MINGW64 /d/pythonTest/example-pkg-yyj-0.0.1
$ export CURL_CA_BUNDLE=""

[redacted] MINGW64 /d/pythonTest/example-pkg-yyj-0.0.1
$ python -m twine upload -r pypi dist/*
Uploading distributions to [redacted]
[redacted]
Uploading example_pkg_yyj-0.0.1-py3-none-any.whl
  0%|          | 0.00/5.05k [00:00<?, ?B/s][redacted]
[redacted]
.com'. Adding certificate verification is strongly advised. See: https://urllib3
.readthedocs.io/en/1.26.x/advanced-usage.html#ssl-warnings
  warnings.warn(
100%|██████████| 5.05k/5.05k [00:02<00:00, 1.90kB/s]
```

If a certificate error is reported during the upload, run the following command (use git bash in Windows) to set environment variables to skip certificate verification:

```
export CURL_CA_BUNDLE=""
```

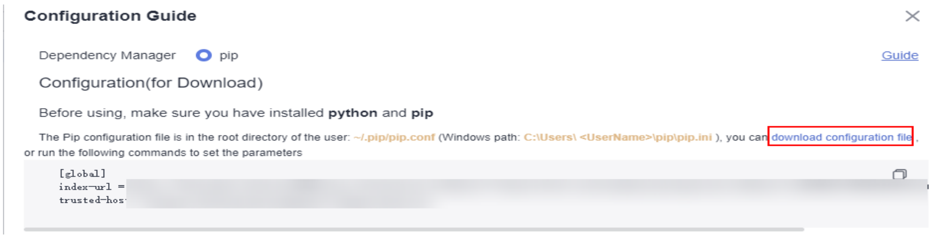
NOTE

The environment variables will be cleared after you log in to the server again, switch to another user, or open the bash window again. Add the environment variables before each upload.

Downloading a PyPI Component

- The client tools are python and pip. Ensure that python and pip have been installed.

1. Download the **pip.ini** file from the self-hosted repo page and copy the file to the user directory. In Linux, the path is **~/.pip/pip.conf** (**C:\Users\<***UserName***>\pip\pip.ini** on Windows)



Configuration(for Download)

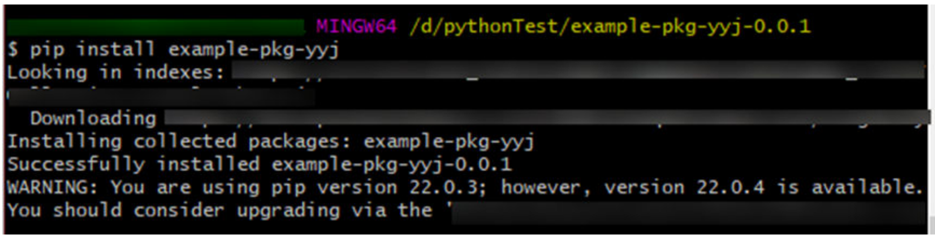
Before using, make sure you have installed **python** and **pip**

The Pip configuration file is in the root directory of the user: ~/.pip/pip.conf (Windows path: C:\Users\ <UserName>\pip\pip.ini), you can download configuration file , or run the following commands to set the parameters

```
[global]
index-url = [redacted]
trusted-hos[redacted]
```

2. Run the following command to install Python:

```
pip install {package name}
```



```
[redacted] MINGW64 /d/pythonTest/example-pkg-yyj-0.0.1
$ pip install example-pkg-yyj
Looking in indexes: [redacted]
[redacted]
  Downloading [redacted]
Installing collected packages: example-pkg-yyj
Successfully installed example-pkg-yyj-0.0.1
WARNING: You are using pip version 22.0.3; however, version 22.0.4 is available.
You should consider upgrading via the '[redacted]
```

Uploading and Downloading a Go Component

The client tool is Go. Ensure that V1.13 or a later version has been installed and the project is a Go module project.

- Go Modules packaging mode and package upload

  This section describes how to build and upload Go components through Go module packaging. The username and password used in the following steps can be obtained from the downloaded configuration file for the Go repository.

  Perform the following steps:

  a. Create a source folder in the working directory.

  ```
  mkdir -p {module}@{version}
  ```

  b. Copy the code source to the source folder.

  ```
  cp -rf . {module}@{version}
  ```

  c. Compress the component into a ZIP package.

  ```
  zip -D -r [package name] [package root directory]
  ```

  d. Upload the component ZIP package and the **go.mod** file to the self-hosted repo.

  ```
  curl -k -u {{username}}:{{password}} -X PUT {{repoUrl}}/{filePath} -T {{localFile}}
  ```

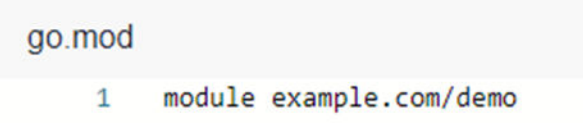
  The component directory varies according to the package version. The version can be:

  - Versions earlier than v2.0: The directory is the same as the path of the **go.mod** file. No special directory structure is required.
  - v2.0 or later:
    - If the first line in the **go.mod** file ends with **/vX**, the directory must contain **/vX**. For example, if the version is v2.0.1, the directory must contain **v2**.
    - If the first line in the **go.mod** file does not end with **/vN**, the directory remains unchanged and the name of the file to be uploaded must contain **+incompatible**.

    Here are a few versions.

  Versions earlier than v2.0

  The **go.mod** file is used as an example.



go.mod

```
module example.com/demo
```

a. Create a source folder in the working directory.

   The value of **module** is **example.com/demo** and that of **version** is **1.0.0**. The command is as follows:

```
mkdir -p ~/example.com/demo@v1.0.0
```

b. Copy the code source to the source folder.

   The command is as follows (with the same parameter values as the previous command):

```
cp -rf . ~/example.com/demo@v1.0.0/
```

c. Compress the component into a ZIP package.

   Run the following command to go to the upper-level directory of the root directory where the ZIP package is located:

```
cd ~
```

   Then, use the **zip** command to compress the code into a component package. In this command, the package root directory is **example.com** and the package name is **v1.0.0.zip**. The command is as follows:

```
zip -D -r v1.0.0.zip  example.com/
```

d. Upload the component ZIP package and the **go.mod** file to the self-hosted repo.

   Parameters **username**, **password**, and **repoUrl** can be obtained from the configuration file of the self-hosted repo.

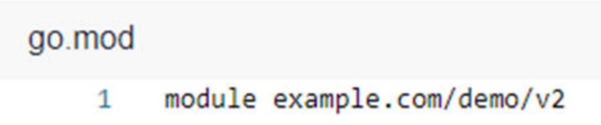
   - For the ZIP package, the value of **filePath** is **example.com/demo/@v/v1.0.0.zip** and that of **localFile** is **v1.0.0.zip**.
   - For the **go.mod** file, the value of **filePath** is **example.com/demo/@v/v1.0.0.mod** and that of **localFile** is **example.com/demo@v1.0.0/go.mod**.

   The command is as follows (replace **username**, **password**, and **repoUrl** with the actual values):

```
curl -k -u {{username}}:{{password}} -X PUT {{repoUrl}}/example.com/demo/@v/v1.0.0.zip -T
v1.0.0.zip
curl -k -u {{username}}:{{password}} -X PUT {{repoUrl}}/example.com/demo/@v/v1.0.0.mod -T
example.com/demo@v1.0.0/go.mod
```

- **v2.0 and later, with the first line in the go.mod file ends with /vX**.

  The **go.mod** file is used as an example.



go.mod

```
module example.com/demo/v2
```

a. Create a source folder in the working directory.

   The value of **module** is **example.com/demo/v2** and that of **version** is **2.0.0**. The command is as follows:

```
mkdir -p ~/example.com/demo/v2@v2.0.0
```

b. Copy the code source to the source folder.

   The command is as follows (with the same parameter values as the previous command):

```
cp -rf . ~/example.com/demo/v2@v2.0.0/
```

c. Compress the component into a ZIP package.

Run the following command to go to the upper-level directory of the root directory where the ZIP package is located:

```
cd ~
```

Then, use the **zip** command to compress the code into a component package. In this command, the package root directory is **example.com** and the package name is **v2.0.0.zip**. The command is as follows:

```
zip -D -r v2.0.0.zip  example.com/
```

d. Upload the component ZIP package and the **go.mod** file to the self-hosted repo.

Parameters **username**, **password**, and **repoUrl** can be obtained from the configuration file of the self-hosted repo.

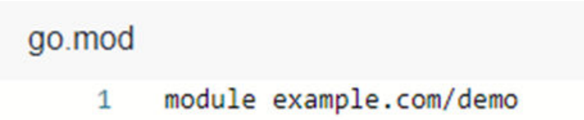
- For the ZIP package, the value of **filePath** is **example.com/demo/v2/@v/v2.0.0.zip** and that of **localFile** is **v2.0.0.zip**.
- For the **go.mod** file, the value of **filePath** is **example.com/demo/v2/@v/v2.0.0.mod** and that of **localFile** is **example.com/demo/v2@v2.0.0/go.mod**.

The command is as follows (replace **username**, **password**, and **repoUrl** with the actual values):

```
curl -u {{username}}:{{password}} -X PUT {{repoUrl}}/example.com/demo/v2/@v/v2.0.0.zip -T
v2.0.0.zip
curl -u {{username}}:{{password}} -X PUT {{repoUrl}}/example.com/demo/v2/@v/v2.0.0.mod -T
example.com/demo/v2@v2.0.0/go.mod
```

- **v2.0 and later, with the first line in the go.mod file does not end with /vX**.

The **go.mod** file is used as an example.



go.mod

```
module example.com/demo
```

a. Create a source folder in the working directory.

The value of **module** is **example.com/demo** and that of **version** is **3.0.0**. The command is as follows:

```
mkdir -p ~/example.com/demo@v3.0.0+incompatible
```

b. Copy the code source to the source folder.

The command is as follows (with the same parameter values as the previous command):

```
cp -rf . ~/example.com/demo@v3.0.0+incompatible/
```

c. Compress the component into a ZIP package.

Run the following command to go to the upper-level directory of the root directory where the ZIP package is located:

```
cd ~
```

Then, use the **zip** command to compress the code into a component package. In this command, the package root directory is **example.com** and the package name is **v3.0.0.zip**. The command is as follows:

```
zip -D -r v3.0.0.zip  example.com/
```

d. Upload the component ZIP package and the **go.mod** file to the self-hosted repo.

Parameters **username**, **password**, and **repoUrl** can be obtained from the configuration file of the self-hosted repo.

- For the ZIP package, the value of **filePath** is **example.com/demo/@v/v3.0.0+incompatible.zip** and that of **localFile** is **v3.0.0.zip**.
- For the **go.mod** file, the value of **filePath** is **example.com/demo/@v/v3.0.0+incompatible.mod** and that of **localFile** is **example.com/demo@v3.0.0+incompatible/go.mod**.

The command is as follows (replace **username**, **password**, and **repoUrl** with the actual values):

```
curl -k -u {{username}}:{{password}} -X PUT {{repoUrl}}/example.com/demo/@v/
v3.0.0+incompatible.zip -T v3.0.0.zip
curl -k -u {{username}}:{{password}} -X PUT {{repoUrl}}/example.com/demo/@v/
v3.0.0+incompatible.mod -T example.com/demo@v3.0.0+incompatible/go.mod
```

- **Download the Go component using the Go client.**

  Certificate verification cannot be ignored on the Go client. You need to add the domain name certificate corresponding to the self-hosted repo to the local certificate trustlist and perform the following steps to add the trust certificate list:

  1) Export a certificate.

  ```
  openssl s_client -connect {host}:443 -showcerts </dev/null 2>/dev/null | sed -ne '/-
  BEGIN CERTIFICATE-/,/-END CERTIFICATE-/p' |openssl x509 -outform PEM
  >mycertfile.pem
  openssl x509 -outform der -in mycertfile.pem -out mycertfile.crt
  ```

  mycertfile.pem and **mycertfile.crt** are the downloaded certificates.

  2) Add the certificate to the root certificate trust list.

  3) Run the go commands to download the dependency package.

  ```
  ##1. Packages of versions earlier than v2.0
  go get -v <moudlename>
  ##2. v2.0 and later versions
  ##a. The ZIP package contains go.mod and the path ends with /vN.
  go get -v {{moduleName}}/vN@{{version}}
  ##b. The ZIP package does not contain go.mod or the first line in go.mod does not
  end with /vN.
  go get -v {moduleName}}@{{version}}+incompatible
  ```

Uploading and Downloading an RPM Component

Use the Linux OS and yum tool. Ensure that the Linux OS is used and yum has been installed.

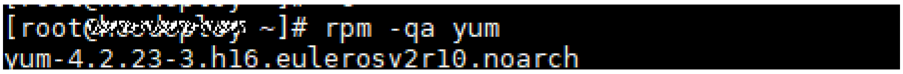
- **Releasing a Component to a Self-Hosted RPM Repo**

Step 1 Check whether the yum tool is installed in Linux.

On the Linux host, run the following command:

```
rpm -qa yum
```

If the following information is displayed, yum has been installed on the server:



```
[root@[redacted] ~]# rpm -qa yum
yum-4.2.23-3.h16.eulerosv2r10.noarch
```

Step 2 Log in to the CodeArts homepage and access the self-hosted repo for RPM. Click**Set Me Up** on the right of the page.

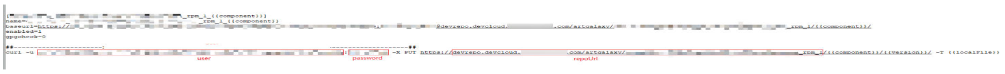
Step 3 In the displayed dialog box, click **Download Configuration File**.

Step 4 On the Linux host, run the following commands to upload an RPM component:

```
curl -k -u {{user}}:{{password}} -X PUT https://{{repoUrl}}/{{component}}/{{version}}/ -T {{localFile}}
```

In this command, **user**, **password**, and **repoUrl** can be obtained from the **RPM upload command** in the configuration file downloaded in the **previous step**.

- *user*: character string before the colon (:) between **curl -u** and **-X**
- *password*: character string after the colon (:) between **curl -u** and **-X**
- *repoUrl*: character string between **https://** and **/{{component}}**



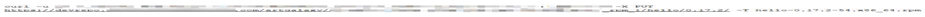
```
[[redacted]_rpm_1_{{component}}]
name=[redacted]_rpm_1_{{component}}
baseurl=https://[redacted]@devrepo.devcloud.[redacted].com/artgalaxy/[redacted]_rpm_1/{{component}}/
enabled=1
gpgcheck=0

##------------------------;[redacted]-----------------------##
curl -u [redacted]:[redacted] -X PUT https://devrepo.devcloud.[redacted].com/artgalaxy/[redacted]_rpm_1/{{component}}/{{version}}/ -T {{localFile}}
```

component, **version**, and **localFile** can be obtained from the RPM component. The **hello-0.17.2-54.x86_64.rpm** component is used as an example.

- *component*: software name, for example, **hello**.
- *version*: software version, for example, **0.17.2**.
- *localFile*: RPM component, for example, **hello-0.17.2-54.x86_64.rpm**.

  The following figure shows the complete command.



```
curl -u [redacted]:[redacted] -X PUT
https://devrepo.[redacted].com/artgalaxy/[redacted]_rpm_1/hello/0.17.2/ -T hello-0.17.2-54.x86_64.rpm
```

  After the command is successfully executed, go to the self-hosted repo and find the uploaded RPM component.

----End

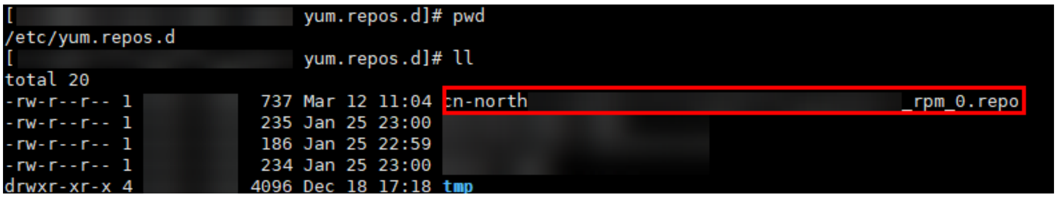
Obtaining a Dependency from a Self-hosted RPM Repo

The following section uses the RPM private component released in **Releasing a Component to a Self-hosted RPM Repo** as an example to describe how to obtain dependency packages from the self-hosted RPM repo.

Step 1 Download the configuration file of the self-hosted RPM repo by referring to **Step 2** and **Step 3** of the released RPM component.

Step 2 Open the configuration file, replace all **{{component}}** in the file with the value of **{{component}}** (**hello** in this file) used for uploading the RPM file, delete the **RPM upload command**, and save the file.

Step 3 Save the modified configuration file to the **/etc/yum.repos.d/** directory on the Linux host.



```
[[redacted] yum.repos.d]# pwd
/etc/yum.repos.d
[[redacted] yum.repos.d]# ll
total 20
-rw-r--r-- 1 [redacted]  737 Mar 12 11:04 cn-north[redacted]_rpm_0.repo
-rw-r--r-- 1 [redacted]  235 Jan 25 23:00 [redacted]
-rw-r--r-- 1 [redacted]  186 Jan 25 22:59 [redacted]
-rw-r--r-- 1 [redacted]  234 Jan 25 23:00 [redacted]
drwxr-xr-x 4 [redacted] 4096 Dec 18 17:18 tmp
```

Step 4 Run the following command to download the RPM component: Replace **hello** with the actual value of **component**.

```
yum install hello
```

----End

Uploading a Conan Component

Conan is a package manager for C and C++ developers. It applies to all operating systems, such as Windows, Linux, OSX, FreeBSD, and Solaris.

Prerequisites

- You have installed the Conan client.
- The Conan repository has been created in the self-hosted repo.

Step 1 Select the corresponding Conan repository from the self-hosted repo page and click **Set Me Up** to download the configuration file.

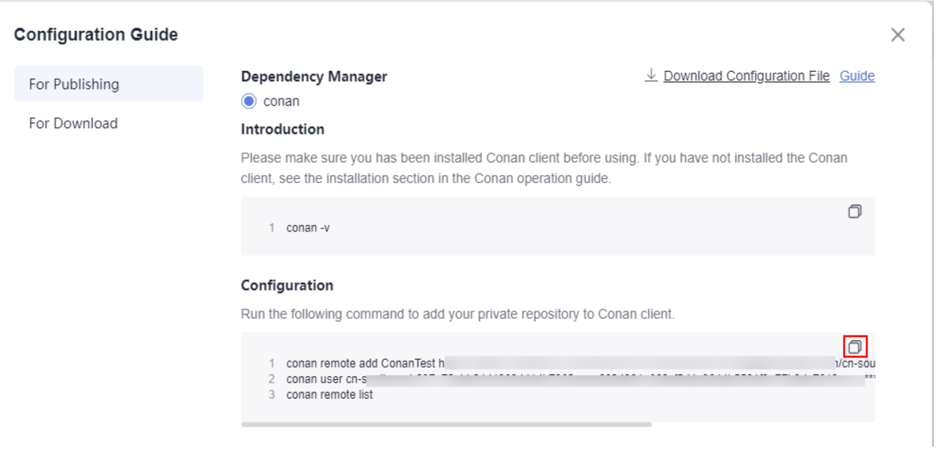
You can replace local Conan configurations with the obtained configuration file (the path is **~/.conan/remotes.json** in Linux or **C:\Users\<UserName>\.conan\remotes.json** in Windows).

Step 2 Copy and run the following commands on the configuration page to add the self-hosted repo to the local Conan client:

```
conan remote add Conan {repository_url}
conan user {user_name} -p={repo_password} -r=Conan
```

Run the following command to check whether the remote repository has been configured on the Conan client:

```
conan remote list
```



Configuration Guide

Dependency Manager

○ conan

Introduction

Please make sure you has been installed Conan client before using. If you have not installed the Conan client, see the installation section in the Conan operation guide.

```
conan -v
```

Configuration

Run the following command to add your private repository to Conan client.

```
conan remote add ConanTest h[redacted]/cn-sou
conan user cn-s[redacted]***
conan remote list
```

Step 3 Upload all software packages to the remote repository. In the example, **my_local_server** is an example remote repository. You can replace it with your own repository.

```
$ conan upload hello/0.1@demo/testing --all -r=my_local_server
```

Step 4 View the software packages that have been uploaded to the remote repository.

```
$ conan search hello/0.1@demo/testing -r=my_local_server
```

----End

Downloading a Conan Component

Step 1 Select the corresponding Conan repository from the self-hosted repo page and click **Set Me Up** to download the configuration file.

You can replace local Conan configurations with the obtained configuration file (the path is **~/.conan/remotes.json** in Linux or **C:\Users\<UserName>\.conan\remotes.json** in Windows).

Step 2 Run the following commands to download the Conan dependency package from the remote repository.

```
$ conan install ${package_name}/${package_version}@${package_username}/${channel} -r=cloud_artifact
```

Step 3 Run the following command to view the downloaded Conan software package.

```
$ conan search "*"
```

Step 4 Run the following command to remove the software package from the local cache.

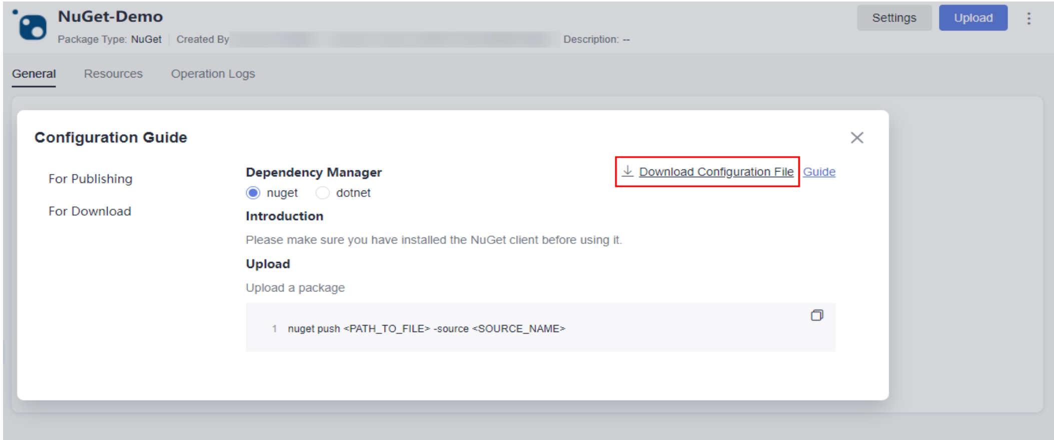
```
$ conan remove ${package_name}/${package_version}@${package_username}/${channel}
```

----End

Uploading a NuGet Component

Ensure that you have installed the NuGet.

Step 1 Select the corresponding NuGet repository from the self-hosted repo page and click **Set Me Up** to download the configuration file **NuGet.txt**.



Package Type: NuGet | Created By [redacted] Description: --

Dependency Manager

● nuget ○ dotnet

Introduction

Please make sure you have installed the NuGet client before using it.

Upload

Upload a package

```
nuget push <PATH_TO_FILE> -source <SOURCE_NAME>
```

Step 2 Open the downloaded configuration file and run the following commands to add the source:

```
##---------------------NuGet add source---------------------##
nuget sources add -name {repo_name} -source {repo_url} -username {user_name} -password
{repo_password}
```

Step 3 Run the following commands to upload the package. Replace **<PATH_TO_FILE>** with the path of the file to be uploaded and run the upload statement. (If a configuration source exists, use the configured source name as the parameter following **-source**.)

```
##---------------------NuGet Download---------------------##
nuget push <PATH_TO_FILE> -source <SOURCE_NAME>
```

----End

Uploading a .NET Component

Ensure that you have installed .NET.

NOTE

You can use the .NET client only after you have added the trusted server certificate.

- To obtain the Windows trust certificate, perform the following steps:

  1. Export the server certificate.

  ```
  openssl s_client -connect {host}:443 -showcerts </dev/null 2>/dev/null | sed -ne '/-BEGIN
  CERTIFICATE-/,/-END CERTIFICATE-/p' |openssl x509 -outform PEM >mycertfile.pem
  openssl x509 -outform der -in mycertfile.pem -out mycertfile.crt
  ```

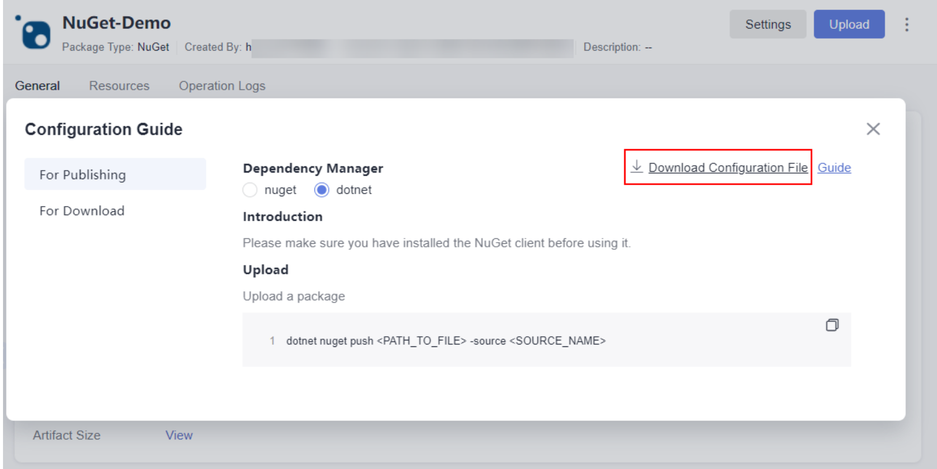
  mycertfile.pem and **mycertfile.crt** are the downloaded certificates.

  2. In Windows, you need to use PowerShell to add the certificate trust.

  Add a certificate

  ```
  Import-Certificate -FilePath "mycertfile.crt" -CertStoreLocation cert:\CurrentUser\Root
  ```

Step 1 Select the corresponding NuGet repository from the self-hosted repo page and click **Set Me Up** to download the configuration file **dotnet.txt**.



Introduction

Please make sure you have installed the NuGet client before using it.

Upload

Upload a package

```
dotnet nuget push <PATH_TO_FILE> -source <SOURCE_NAME>
```

Step 2 Open the configuration file, find the command under **dotnet add source**, and add the source.

```
##---------------------dotnet add source---------------------##
dotnet nuget add source {repo_url} add -n {repo_name} -u {user_name} -p {repo_password}
```

Step 3 Find the statement under **dotnet upload**, replace <PATH_TO_FILE> with the path of the file to be uploaded, and run the upload statement.

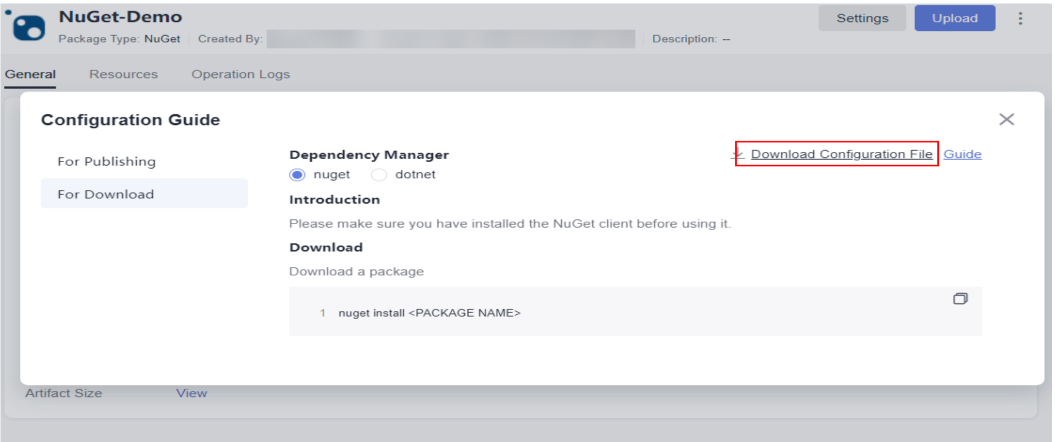
```
##---------------------dotnet upload---------------------##
dotnet nuget push <PATH_TO_FILE> -s {repo_name}
```

----End

Downloading a NuGet Component

Ensure that you have installed the NuGet.

Step 1 Select the corresponding NuGet repository from the self-hosted repo page and click **Set Me Up** to download the configuration file **NuGet.txt**.



Package Type: NuGet | Created By: [redacted] | Description: --

Configuration Guide

Dependency Manager

● nuget ○ dotnet

Introduction

Please make sure you have installed the NuGet client before using it.

Download

Download a package

```
nuget install <PACKAGE NAME>
```

Step 2 Open the configuration file, find the command under **NuGet add source**, and add the source.

```
##---------------------NuGet add source---------------------##
nuget sources add -name {repo_name} -source{repo_url} -username {user_name} -password
{repo_password}
```

Step 3 Open the configuration file, find the statement under **NuGet Download**, replace <PACKAGE> with the name of the component to be downloaded, and run the download statement. (If a configuration source exists, use the configured source name as the parameter following **-source**.)

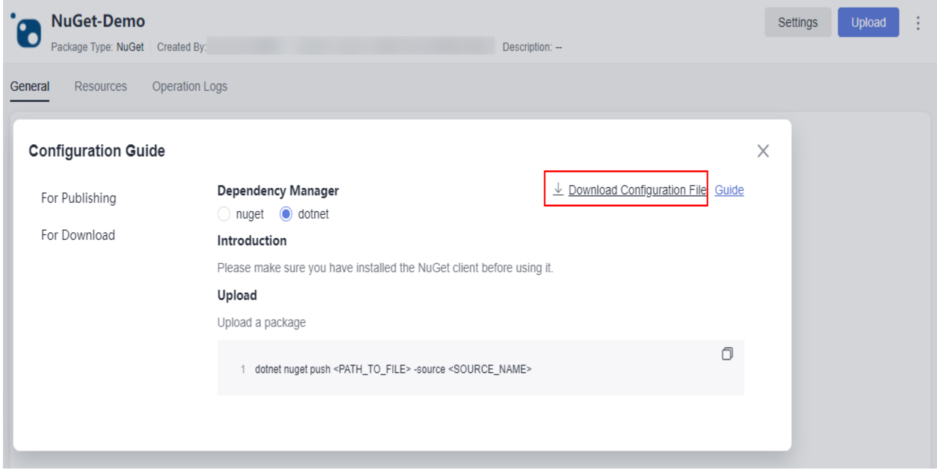
```
##---------------------NuGet Download---------------------##
nuget install <PACKAGE>
```

----End

Downloading a .NET Component

Ensure that you have installed .NET.

Step 1 Select the corresponding NuGet repository from the self-hosted repo page and click **Set Me Up** to download the configuration file **dotnet.txt**.



Package Type: NuGet | Created By: [redacted] | Description: --

Configuration Guide

Dependency Manager

○ nuget ● dotnet

Introduction

Please make sure you have installed the NuGet client before using it.

Upload

Upload a package

```
dotnet nuget push <PATH_TO_FILE> -source <SOURCE_NAME>
```

Step 2 Open the configuration file, find the command under **dotnet add source**, and add the source.

```
##---------------------dotnet add source----------------------##
dotnet nuget add source {repo_url} add -n {repo_name} -u {user_name} -p {repo_password}
```

Step 3 Find the statement under **dotnet download**, replace < PACKAGE > with the name of the component to be downloaded, and run the download statement.

```
##---------------------dotnet download----------------------##
dotnet add package <PACKAGE>
```

----End

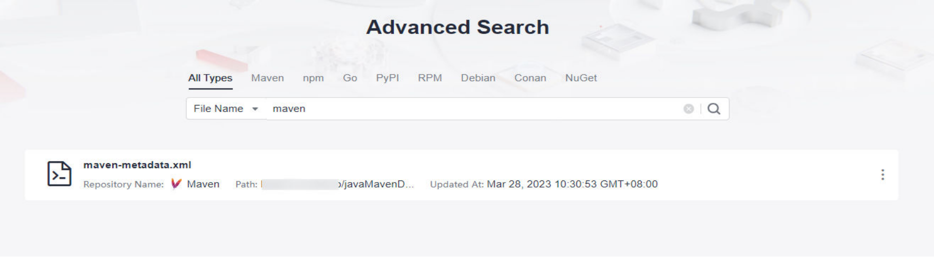
2.8 Managing Private Components

Searching for Private Components

Step 1 Go to the **Self-hosted Repos** page and click **Advanced Search** in the upper left corner of the page.

Step 2 In the upper part of the page, you can select the repository where the component to be queried is located. By default, all repositories are selected.

Step 3 Enter the keyword of the file name in the search box, and click 🔍 to search for the component.



Advanced Search

File Name: maven

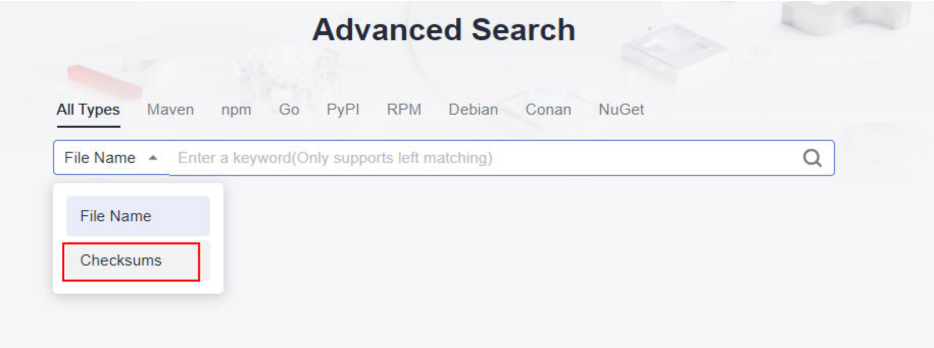
maven-metadata.xml
Repository Name: Maven Path: [redacted]/javaMavenD... Updated At: Mar 28, 2023 10:30:53 GMT+08:00

Step 4 Click the **File Name** to view its details.

----End

- Searching for Artifacts by Checksums

1. Click the drop-down list on the left of the search box and select **Checksums** (The default value is the file name).



Advanced Search

2. You can also enter the **MD5/SHA-1/SHA-256/SHA-512 checksum** and click 🔍 to find the corresponding component.

Downloading a Private Component

Step 1 Access the self-hosted repo homepage. In the left pane, locate the private component to be downloaded, and click the component name.

If there are too many repositories or components, you can search for the desired one by following instructions in **Searching for Private Components**.

Step 2 Click **Download**.

----End

Deleting a Private Component

Step 1 Access the self-hosted repo homepage. In the left pane, locate the private component to be downloaded, and click the component name.

If there are too many repositories or components, you can search for the desired one by following instructions in **Searching for Private Components**.

Step 2 Click **Delete**.

Step 3 In the displayed dialog box, click **Yes**.

----End

Following or Unfollowing a Private Component

Step 1 Access the self-hosted repo homepage. In the left pane, locate the private component to be downloaded, and click the component name.

If there are too many repositories or components, you can search for the desired one by following instructions in **Searching for Private Components**.

Step 2 Click **Unfollowed** on the right of the page.

When the icon changes to ★, click **Following** in the lower left corner of the page to view the list of followed components. Click the **path** value in the list to go to the component details page.

----End

2.9 Managing the Recycle Bin

Repositories and components deleted from a self-hosted repo are moved to the recycle bin, where you can manage them.

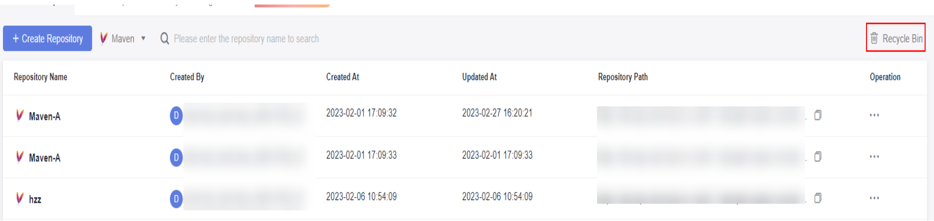
The self-hosted repo provides the recycle bin entry both from the homepage and project pages.

Homepage Recycle Bin

You can process all deleted components in the recycle bin on the CodeArts Artifact homepage.

Step 1 Access the self-hosted repo by following instructions in **Accessing Through the Homepage**.

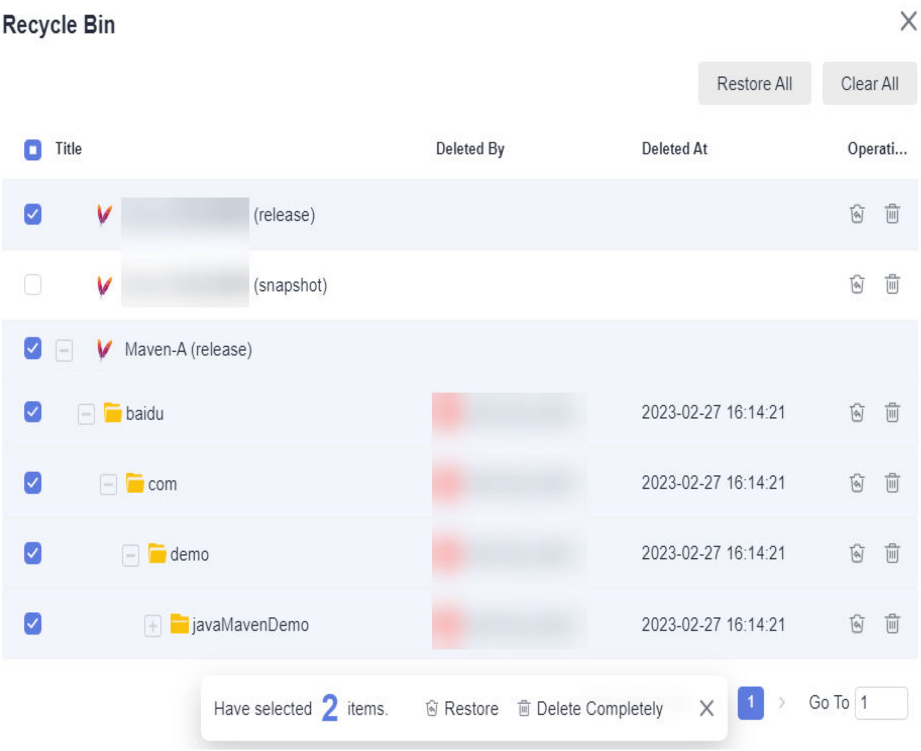
Step 2 Click **Recycle Bin** in the upper right corner of the page. The **Recycle Bin** page is displayed on the right.



Repository Name	Created By	Created At	Updated At	Repository Path	Operation
Maven-A	D [redacted]	2023-02-01 17:09:32	2023-02-27 16:20:21	[redacted]	···
Maven-A	D [redacted]	2023-02-01 17:09:33	2023-02-01 17:09:33	[redacted]	···
hzz	D [redacted]	2023-02-06 10:54:09	2023-02-06 10:54:09	[redacted]	···

Step 3 Delete or restore the repositories and components in the list as required.

If the icons ♻ and 🗑 are both displayed in the **Operation** column, the repository shown in the corresponding row has been deleted. Otherwise, the repository shown in the corresponding row has not been deleted but the components in it have been deleted. You can click the repository name to view the deleted components in the repository.



■ Title	Deleted By	Deleted At	Operati...
☑ [redacted] (release)			♻ 🗑
□ [redacted] (snapshot)			♻ 🗑
☑ ⊟ Maven-A (release)			
☑ ⊟ baidu	[redacted]	2023-02-27 16:14:21	♻ 🗑
☑ ⊟ com	[redacted]	2023-02-27 16:14:21	♻ 🗑
☑ ⊟ demo	[redacted]	2023-02-27 16:14:21	♻ 🗑
☑ ⊞ javaMavenDemo	[redacted]	2023-02-27 16:14:21	♻ 🗑

Available operations are as follows.

Operation Type	Operation	Description
Restore	Restore a repository	Click ♻ in the **Operation** column to restore the repository.
	Restore a component	Go to the repository where the component to restore is located, and click ♻ in the **Operation** column to restore the component.
	Batch restore components	Go to the repository where the components to restore are located, select the components, and click **Restore** below the list to restore the components.
	Restore all	Click **Restore All** in the upper right corner of the page to restore all repositories and components in the recycle bin.
Delete	Delete a repository	Click 🗑 in the **Operation** column to delete a repository.
	Delete a component	Go to the repository where the component to delete is located, and click 🗑 in the **Operation** column to delete the component.
	Delete components in batches	Go to the repository where the components to delete are located, select the components, and click **Clear** below the list to delete the components.
	Clear recycle bin	Click **Clear All** to delete all repositories and components in the recycle bin.

----End

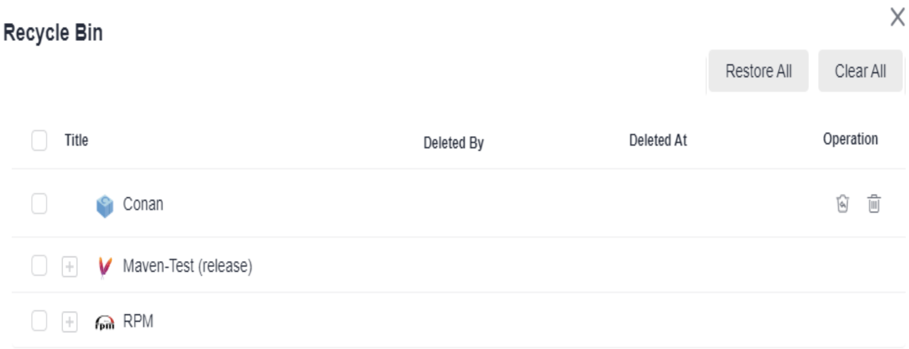
Recycle Bin in a Project

Step 1 Access the self-hosted repo by following instructions in **Accessing Through a Specific Project**.

Step 2 In the lower left corner of the page, click **Recycle Bin**. The **Recycle Bin** page is displayed on the right.

Step 3 Delete or restore the repositories and components in the list as required.

If the icons ♻ and 🗑 are both displayed in the **Operation** column, the repository shown in the corresponding row has been deleted. Otherwise, the repository shown in the corresponding row has not been deleted but the components in it have been deleted. You can click the repository name to view the deleted components in the repository.



Recycle Bin

Restore All Clear All

□ Title	Deleted By	Deleted At	Operation
□ Conan			↶ 🗑
□ ⊞ Maven-Test (release)			
□ ⊞ RPM			

Available operations are as follows.

Operation Type	Operation	Description
Restore	Restore a repository	Click ↶ in the **Operation** column to restore the repository.
	Restore a component	Go to the repository where the component to restore is located, and click ↶ in the **Operation** column to restore the component.
	Batch restore components	Go to the repository where the components to restore are located, select the components, and click **Restore** below the list to restore the components.
	Restore all	Click **Restore All** in the upper right corner of the page to restore all repositories and components in the recycle bin.
Delete	Delete a repository	Click 🗑 in the **Operation** column to delete a repository.
	Delete a component	Go to the repository where the component to delete is located, and click 🗑 in the **Operation** column to delete the component.
	Delete components in batches	Go to the repository where the components to delete are located, select the components, and click **Clear** below the list to delete the components.
	Clear recycle bin	Click **Clear All** to delete all repositories and components in the recycle bin.

----End