CodeArts Build

Getting Started

Issue 01

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HUAWEI TECHNOLOGIES CO., LTD.

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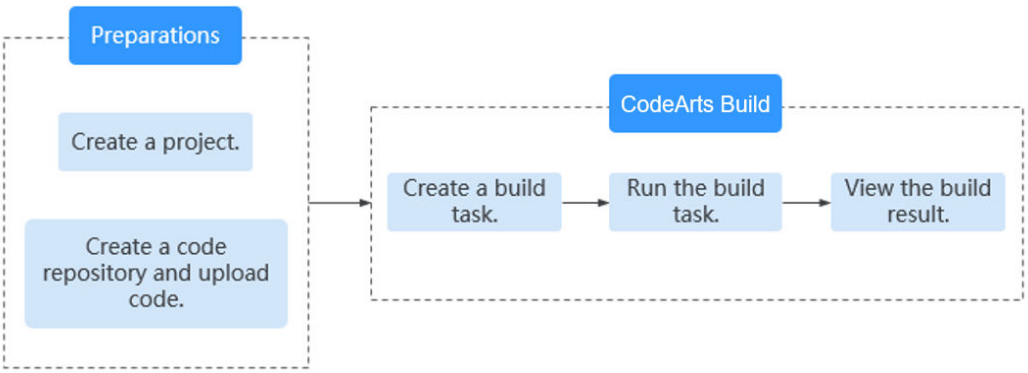
1 Graphical Build

1.1 Getting Started with CodeArts Build

CodeArts Build provides an easy-to-use, cloud-based build platform that supports multiple programming languages, helping you achieve continuous delivery, with shorter period and higher efficiency. With CodeArts Build, you can create, configure, and run build tasks with a few clicks. CodeArts Build also supports automated code retrieval, build, and packaging, as well as real-time status monitoring.

This document describes the basic operations of CodeArts Build, helping you quickly get started.



Prerequisites

- You have **registered a HUAWEI ID and enabled Huawei Cloud services**.
- A project is available. If no project is available, **create one**.
- You have created a code repository in the project and have uploaded code to the repository. If no code repository is available, perform the following steps to create one:
  a. Log in to CodeArts using the Huawei Cloud account.
  b. Click the name of the project to create a repository for it.
  c. In the navigation pane, choose **Code** > **Repo**.

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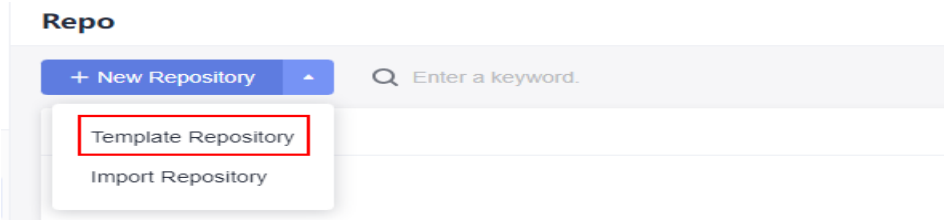
d. On the Repo page, click next to **New Repository** and select **Template Repository**.



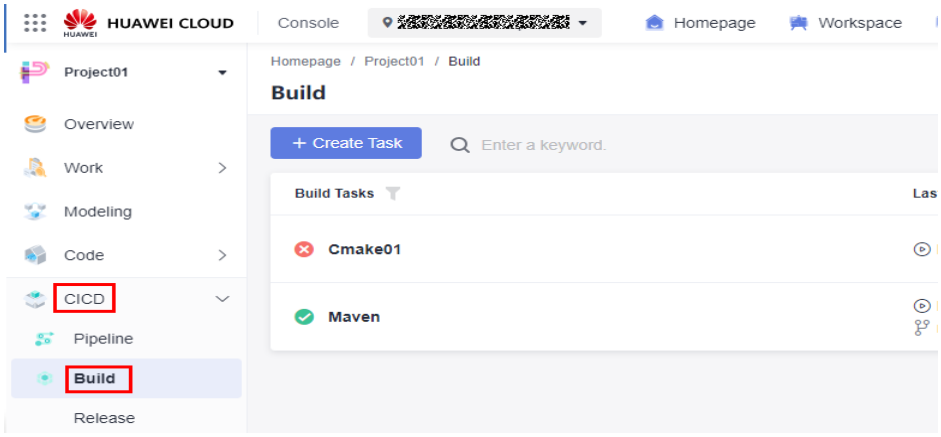
e. On the page displayed, search for and select the **Java Maven Demo** template.

f. Click **Next**. Enter a repository name and click **OK**.

g. **Upload code to the repository**.

Creating a Build Task

Step 1 In the navigation pane, choose **CICD** > **Build**.



Step 2 Click **Create Task**. The **Basic Information** page is displayed.

Step 3 Configure the parameters and click **Next**.

Table 1-1 Configuring basic information

Parameter	Description
Task Name	Specifies the name of the task.
Code Source	Select **Repo**.
Source Code Repository	Select the repository created in **Prerequisites**.
Branch	Select the branch created when you create the repository (see **Prerequisites**). If no branch is available, select the default **master**.
Description	Describe the build task.

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Step 4 Select **Maven** as the build template. Click **Next**.

Step 5 On the **Build Actions** tab page, customize **build actions** as required.

Step 6 Click **Create**.

----End

Running the Build Task

This section describes how to run a build task and view the build result.

Step 1 Click a build task name.

Step 2 On the **Build History** tab, click **Run** in the upper right to start the task.

- If the following page as shown in **Figure 1-1** is displayed, the task is successfully executed.

  Figure 1-1 Build success

- If the task fails, rectify the fault based on the messages or logs.

----End

Viewing the Build Package

The build package generated using default settings is stored in the *build_name*/*build_time* directory of Release Repos. This section describes how to view the build package and verify the release result.

Step 1 In the navigation pane, choose **Artifact** > **Release Repos**.

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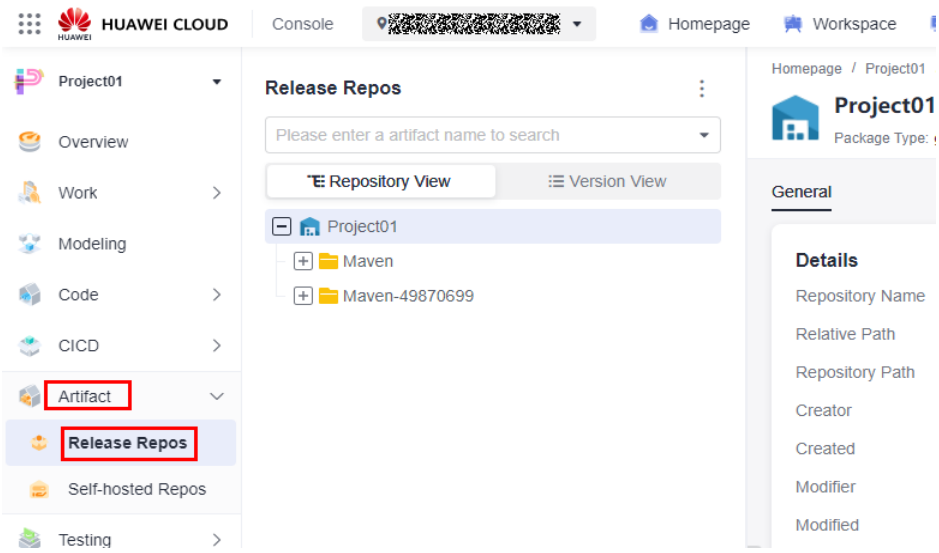
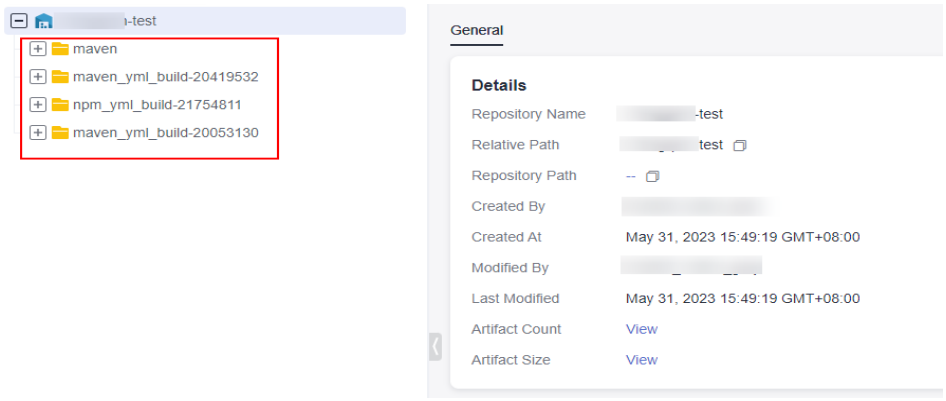


Step 2 Go to the release repos to view the released software package. The name of the software package is the same as that of the build task (see **Creating a Build Task**), as shown in **Figure 1-2**.

Figure 1-2 Viewing the software package



----End

Clearing Resources

To avoid unnecessary fees, you are advised to release build resources after completing tasks.

- CodeArts Repo: Delete code repositories.
- Release Repos: **Delete software packages**, and **clear the recycle bin**.

NOTICE

Released resources cannot be recovered. Exercise caution when performing these operations.

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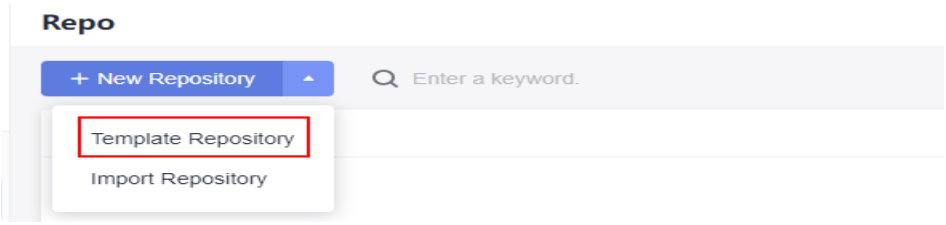
1.2 Getting Started with Maven Build

CodeArts Build provides multiple build templates. The Maven template can be used to build and pack Java Maven projects.

This topic describes how to use the code repository template **Java Maven Demo** provided by CodeArts Repo and the build template **Maven** provided by CodeArts Build.

Prerequisites

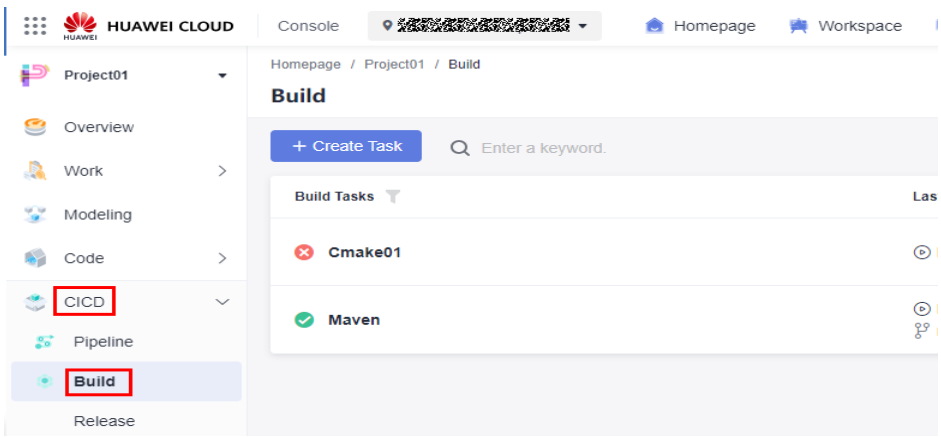
- You have **registered a HUAWEI ID and enabled Huawei Cloud services**.
- A project is available. If no project is available, **create one**.
- You have created a code repository in the project and have uploaded code to the repository. If no code repository is available, perform the following steps to create one:
  a. Log in to CodeArts using the Huawei Cloud account.
  b. Click the name of the project to create a repository for it.
  c. In the navigation pane, choose **Code** > **Repo**.
  d. On the Repo page, click next to **New Repository** and select **Template Repository**.



  e. On the page displayed, search for and select the **Java Maven Demo** template.
  f. Click **Next**. Enter a repository name and click **OK**.
  g. **Upload code to the repository**.

Creating a Build Task

Step 1 In the navigation pane, choose **CICD** > **Build**.



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Step 2 Click **Create Task**. The **Basic Information** page is displayed.

Step 3 Configure the parameters and click **Next**.

Table 1-2 Configuring basic information

Parameter	Description
Task Name	Specifies the name of the task.
Code Source	Select **Repo**.
Source Code Repository	Select the repository created in **Prerequisites**.
Branch	Select the branch created when you create the repository (see **Prerequisites**). If no branch is available, select the default **master**.
Description	Describe the build task.

Step 4 Select **Maven** as the build template. Click **Next**.

Step 5 On the **Build Actions** tab page, customize **build actions** as required.

Step 6 Click **Create**.

----End

Running the Build Task

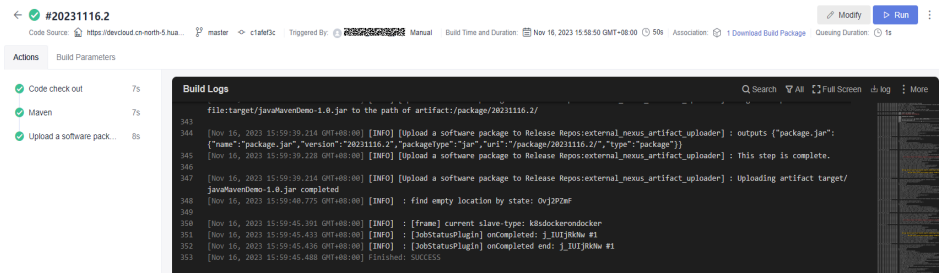
This section describes how to run a build task and view the build result.

Step 1 Click a build task name.

Step 2 On the **Build History** tab, click **Run** in the upper right to start the task.

- If the following page as shown in **Figure 1-3** is displayed, the task is successfully executed.

Figure 1-3 Build success



- If the task fails, rectify the fault based on the messages or logs.

----End

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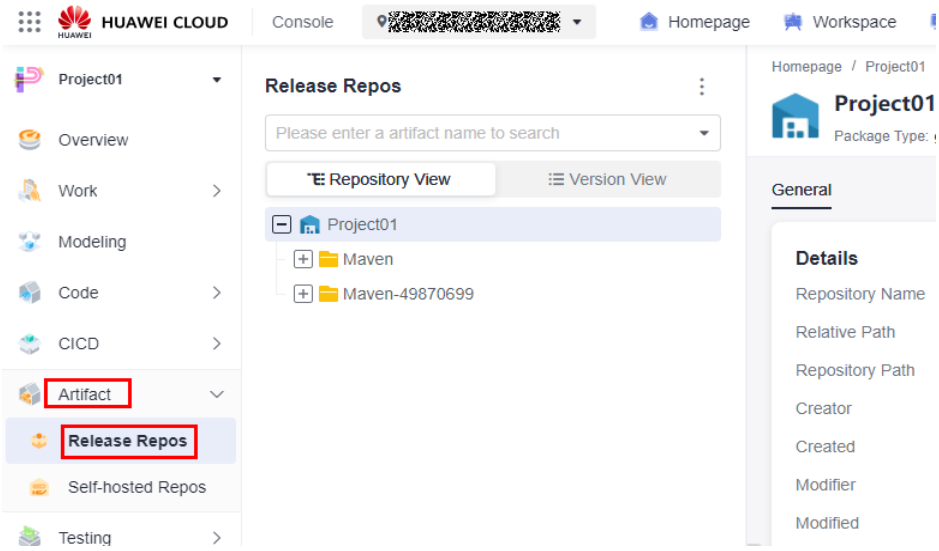
Viewing the Build Package

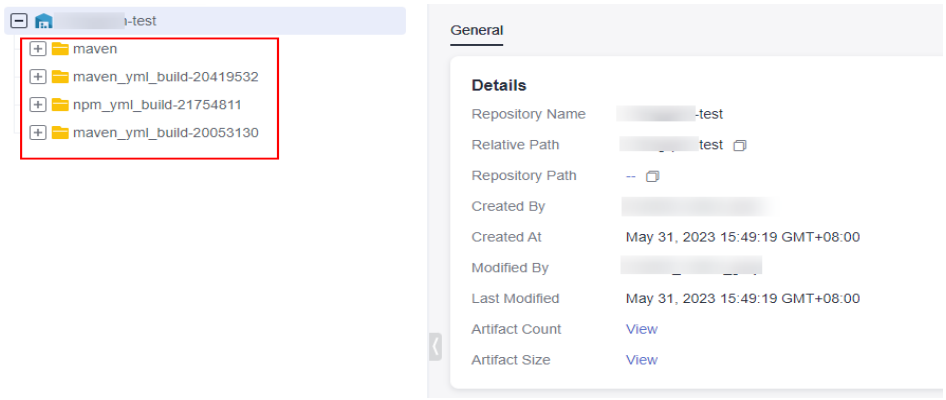
The build package generated using default settings is stored in the *build_name*/*build_time* directory of Release Repos. This section describes how to view the build package and verify the release result.

Step 1 In the navigation pane, choose **Artifact** > **Release Repos**.



Step 2 Go to the release repos to view the released software package. The name of the software package is the same as that of the build task (see **Creating a Build Task**), as shown in **Figure 1-4**.

Figure 1-4 Viewing the software package



----End

Clearing Resources

To avoid unnecessary fees, you are advised to release build resources after completing tasks.

- CodeArts Repo: Delete code repositories.
- Release Repos: **Delete software packages**, and **clear the recycle bin**.

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NOTICE

Released resources cannot be recovered. Exercise caution when performing these operations.

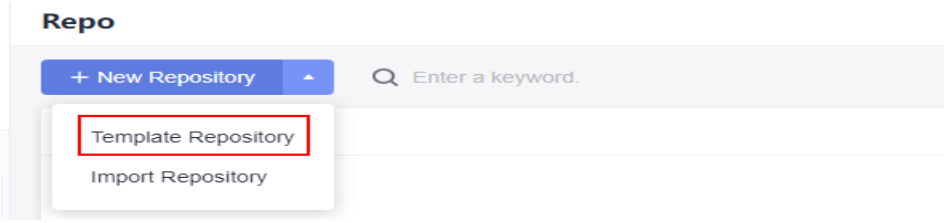
1.3 Getting Started with npm Build

CodeArts Build provides multiple build templates. The **npm** template can be used to build and pack Node.js projects.

This topic describes how to use the code repository template **Nodejs Webpack Demo** and build template **npm** for a build using npm.

Prerequisites

- You have **registered a HUAWEI ID and enabled Huawei Cloud services**.
- A project is available. If no project is available, **create one**.
- You have created a code repository from the template in the project. If no code repository is available, perform the following steps to create one:
  a. Log in to CodeArts using the Huawei Cloud account.
  b. Click the name of the project to create a repository for it.
  c. In the navigation pane, choose **Code** > **Repo**.
  d. On the Repo page, click next to **New Repository** and select **Template Repository**.



  e. On the page displayed, search for and select the **Nodejs Webpack Demo** template.
  f. Click **Next**. Enter a repository name and click **OK**.

Creating a Build Task

Step 1 In the navigation pane, choose **CICD** > **Build**.

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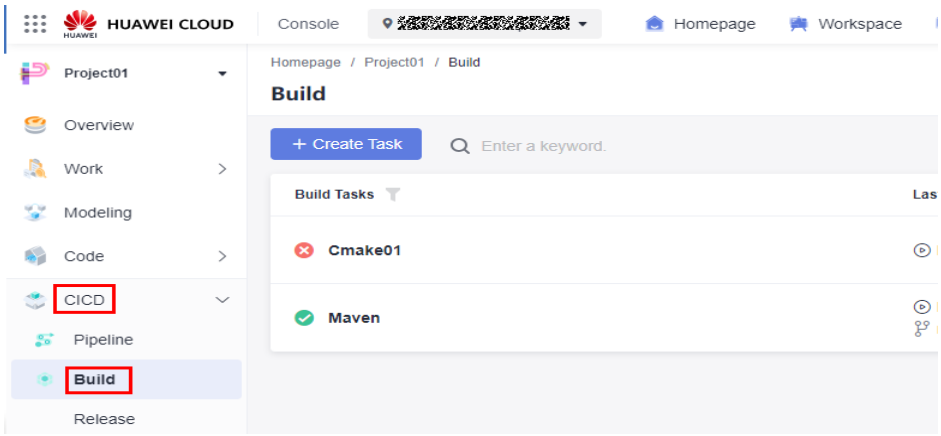

Step 2 Click **Create Task**. The **Basic Information** page is displayed.

Step 3 Configure the parameters and click **Next**.

Table 1-3 Configuring basic information

Parameter	Description
Task Name	Specifies the name of the task.
Code Source	Select **Repo**.
Source Code Repository	Select the repository created in **Prerequisites**.
Branch	Select the branch created when you create the repository (see **Prerequisites**). If no branch is available, select the default **master**.
Description	Describe the build task.

Step 4 Select **npm** as the build template and click **Next**.

Step 5 On the **Build Actions** tab page, customize **build actions** as required.

Step 6 Click **Create**.

----End

Running the Build Task

This section describes how to run an npm build task and view the build result.

Step 1 Click a build task name.

Step 2 On the **Build History** tab, click **Run** in the upper right to start the task.

- If the following page is displayed, the task is successfully executed.

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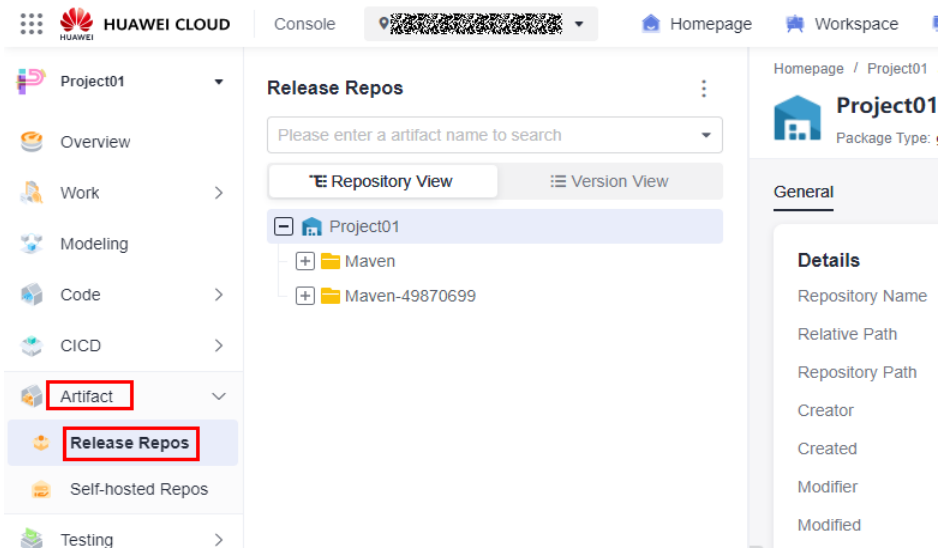
- If the task fails, rectify the fault based on the messages or logs.

----End

Viewing the Build Package

The build package generated using default settings in the npm template is stored in the *build_name*/*build_time* directory of Release Repos. This section describes how to view the build package and verify the release result.

Step 1 In the navigation pane, choose **Artifact** > **Release Repos**.



Step 2 Go to the release repos to view the released software package. The name of the software package is the same as that of the build task (see **Creating a Build Task**).

----End

Clearing Resources

To avoid unnecessary fees, you are advised to release build resources after completing tasks.

- CodeArts Repo: Delete code repositories.

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- Release Repos: **Delete software packages**, and **clear the recycle bin**.

NOTICE

Released resources cannot be recovered. Exercise caution when performing these operations.

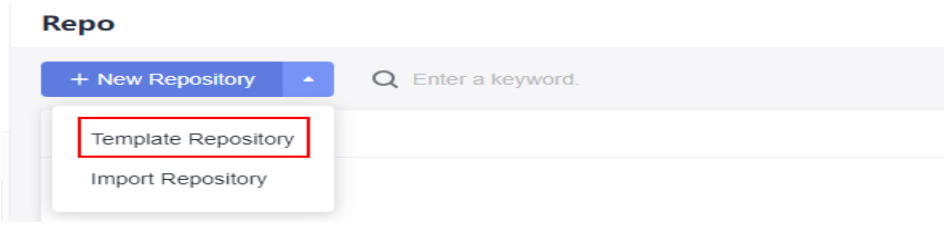
1.4 Getting Started with Android Build

CodeArts Build provides multiple build templates. The **Android APK** template can be used to build and pack Android projects.

This topic describes how to use the code repository template **Android Gradle Demo** and build template **Android APK** for a fast Android build.

Prerequisites

- You have **registered a HUAWEI ID and enabled Huawei Cloud services**.
- A project is available. If no project is available, **create one**.
- You have created a code repository from the template in the project. If no code repository is available, perform the following steps to create one:
  a. Log in to CodeArts using the Huawei Cloud account.
  b. Click the name of the project to create a repository for it.
  c. In the navigation pane, choose **Code** > **Repo**.
  d. On the Repo page, click next to **New Repository** and select **Template Repository**.



  e. Access the homepage of CodeArts Repo and choose **New Repository** > **Template Repository**. On the page displayed, search for and select the **Android Gradle Demo** template.
  f. Click **Next**. Enter a repository name and click **OK**.

Creating a Build Task

Step 1 In the navigation pane, choose **CICD** > **Build**.

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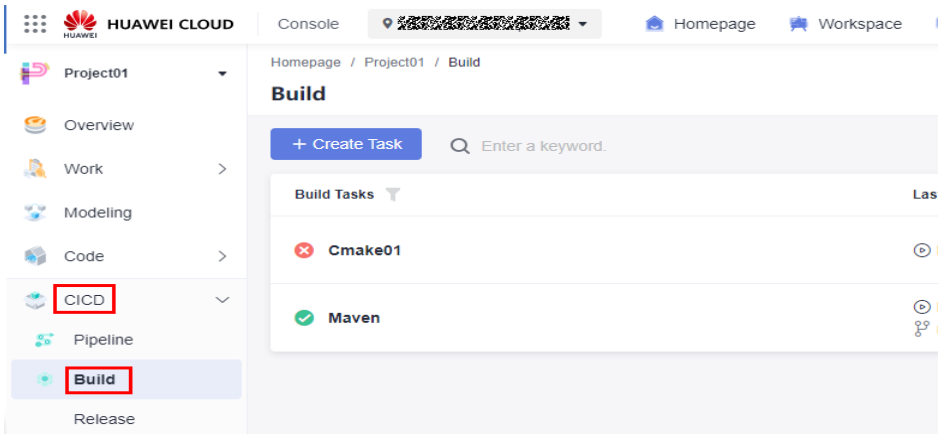

Step 2 Click **Create Task**. The **Basic Information** page is displayed.

Step 3 Configure the parameters and click **Next**.

Table 1-4 Configuring basic information

Parameter	Description
Task Name	Specifies the name of the task.
Code Source	Select **Repo**.
Source Code Repository	Select the repository created in **Prerequisites**.
Branch	Select the branch created when you create the repository (see **Prerequisites**). If no branch is available, select the default **master**.
Description	Describe the build task.

Step 4 Select a build template as required. Click **Next**.

Step 5 On the **Build Actions** tab page, customize **build actions** as required.

Step 6 Click **Create**.

----End

Running the Build Task

This section describes how to run an Android APK build task and view the build result.

Step 1 Click a build task name.

Step 2 On the **Build History** tab, click **Run** in the upper right to start the task.

- If the following page is displayed, the task is successfully executed.

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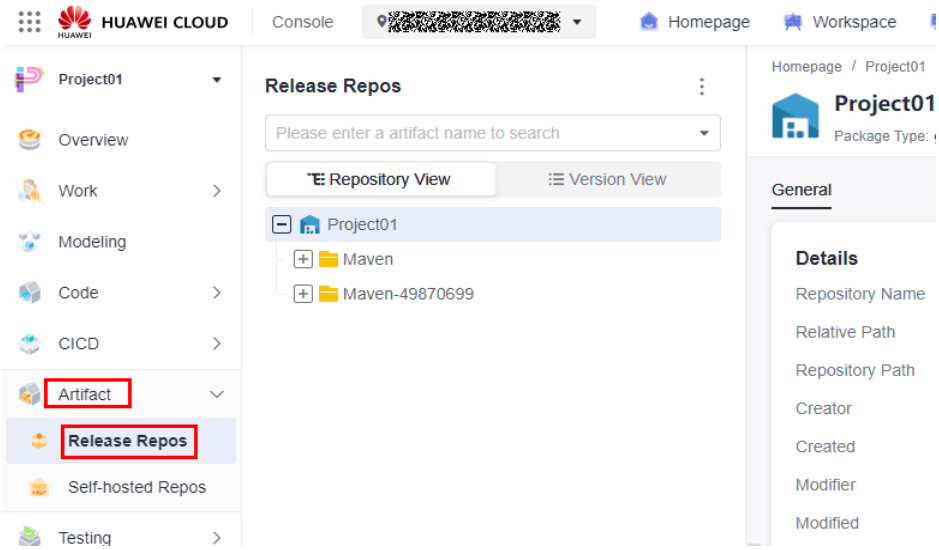
- If the task fails, rectify the fault based on the messages or logs.

----End

Viewing the Build Package

The build package generated using default settings in the Android APK template is stored in the *build_name*/*build_time* directory of Release Repos. This section describes how to view the build package and verify the release result.

Step 1 In the navigation pane, choose **Artifact** > **Release Repos**.



Step 2 Go to the release repos to view the released software package. The name of the software package is the same as that of the build task (see **Creating a Build Task**).

----End

Clearing Resources

To avoid unnecessary fees, you are advised to release build resources after completing tasks.

- CodeArts Repo: Delete code repositories.
- Release Repos: **Delete software packages**, and **clear the recycle bin**.

NOTICE

Released resources cannot be recovered. Exercise caution when performing these operations.

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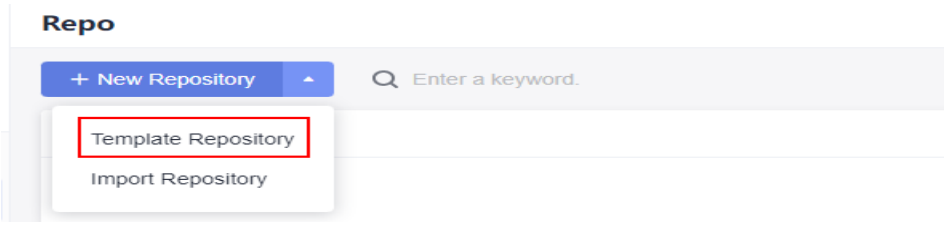
1.5 Getting Started with CMake Build

CodeArts Build provides multiple build templates. The **CMake** template can be used to build and pack cross-platform projects.

This topic describes how to use the code repository template **Cpp Demo** and build template **CMake** for a build using CMake.

Preparations

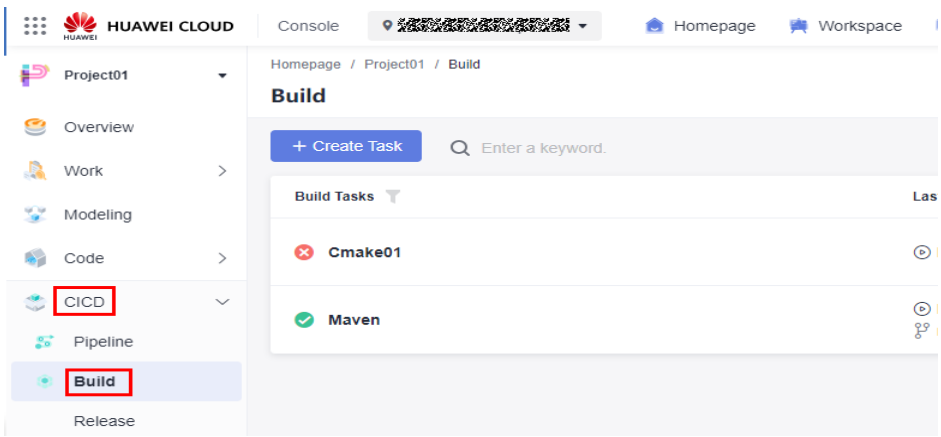
- You have **registered a HUAWEI ID and enabled Huawei Cloud services**.
- A project is available. If no project is available, **create one**.
- You have created a code repository from the template in the project. If no code repository is available, perform the following steps to create one:
  a. Log in to CodeArts using the Huawei Cloud account.
  b. Click the name of the project to create a repository for it.
  c. In the navigation pane, choose **Code** > **Repo**.
  d. On the Repo page, click next to **New Repository** and select **Template Repository**.



  e. Access the homepage of CodeArts Repo and choose **New Repository** > **Template Repository**. On the page displayed, search for and select the **Cpp Demo** template.
  f. Click **Next**. Enter a repository name and click **OK**.

Creating a Build Task

Step 1 In the navigation pane, choose **CICD** > **Build**.



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Step 2 Click **Create Task**. The **Basic Information** page is displayed.

Step 3 Configure the parameters and click **Next**.

Table 1-5 Configuring basic information

Parameter	Description
Task Name	Specifies the name of the task.
Code Source	Select **Repo**.
Source Code Repository	Select the repository created in **Prerequisites**.
Branch	Select the branch created when you create the repository (see **Prerequisites**). If no branch is available, select the default **master**.
Description	Describe the build task.

Step 4 Select **CMake** as the build template and click **Next**.

Step 5 On the **Build Actions** tab page, customize **build actions** as required.

Step 6 Click **Create**.

----End

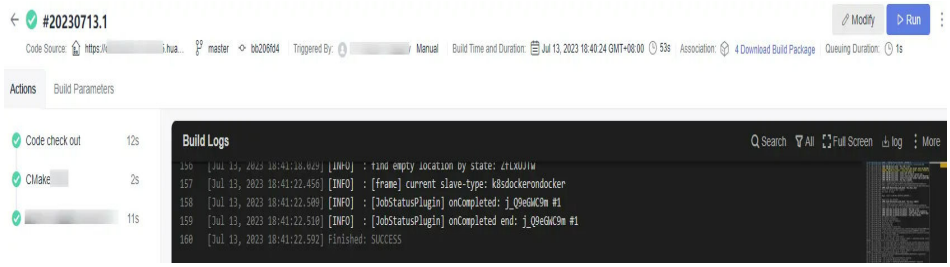
Running the Build Task

This section describes how to run a CMake build task and view the build result.

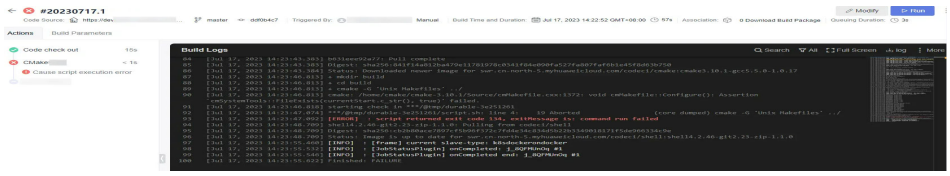
Step 1 Click a build task name.

Step 2 On the **Build History** tab, click **Run** in the upper right to start the task.

- If the following page is displayed, the task is successfully executed.



- If the task fails, rectify the fault based on the messages or logs.



----End

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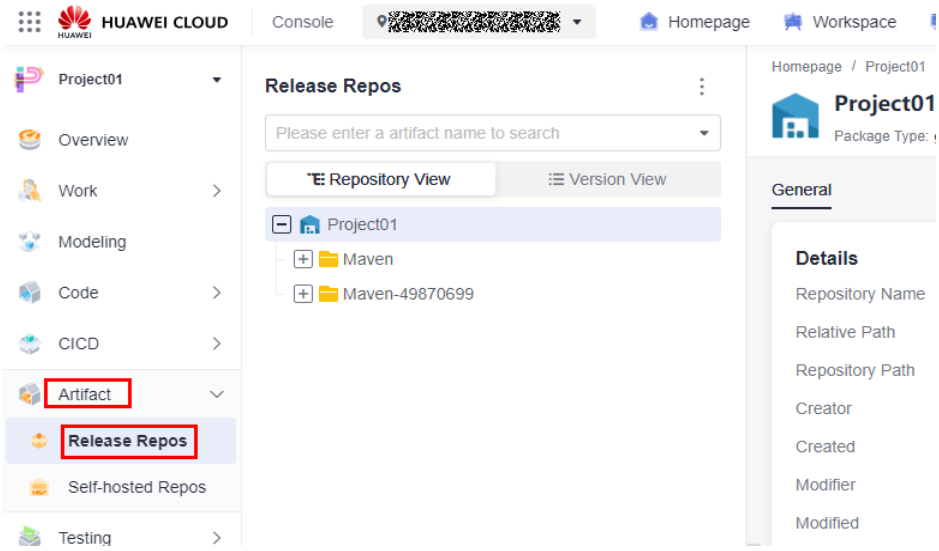
Viewing the Build Package

The build package generated using default settings in the CMake template is stored in the *build_name*/*build_time* directory of Release Repos. This section describes how to view the build package and verify the release result.

Step 1 In the navigation pane, choose **Artifact** > **Release Repos**.



Step 2 Go to the release repos to view the released software package. The name of the software package is the same as that of the build task (see **Creating a Build Task**).

----End

Clearing Resources

To avoid unnecessary fees, you are advised to release build resources after completing tasks.

- CodeArts Repo: Delete code repositories.
- Release Repos: **Delete software packages**, and **clear the recycle bin**.

NOTICE

Released resources cannot be recovered. Exercise caution when performing these operations.

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2 Getting Started with Common Practices

Users who have enabled the CodeArts Build service can choose a graphical or code-based mode for build according to different service scenarios.

This section describes common practices of graphical build.

Graphical Build

Practice	Description
Using Node.js to Create a Docker Image	Use a Node.js build task to create a Docker image on CodeArts Build.

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