

02_Deploy_Getting Started_Public Cloud & Partner Cloud-Copy

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1 Creating a Tomcat Application Using CodeArts Deploy and Deploying It on an ECS

CodeArts Deploy provides users with visualized, automatic, and rich deployment actions, helping them establish a standard deployment process, reducing deployment costs, and enhancing release efficiency.

This section uses **Deploy a Tomcat Application** as an example to describe how to deploy a Tomcat application on a host. The following describes how to quickly deploy an application.

Prerequisites

- A project is available. If there is no project, [create one](#).
- You have permissions to create applications. For details, see [Editing Permissions](#).
- The related software package has been compiled.

NOTICE

You can set **Source** to **Artifact** or **Build task**. In this example, **Artifact** is selected. Therefore, you need to prepare the compiled software package in advance. If you select **Build task**, you do not need to prepare the software package.

Creating a Host Cluster and Adding Hosts to It

Step 1 Go to the CodeArts homepage and click the target project name to access the project.

Step 2 Go to the **Basic Resources** page.

Choose **Settings > General > Basic Resources**. The **Host Clusters** page is displayed by default.

 **NOTE**

Choose **CICD > Deploy**. Click **Basic Resources**. The **Host Clusters** page is displayed by default.

Step 3 Create a host cluster and add hosts to it.

1. Choose **Settings > General > Basic Resources**. The **Host Clusters** page is displayed by default.
2. Click **Create Host Cluster**, enter the following information, and click **Save**.


Parameter	Mandatory	Description
Cluster Name	Yes	Enter a custom name. Enter 3 to 128 characters. Use digits, letters, hyphens (-), underscores (_), and periods (.).
OS	Yes	Select Linux or Windows based on the OS of the host to be added. In this example, select Linux .
Host Connection Mode	Yes	If the target host cannot connect to the public network, you need to select a host bound with an EIP as the proxy host to connect CodeArts Deploy to the target host. Direct connection: Select a host bound with an EIP as the target host to connect to CodeArts. Proxy: Select a host bound with an EIP as the proxy host to connect to CodeArts.
Execution Resource Pool	Yes	A resource pool is a collection of physical environments where commands are executed during software package deployment. In this scenario, select official .
Description	No	Enter a description. Max. 500 characters.

3. (The following uses a Linux-based target host as an example.) Click **Add Host**, select **Adding IP for Add hosts by**, enter the following information, and click **OK**. The target host is created.

Table 1-1 Parameters of the target host (Linux)

Parameter	Mandatory	Description
Host Name	Yes	Enter a custom name. Enter 3 to 128 characters. Use digits, letters, hyphens (-), underscores (_), and periods (.).

Parameter	Mandatory	Description
IP	Yes	Enter the private or public IP address of the target host.
OS	Yes	Keep the default value because it is the OS of your host cluster.
Authorization	Yes	Select a Password or Key for authentication as required. <ul style="list-style-type: none">- Password: The Username and Password are displayed on the page. Take ECS as an example. You need to enter the ECS username and password.- Key: The Username and Key are displayed on the page. For details about how to generate and obtain a key, see Obtaining the Linux Key.
SSH Port	Yes	Port 22 is recommended. Custom ports are supported. Correct port format: 1-65535 .

4. Click  in the **Operation** column of a host to start the host for connectivity verification.

----End

Creating an Application

Step 1 Choose **CICD > Deploy**.

Step 2 Create an application.

1. Click **Create Application**. On the **Basic Information** page that is displayed, modify the basic information such as **Name**, **Description**, and **Execution Resource Pool** as required.
2. After editing the basic application information, click **Next**. The deployment template selection page is displayed.
Select **Deploying a Tomcat Application** and click **OK**.

NOTE


The following describes the initialization procedure and parameters of the Tomcat application deployment template. For details, see [Deployment Actions](#).

----End

Creating an Environment and Importing Hosts

Step 1 Create a deployment environment and import hosts from the host cluster.

1. Switch to the **Environment Management** tab page and click **Create Environment**.

2. Enter basic information, such as the **Environment**, **OS**, and **Description**, and click **Save**.
3. Switch to the **Resource** tab page and click **Import Host**.
4. The system automatically filters all clusters that meet the requirements of the current environment. In the dialog box that is displayed, select the target host cluster and click  in the **Operation** column of a host to import the host to the environment.

----End

Configuring Deployment Actions and Deploying the Application

Step 1 Configure deployment actions.

Switch to the **Deployment Actions** tab page and click **Edit** to set parameters.

1. Install JDK

Table 1-2 Parameters for installing the JDK

Parameter	Mandatory	Description
Action Name	Yes	Name of an added deployment action. Max 128 characters. Do not start or end with a space. Use letters, digits, spaces, and these special characters: -_;;/().
Environment	Yes	Select a host cluster as the deployment object.
JDK Version	Yes	Select the JDK version to be installed.
Installation Path	Yes	Installation path of JDK.
Action Control	No	Whether to enable this action. - Whether to keep running on failure. - Whether to execute this action with the sudo permission.

2. Install Tomcat

Table 1-3 Parameters for installing Tomcat

Parameter	Mandatory	Description
Action Name	Yes	Name of an added deployment action. Max 128 characters. Do not start or end with a space. Use letters, digits, spaces, and these special characters: -_!;:./().
Environment	Yes	Select a host cluster as the deployment object.
Tomcat Version	Yes	Version of Tomcat to be installed.
Installation Path	Yes	Installation path of Tomcat.
HTTP Port	Yes	Default port: 8080
AJP Port	Yes	Default port: 8009
Service Shutdown Port	Yes	Default port: 8005
Action Control	No	Whether to enable this action. <ul style="list-style-type: none"> - Whether to keep running on failure. - Whether to execute this action with the sudo permission.

3. Stop Tomcat

Table 1-4 Parameters for stopping Tomcat

Parameter	Mandatory	Description
Action Name	Yes	Name of an added deployment action. Max 128 characters. Do not start or end with a space. Use letters, digits, spaces, and these special characters: -_!;:./().
Environment	Yes	Select a host cluster as the deployment object.
Operation	Yes	Start and Stop are available.
Absolute Path	Yes	Absolute path of the Tomcat service.

Parameter	Man dato ry	Description
Action Control	No	Whether to enable this action. - Whether to keep running on failure. - Whether to execute this action with the sudo permission.

4. Select Deployment Source

Table 1-5 Parameters for selecting a deployment source

Parameter	Man dato ry	Description
Action Name	Yes	Name of an added deployment action. Max 128 characters. Do not start or end with a space. Use letters, digits, spaces, and these special characters: <code>-_!;:./()</code> .
Source	Yes	Two types are available: Artifact and Build task .
Environment	Yes	Select a host cluster as the deployment object.
Software Package	Yes	You can select an existing software package in CodeArts Artifact or from a local host. package_url indicates the path of the software package in CodeArts Artifact. NOTE Local software packages or files uploaded to CodeArts Artifact can be reused.
Download Path	Yes	Where the downloaded software package is stored.
Action Control	No	Whether to enable this action. - Whether to keep running on failure. - Whether to execute this action with the sudo permission.

NOTICE

In this example, **Artifact** is selected as the deployment source. If you select **Build task**, see [Selecting a Deployment Source](#).

5. Start Tomcat

Table 1-6 Parameters for starting Tomcat

Parameter	Mandatory	Description
Action Name	Yes	Name of an added deployment action. Max 128 characters. Do not start or end with a space. Use letters, digits, spaces, and these special characters: -_!;:./().
Environment	Yes	Select a host cluster as the deployment object.
Operation	Yes	Start and Stop are available.
Absolute Path	Yes	Absolute path of the Tomcat service.
HTTP Port	Yes	HTTP port of the Tomcat service.
AJP Port	Yes	AJP port of the Tomcat service.
Service Shutdown Port	Yes	Shutdown port monitored by the Tomcat service.
Waiting Time	Yes	After the specified duration, the system checks the service status. You can adjust the time based on the actual time required for starting the service. If the time is improper, the detection fails. Enter a time (Max. 300s)
Action Control	No	Whether to enable this action. <ul style="list-style-type: none"> - Whether to keep running on failure. - Whether to execute this action with the sudo permission.

6. Health Test Through URLs

Table 1-7 Parameters for health test through URLs

Parameter	Mandatory	Description
Action Name	Yes	Name of an added deployment action. Max 128 characters. Do not start or end with a space. Use letters, digits, spaces, and these special characters: -_!;:./().
Environment	Yes	Select a host cluster as the deployment object.

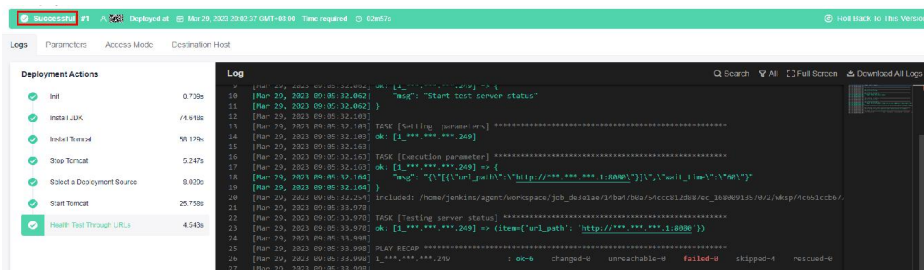
Parameter	Mandatory	Description
Retries	Yes	The number of times you want the system to retry the health test before the test is considered failed.
Interval (s)	Yes	Interval between two retries, in seconds (0-60).
Test Path	Yes	Path of the service to be tested. You can add multiple paths.
Action Control	No	Whether to enable this action. - Whether to keep running on failure.

After the **Health Test Through URLs** parameter is set, all parameters are completed. For details about application configuration, see [Configuring Parameters of an Application](#).

Step 2 Deploy an application.

After setting the preceding parameters, click **Save & Deploy** to deploy an application.

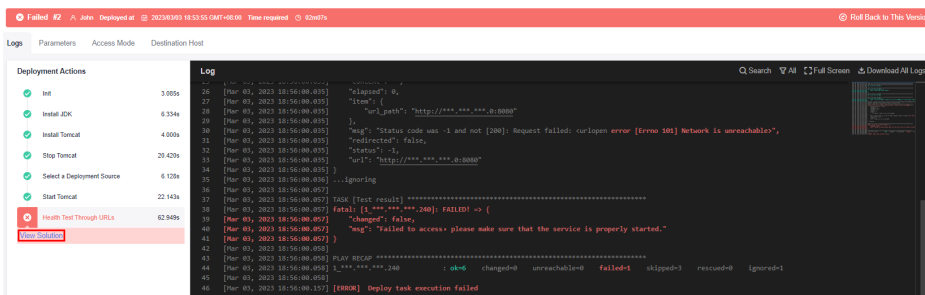
- Application deployed.



- If an application fails to be deployed, perform the following steps to locate the fault:

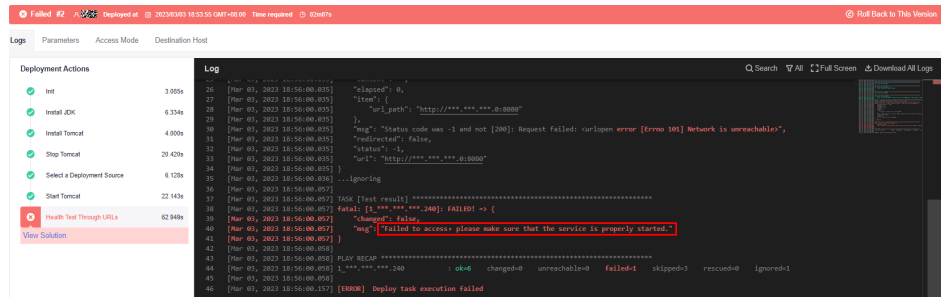
a. **View the automatic matching solution.**

If the deployment fails, click **View Solution** under deployment actions to go to the corresponding help center page.



b. **Search for a solution manually.**

If the issue persists, paste the error information (content in the red box) to the search box of the help center and manually search for the solution.



----End

(Optional) Verifying the Deployment Result

The **Deploying a Tomcat Application** template supports deployment result verification. This section describes how to verify the deployment result. After the application is successfully deployed, enter the following information in the address box of the browser:

<Public IP address of the target host>8080/tomcat-demo

Press **Enter**. If the following information is displayed, the application is successfully deployed.



Hello Deploy!

For more information, see [User Guide](#).

2 Common Practices

After subscribing to CodeArts Deploy, you can deploy resources such as artifacts to hosts or containers based on service requirements. This standardizes the deployment environment and automates the deployment process. This document describes common deployment modes provided by CodeArts Deploy, helping you better use this service.

NOTE

Before using CodeArts Deploy, ensure that you meet the following requirements:

- A project is available. If there is no project, [create one](#) first.
- You have permissions to create applications. For details, see [Permission Management](#).
- The related software package has been compiled.

Table 2-1 Common best practices

Practice		Description
Internal network deployment	Deploying an Application on an Intranet Host Using a Proxy Host	This practice provides a complete operation guide for deploying an application on a host or server on the internal network through a proxy host.
Gray deployment	Using Nginx for Gray Release	This practice implements blue-green and gray release of applications based on the Nginx load balancing mechanism.
	Using Kubernetes Nginx-Ingress for Gray Release	This practice implements gray release based on native Kubernetes features.
HE2E DevOps practice	HE2E DevOps Practice - Deploying an Application	This practice uses the DevOps process example project to describe how to deploy applications on CCE and ECS.

