CodeArts Deploy

Service Overview

Issue	01
Date	2025-05-23

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1 About CodeArts Deploy

Overview

CodeArts Deploy provides visualized and automatic deployment services. It has various deployment actions to help you make a standard deployment process, reduce deployment costs, and improve release efficiency.

CodeArts Deploy has the following features:

- Supports host (physical machine and VM) deployment and container deployment.
- Provides system templates such as Tomcat, SpringBoot, and Django for you to create tasks quickly. You can drag and drop atomic actions to orchestrate tasks flexibly.
- Supports multiple hosts in environment at the same time.
- Implements container deployment using Cloud Container Engine (CCE).
- Saves custom templates to create applications at one click.
- Supports parameterized configuration, provides parameter types such as string, environment, and enumeration, and supports dynamic parameter replacement during application deployment.
- Seamlessly integrates with CodeArts Pipeline to support continuous service release.
- Generates deployment logs for atomic actions and provides keywords to accurately match FAQs. If the deployment fails, you can quickly locate the cause and find a solution.

What Can I Do with CodeArts Deploy?

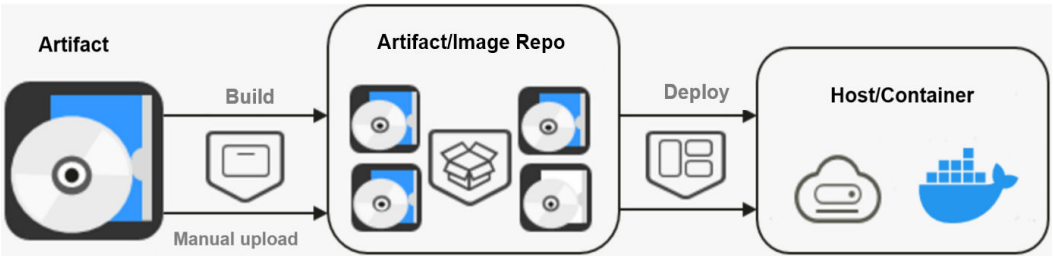
The table below describes the functions provided by CodeArts Deploy.

Table 1-1 CodeArts Deploy functions

Function	Description
Basic resource management	Add one or more hosts and verify the connectivity. Create a host cluster to perform operations on multiple hosts in a unified manner. Search for a host by name or IP address. Modify or delete a host or host cluster.
Application management	Create one or more applications using a predefined template or custom orchestration procedure, search for and filter applications by name, and modify and delete applications.
Parameter configuration	Application steps support parameter reference. During deployment, you can specify parameter values. You can deploy applications by replacing corresponding parameters with specified values.
Dynamic parameter	Applications support dynamic parameter execution. During deployment, you can dynamically enter parameters without modifying applications, enhancing reusability and flexibility.
Application package selection	Application packages can be selected from CodeArts Artifact. Application packages can be automatically archived to CodeArts Artifact during building.
Application package upload	Application packages can be uploaded from the local host to CodeArts Artifact.
Deployment dynamics	Dynamic messages, including deployment success, deployment failure, and application update and deletion messages, are generated during application deployment.
Concurrent deployment	Select multiple hosts and environments in an application to implement parallel deployment of multiple hosts.
Deployment details	View the deployment details, including the deployment progress and application deployment information.
Deployment log	View deployment logs. If multiple hosts are deployed concurrently, you can view logs by host.
CodeArts Pipeline integration	Applications can be integrated in CodeArts Pipeline and orchestrated to be executed in parallel or serially. Pipeline parameters are supported.

How Does CodeArts Deploy Work?

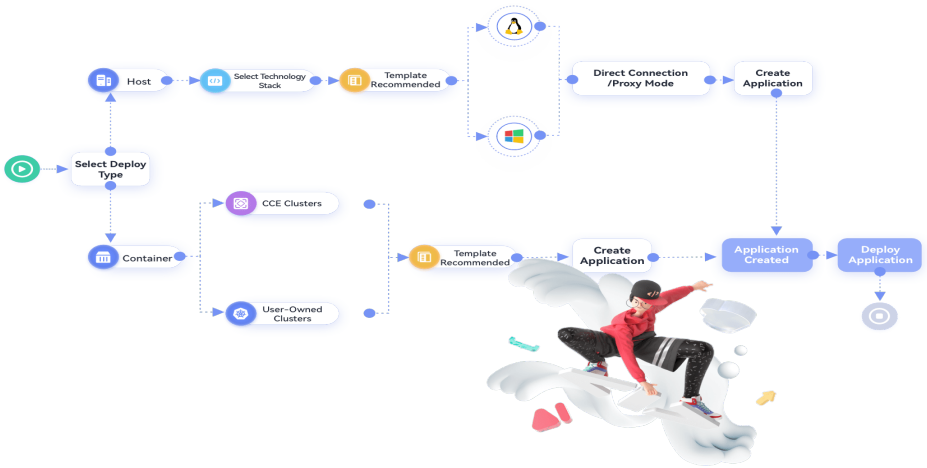
You can either manually upload artifacts or create a build task to save artifacts to Artifact or an image repository. CodeArts Deploy uploads the artifacts and installs them on a host or container.



2 Functions

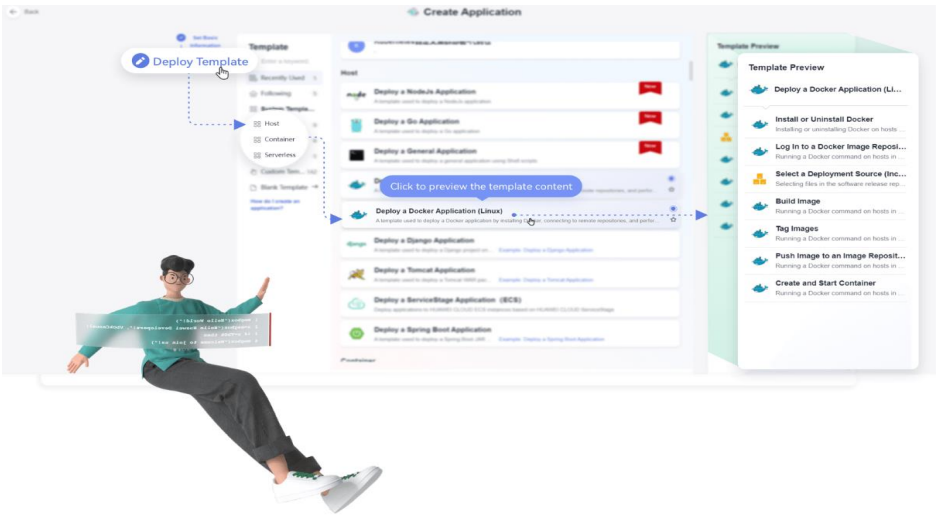
2.1 Easily Creating an Application Following a Wizard

To help new users quickly get started, CodeArts Deploy provides a wizard to create an application. The decision tree guide also reduces usage costs.



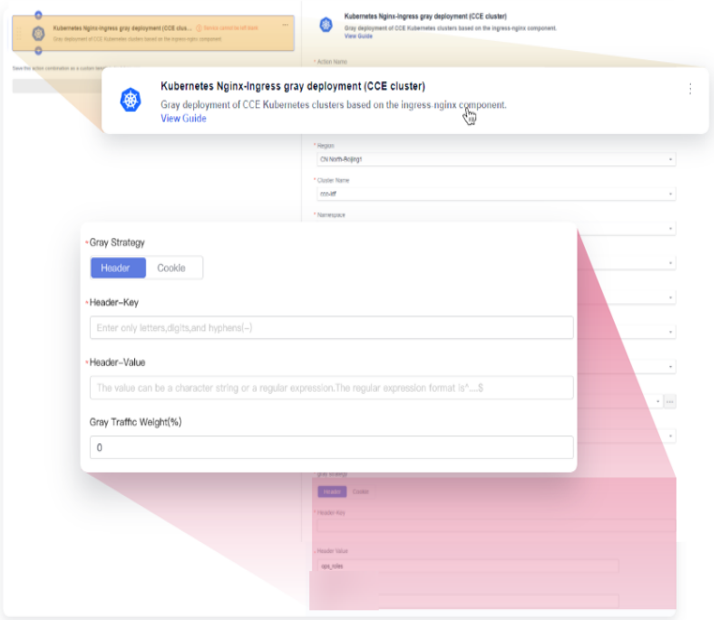
2.2 Diverse System Templates and Instant Preview

CodeArts Deploy covers host, container, and serverless deployment scenarios. It provides many types of **system deployment templates** for Node.js application deployment, Go application deployment, Nginx-Ingress grayscale release, and general deployment. It also supports template preview, so that you can quickly preview deployment capabilities of each template and select a proper one.



2.3 Grayscale Release of Kubernetes nginx-ingress

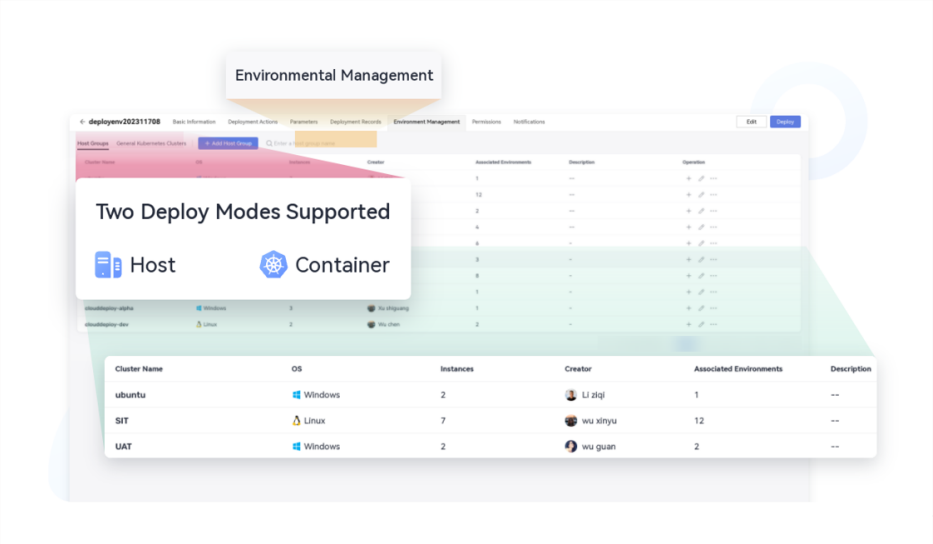
CodeArts Deploy supports gray deployment on CCE Kubernetes clusters based on the Nginx-Ingress component. The deployment action **Kubernetes nginx-ingress gray deployment (CCE cluster)** is added to simplify configuration and improve efficiency. For details, see .



2.4 Differentiated Environment Management

CodeArts Deploy provides the **Environment Management** to host environment resources such as host clusters consisting of hosts or proxies and Kubernetes clusters (available soon). Refined environment permission management further

standardizes dependencies between applications (software packages) and environments, and implements application-level isolation and differentiated management.



2.5 Multi-Region DR and Multi-Account Collaborative Deployment

To solve region and permission restrictions during application deployment, CodeArts Deploy provides functions such as application-level cross-region HA DR deployment and collaborative deployment of multiple accounts in an enterprise for flexibility, continuity, and security.

The deployment scope is as follows:

- **Kubernetes (CCE Cluster)**
- **FunctionGraph**

3 Notes and Constraints

Before You Start

- If you apply CodeArts Deploy in specific industries (such as education, healthcare, and banking), you must comply with the user data protection laws and content management laws stipulated by related countries/regions.
- Do not use CodeArts Deploy to crawl, process, or upload data on external video or audio webpages.
- Do not use CodeArts Deploy to perform operations other than source code compilation and building.
- Do not use commands such as **sleep**, **usleep**, **read**, **timeout**, **yes**, **dd**, and **while** loop to occupy server processes for a long time (more than 10 minutes).

Naming

Item	Description
Cluster name	• Use digits, letters, hyphens (-), underscores (_), and periods (.). • The value can contain 3 to 128 characters.
Host name	• Use digits, letters, hyphens (-), underscores (_), and periods (.). • The value can contain 3 to 128 characters.
Application name	• Use digits, letters, hyphens (-), and underscores (_). • The value can contain 3 to 128 characters.
Action name	• Do not start or end with a space. Use letters, digits, spaces, and these special characters: -_,:./() • The value can contain 1 to 128 characters.

Specifications and Constraints

This section describes the constraints on CodeArts Deploy.

- Basic constraints

  Table 3-1 Basic constraints

Category	Item	Constraint
Application management	Maximum number of applications in a single project	2,000
	Maximum number of days for which deployment records can be viewed under an application	92
	Maximum time for deploying an application (minutes)	30
Basic resource management	Maximum number of host clusters in a project	1,000
	Maximum number of hosts in a host cluster	200
	Maximum number of hosts whose connectivity is verified in batches	200
Environment management	Maximum number of environments in a single application	100
	Maximum number of hosts in a single environment	200
	Maximum number of hosts whose connectivity is verified in batches	200

- Only OSs listed in the table below are supported.

Table 3-2 OSs supported

OS	Version
CentOS	6.3, 6.5, 6.8, 6.9, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 8.0, 8.1, 8.2, and Stream 9 Note: Docker 18.09.0 is incompatible with CentOS 8.
Debian	8.2.0, 8.8.0, 9.0.0, and 10.0.0
EulerOS	2.0, 2.2, 2.3, and 2.5
Ubuntu	14.04, 16.04, 18.04, 20.04, 22.04 Note: Ubuntu 22.04 supports only Docker 19.03 and later versions. It is incompatible with Nginx 1.12.2 and does not support all PHP versions. Ubuntu 20.04 is incompatible with Nginx 1.12.2 and PHP 5.6.38.
Windows	2012 R2, 2016, 2019, Win 7, and Win 10
OpenEuler	20.03 Note: JDK11 and PHP-5.6.38 are incompatible with openEuler (x86). All versions of Nginx, Python, JDK, and PHP are incompatible with openEuler (Arm).
AlmaLinux	AlmaLinux 9

- Only cluster versions listed in the table below are supported.

Table 3-3 Cluster versions

Type	Version
CCE cluster	1.17–1.25
Self-managed K8S cluster	Comply with constraints and limitations in the **Kubernetes community**

