

Tencent Container Registry

Quick Start

Product Documentation



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Last updated : 2022-01-18 17:08:55

This document describes how to purchase a Tencent Container Registry (TCR) Enterprise Edition instance, configure a network access policy, and push and pull container images.

To use TCR Individual Edition, please see [Personal Getting Started \(old\)](#).

Step 1: Signing up for a Tencent Cloud Account

If you already have a Tencent Cloud account, ignore this step.

[Click here to sign up for a](#)

Step 2: Activating TCR Service

Log in to the [Tencent Cloud console](#), select **Tencent Cloud services > Tencent Container Registry** to enter the TCR console, activate TCR and authorize permissions to it according to the prompts. If you have already authorized permissions to TCR, skip this step.

[Activate TCR](#)

Step 3: Purchasing an Enterprise Edition Instance

1. Log in to the [TCR console](#) and go to the "Instance Management" page.
2. Click **Create**. On the TCR purchase page, purchase an instance by referring to the following information, as shown in the figure below.

Tencent Container Registry [Product Details](#)

[Product Documentation](#) [Billing Instructions](#) [Console](#)

Q: Note: TCR Enterprise is officially commercialized, providing enterprise-level secure hosting and cross-region synchronization services for cloud-native artifacts, and featuring the capability of large-scale cluster image distribution.

Purchase Notes

- Instructions:** TCR provides you with enterprise-level hosting and distribution services for cloud-native artifacts. Fees of service leasing, data storage and access will be generated during use. If you need to use fee service, please visit "Tencent Kubernetes Engine - Image Repository".
- Billing Rules:** For now, TCR Enterprise only supports pay-as-you-go (postpaid) billing mode. We will support the monthly subscription (prepaid) billing mode soon. By then, you can convert existing instances to monthly subscription.
- Billing Rules:** TCR only charges hosting service fees. The cloud-native artifacts (such as container images and Helm charts) involved in using this service are hosted in your COS Bucket and generate storage and traffic fees based on actual usage. The COS billing method is adopted. You can go to the "Billing Center" to query billing information.

Select Configuration

Instance Name

The instance name can contain 5-50 characters, including lowercase letters, digits and "-". It cannot start or end with "-", and cannot be modified once created.

Instance Region

South China			East China			North China		
Guangzhou	Shenzhen Finance	Shanghai	Nanjing	Shanghai Finance	Beijing	Beijing Finance		
<small>Hong Kong, Macao and Taiwan</small>			<small>Southeast Asia</small>			<small>Northwest Asia</small>		
Taipei (China)	Hong Kong (China)	Singapore	Bangkok	Seoul	Silicon Valley	Virginia		
Europe								
Frankfurt								

If you want to create instances in other regions, please submit a ticket to apply for it.

Instance Specification	Basic	Standard	Premium
Dedicated registry service	✓	✓	✓
Dedicated service access domain name	✓	✓	✓
Dedicated data storage backend	✓	✓	✓
Temporary/long-term access credential management	✓	✓	✓
Multi-level repository directory	✓	✓	✓
Helm chart hosting	✓	✓	✓
Namespace quota	50	100	500
Image repository quota	1000	3000	5000
Helm repository quota	1000	3000	5000
Public network access control	✓	✓	✓
VPC access control	✓	✓	✓
VPC access quota	3	5	10
Image vulnerability scanning	✓	✓	✓
Operation log retention	7 days	15 days	30 days
Multiple regions replications for single instance, nearest server access	/	/	✓
Cross-instance (cross-region) automatic synchronization	/	✓	✓
Multi-AZ disaster recovery in the same city	✓	✓	✓
Webhook Trigger Type	✓	✓	✓
Container image compilation and building	✓	✓	✓
Cloud-native delivery workflow	/	✓	✓
P2P accelerated distribution of images	✓	✓	✓

Instance Domain Name

After creating the instance, please go to access control to specify the VPC and public IP range for private and public access.

Backend Storage **Create a COS bucket under the current account**

Note that data such as images of the instance will be stored in the COS bucket, which will cause storage and traffic fees. For more information, please see [COS Billing Guide](#)

Instance Tag +

Price Calculator

Specification: Guangzhou-Basic

Configuration Fee: **0.14USD/hour**

I have read and agree to "TCR Service Protocol".

[Buy Now](#)

- **Billing Mode:** TCR supports the pay-as-you-go billing mode. For more information, see [Billing Overview](#).
- **Instance Name:** enter a custom instance name. The name must be globally unique and cannot be identical with an existing instance name of your own or another user. This name is used as the access domain name of this

TCR instance. **The name cannot be modified after creation.** We recommend that you use an abbreviation that combines the company name and instance region or project as the instance name.

- **Instance Region:** select a region where you want to deploy the instance. **The region cannot be modified after the instance is created.** Select the region based on the location of the container cluster resources.
 - **Instance Specification:** select the instance specifications that you want to purchase. Different instance specifications have different instance performance levels and quotas. For more information, see [Purchase Guide](#).
 - **Instance Domain Name:** the instance domain name that is automatically generated. Its prefix is the same as that of the instance name. **The instance domain name cannot be modified after the instance is created.** This domain name is used when you run the `docker login` command to log in to the instance.
 - **Backend Storage:** when an instance is created, a Tencent Cloud COS bucket will be automatically created and associated under the current account. Images and other data in the instance will be stored in the bucket, incurring storage and traffic costs. For more information, see [Billing Overview](#). After instance creation, you can go to the COS console to view the bucket. Avoid mistakenly deleting the bucket. Otherwise, data such as images hosted in the instance will be lost.
 - **Instance Tag:** bind the newly created instance to a Tencent Cloud tag. You can also bind and edit tags on the instance details page after instance creation.
3. Read and agree to the TCR Service Agreement.

Enterprise Edition instances are billed differently based on their region and specifications. Please confirm the selected specifications and configuration fees after configuring the basic information.
 4. After checking the selected option, click **Buy Now** to purchase the enterprise edition instance you have selected and configured.
 5. You can check the instance purchase progress on the "Instance List" page. When the instance status changes to "Running", the instance has been successfully purchased and is available. You can complete the following steps to configure the access control policy of the instance and log in to the instance to push and pull images.

Step 4: Configuring the Network Access Policy

To protect your data security, all public and private network access requests are denied by default after the instance is created. Before you log in to the instance, push, and pull images, you must configure the network access policy.

In the console, select **Access Control** in the left sidebar, select **Private Network Access** or **Public Network Access** as needed, and configure the corresponding access policy.

- Private
- Public

Note

Both TCR Individual and TCR Enterprise do not support classic network access. If you need to use this service, we recommend that you switch to VPC as soon as possible and access the service over the private network.

To use this service in TKE, refer to [Using a Container Image in a TCR Enterprise Instance to Create a Workload](#) to configure the network access policy.

We recommend that you push and pull container images through private network access because it can significantly accelerate the push and pull speeds and reduce public network traffic costs. In addition, you can manage private network access linkages to specify the VPCs that are allowed to access your image data and improve data security.

Follow the steps below:

1. In the upper part of the "Private Network Access" page, select the created instance.
2. Click **Create**. In the "Create a private network access linkage" window, configure the VPC and subnet information, as shown in the figure below.

Create a private network access linkage ✕

Associated Instance intl-demo (Guangzhou)

Virtual Private Cloud

If no suitable VPC in the current region, you can [create a new one.](#)

You are associating the private network with a TCR instance. After the association, a bridge link is established between the private network and the TCR instance, occupying an IP address of the private network as the access entry. In this way, the cloud server connected to the private network can access the associated instance by accessing the private network IP address. If the private network is connected to other private network or IDC network through cloud networking or Direct Connect, server connected to the associated network can also access the TCR instance resources via the private network. After the private network access link is established, you can use the self-owned DNS, or configure the host on the server, to parse the instance domain name to a specific IP address of the private network. For more information, please see [private network access control](#).

Select the VPC where the container cluster to access the image repository is located and select any subnet in this VPC that has usable private IP addresses.

- After the private network access linkage is successfully established, the parsing of the instance domain name is not configured in the connected VPC by default. Click **Manage Auto-parsing** to enable the parsing for private network domain name. This feature is based on Tencent Cloud Private DNS. Please activate this service before proceeding. For more information, see [Private Network Access Control](#).

Step 5: Creating a Namespace

- Select **Namespace** in the left sidebar. On the "Namespace" page that appears, click **Create**.

Note :

Namespaces are used to manage image repositories in the instance. They do not directly store container images, but can map to teams, product projects, or other custom layers in an enterprise.

2. In the "Create a Namespace" window, configure the namespace information and click **Confirm**, as shown in the figure below.

Create a Namespace ✕

Associated Instance **intl-demo**

Name *

2 to 30 chars. It supports lower-case letters, numbers and symbols (".", "_", "-"). Symbols cannot be used in the beginning, at the end or consecutively.

Access Level **Private** **Public**

It defaults to Private. If you set it to "Public", all image repositories and Helm Charts in this namespace will become public. As "Anonymous Access" is enabled for instance by default, any clients that pass access control can get the images and charts directly without logging in.

- **Name:** we recommend that you set this parameter to the name of an enterprise team or product project. Namespace names must be unique in an instance.
- **Access Level:** you can select either **Private** or **Public**. Image repositories and Helm chart repositories in the namespace will inherit this attribute. You can modify this attribute after creating the namespace.

Step 6: (Optional) Creating an Image Repository

Note :

After creating a namespace, you can use the Docker client to push images to the namespace, and the corresponding image repository will be automatically created.

1. Click **Image Repository** in the left sidebar to go to the "Image Repository" list page.
2. Click **Create**. In the "Create an Image Repository" window, configure the image repository information and click **Confirm**, as shown in the figure below.

In the "Namespace" drop-down list, you can select a created namespace. "Name" can be a multi-level path, and "Detailed Description" supports the Markdown syntax.

Create an Image Repository ✕

Associated Instance **intl-demo**

Namespace *

Name * ✔

2 to 200 chars. It can only contain lower case letters, numbers and symbols (".", "_", "-", "/"). Symbols cannot be use in the beginning, at the end or consecutively. Multi-level addresses are supported. e.g., "sub1/sub2/repo".

Image source Local

After creating the image repository, you can use Docker client or CI tool to push existing images to this repository.

Brief description

Detailed Description

Step 7: Pushing and Pulling an Image

After completing the preceding steps, you have created an instance and image repository. Next, you can perform the following operations to push an image to or pull an image from the image repository.

Note :

In this step, you need to use a CVM or CPM with Docker installed and ensure that the target client is in the public or private network access allowlist defined in [Configuring the Network Access Policy](#).

Logging in to the TCR instance

1. Click **Access Credential** in the left sidebar to go to the "Access Credential" list page. Select the newly created instance, and click **Generate Temp Login Token**.

Note :

In this document, a temporary login token for the instance is used as an example. You can also [obtain a long-term access credential](#).

2. In the "Temp login token" window that appears, click **Copy login token**.
3. In the command-line tool, run the login token that you have obtained to log in to the instance. The following shows a sample token:

```
sudo docker login demo-tcr.tencentcloudcr.com --username 1xxx1019xxxx --password eyJhbGciOiJSUzI1NiIsImtpZCI6I1ZCVTY6VTVGZpP...
```

If `Login Succeeded` is displayed in the command line tool, you have logged in to the instance successfully.

Pushing a container image

You can create a container image on the local server or obtain a public image from Docker Hub for testing.

This document uses the official and latest Nginx image on Docker Hub as an example. In the command line tool, run the following commands sequentially to push this image. Replace `demo-tcr`, `project-a`, and `nginx` with the actual instance, namespace, and image repository names you have created.

```
sudo docker tag nginx:latest demo-tcr.tencentcloudcr.com/project-a/nginx:latest
```

```
sudo docker push demo-tcr.tencentcloudcr.com/project-a/nginx:latest
```

Pulling a container image

This document uses the successfully pushed Nginx image as an example. In the command line tool, run the following command to pull this image:

```
sudo docker pull demo-tcr.tencentcloudcr.com/project-a/nginx:latest
```

References

TCR Enterprise Edition provides advanced features such as Helm chart hosting, cross-region instance synchronization, and image security scanning. To use them, refer to the following documents:

- [Managing Helm charts](#)
- [Configuring Instance Synchronization](#)
- [Trigger Management](#)
- [Network Access Control Overview](#)
- [Access Management](#)

What if a problem occurs when I use TCR?

If you encounter a problem while using TCR, locate and solve the problem by referring to the [FAQs](#). Alternatively, you can [submit a ticket](#), and we will solve the problem for you as soon as possible.

TCR Individual Getting Started

Last updated : 2023-01-05 15:21:12

This document describes how to initialize a Tencent Container Registry (TCR) Individual instance, configure a namespace, and push and pull container images.

To use TCR Enterprise, please see [Quick Start](#).

Step 1: Signing up for a Tencent Cloud Account

If you already have a Tencent Cloud account, ignore this step.

[Click here to sign up for a](#)

Step 2: Activating TCR Service

Log in to the [Tencent Cloud console](#), select **Tencent Cloud services > Tencent Container Registry** to enter the TCR console, activate TCR and authorize permissions to it according to the prompts. If you have already authorized permissions to TCR, skip this step.

[Activate TCR](#)

Step 3: Initializing TCR Individual Service

1. Log in to the [TCR console](#) and go to the "Instance Management" page.
2. Select the region where you want to use the service. Currently, TCR Individual service is only deployed in Guangzhou throughout the Chinese mainland and supports cross-region access through private network in the regions such as Beijing, Shanghai and Chengdu. In this document, we take a TCR Individual instance in Guangzhou region as an example.
3. Check the tab of TCR Individual instance in the region, and click **Initialize Password** to set the password for accessing TCR Individual service. You can reset the password by clicking **More > Reset the login password**.
4. After the initialization of the login password is completed, you can click **Log In to Instance** to have the guidance on login of TCR Individual.

```
docker login ccr.ccs.tencentyun.com --username=xxxxxxxxxx
```

"username" is the current Tencent Cloud account ID.

Run this login command in the command line tool, and enter the password. The login is successful if `Login Succeeded` is displayed.

Step 4: Creating a Namespace

1. Select **Namespace** in the left sidebar. On the "Namespace" page that appears, select "TCR Individual Instance" and click **Create**.

Note :

Namespaces are used to manage image repositories in the instance. They do not directly store container images, but can map to teams, product projects, or other custom layers in an enterprise.

2. In the "Create a Namespace" window, configure the namespace information and click **Confirm**, as shown in the figure below.

Create Namespace ✕

Name

Up to 30 characters, can only contain lowercase letters, numbers, and periods ("."), underscores ("_"), and hyphens ("-"). It can neither start or end with symbols nor contain consecutive symbols

Submit

- **Name:** it is recommended to use an enterprise team or project name. TCR Individual instance is a shared instance. You cannot create a namespace with the name that has been used by another user.

Step 6: (Optional) Creating an Image Repository

Note :

After creating a namespace, you can use the Docker client to push images to the namespace, and the corresponding image repository will be automatically created.

1. Click **Image Repository** in the left sidebar to go to the "Image Repository" list page. Select "TCR Individual Instance" at the top of the page.
2. Click **Create**. In the "Create an Image Repository" window, configure the image repository information and click **Confirm**, as shown in the figure below.

In the "Namespace" drop-down list, you can select a created namespace. "Name" cannot be a multi-level path, and "Detailed Description" supports the Markdown syntax.

Create Image Repository ✕

Name

Up to 200 characters. It supports only lowercase letters, numbers, and symbols (".", "_", "-"), and cannot begin or end with a symbol

Type

Namespace

Description

Up to 1000 characters

Step 7: Pushing and Pulling an Image

After completing the preceding steps, you have created a namespace and image repository. Next, you can perform the following operations to push an image to or pull an image from the image repository.

Note :

You need to use a CVM or physical machine that has installed the Docker.

Pushing a container image

You can create a container image on the local server or obtain a public image from Docker Hub for testing.

This document uses the official and latest Nginx image on Docker Hub as an example. In the command line tool, run the following commands sequentially to push this image. Replace `project-a` and `nginx` with the actual namespace and image repository names you have created.

```
sudo docker tag nginx:latest ccr.ccs.tencentyun.com/project-a/nginx:latest
```

```
sudo docker push ccr.ccs.tencentyun.com/project-a/nginx:latest
```

Pulling a container image

This document uses the successfully pushed Nginx image as an example. In the command line tool, run the following command to pull this image:

```
sudo docker pull ccr.ccs.tencentyun.com/project-a/nginx:latest
```

What if a problem occurs when I use TCR?

If you encounter a problem while using TCR, locate and solve the problem by referring to the [FAQs](#). Alternatively, you can [submit a ticket](#), and we will solve the problem for you as soon as possible.