

# Tencent Kubernetes Engine Beginner's Guide

# **Product Documentation**





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## Beginner's Guide

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This document helps you quickly understand and get started with Tencent Kubernetes Engine (TKE) as instructed.

## 1. What Is TKE?

Based on the native Kubernetes system, Tencent Kubernetes Engine (TKE) provides container-centric, highly scalable and high-performance container management services. It works closely with Tencent Cloud IaaS products to help you quickly implement business containerization. For more information, see Overview. TKE allows you to manipulate clusters and services in the TKE console or TencentCloud API.

## 2. TKE Billing

TKE allows you to create different types of Kubernetes clusters with different billable items and billing standards. For more information about the billing modes and prices, see Purchase Guide.

## 3. Using TKE

#### 3.1 Register on Tencent Cloud

Before using TKE, you need to sign up for a Tencent Cloud account and complete the identity verification.

#### 3.2 Role authorization

You need to authorize the current service role and grant operation permissions for TKE before accessing your other Tencent Cloud service resources.

Open the Tencent Cloud console, select **Products** > **Tencent Kubernetes Engine** to enter the TKE console and authorize TKE according to the prompts. After that, get relevant resource operation permissions, and you can start to create a cluster. Steps are as follows:

1. View information in the displayed **Service Authorization** dialog box, and click **Go to Cloud Access Management**, as shown in the following figure.





2. On the **Role Management** page, read information related to the role, as shown in the following figure.

Service Authorization		
After you agree to grant permissions to TencentCloud Kubernetes Engine, a preset role will be created and relevant permissions will be granted to TencentCloud Kubernetes Engine		
Role Name	TKE_QCSRole	
Role Type	Service Role	
Description	Current role is a TencentCloud Kubernetes Engine service role, which will access your other cloud service resources within the permissions of the associated policies.	
Authorized Policies	Preset policy QcloudAccessForTKERole①, Preset policy QcloudAccessForTKERoleInOpsManagement③	
Grant Ca	ancel	

3. Click **Grant** to grant authorization. Now you can go to the TKE console to create clusters and purchase related products.

#### 3.3 Creating a cluster

For how to quickly create a standard managed cluster, see Quickly Creating a Standard Cluster. For the complete process of creating a standard managed cluster, see Creating a Cluster.

If you need more types of clusters, see Creating Serverless Cluster, Creating a Container Instance, and Creating Edge Cluster.

#### 3.4 Deploying workloads

You can deploy workloads by deploying images or orchestrating the YAML file.

If you want to deploy stateless workloads through image templates, see directions in Creating Simple Nginx Service or WordPress with Single Pod.

If you want to deploy workloads through custom images, see directions in Building Hello World Service Manually.

#### 3.5 Cluster operations

TKE is a management platform for clusters, applications, storage and networks. For more information or directions, please refer to the table below.

Operation Reference

Connect to a TKE cluster from a local client using Kubectl, the Kubernetes command line tool	Connecting to a Cluster
Upgrade a running Kubernetes cluster	Upgrading a Cluster
Add a pod to the created Kubernetes cluster	Adding a Node
Manage nodes in a Kubernetes cluster	Creating a Node Pool
Operate native Kubernetes objects in the console	Kubernetes Object Management
Provide a fixed access entry for a set of containers through service	Basic Features
Configure different forwarding rules through Ingress resources	Ingress Management
Leverage TKE's storage capability	Storage Management Overview
Assign the IP addresses within the container network address range to containers in the cluster	Container Network Overview
Store and analyze service logs in Kubernetes clusters	Log Collection
Monitor clusters	TMP Instance Management
Use a private image hosted in Tencent Container Registry (TCR) to deploy applications	Using a Container Image in a TCR Enterprise Instance to Create a Workload

## 4. Beginner's Guide

#### Can I use TKE in classic network?

No. Currently, you can use TKE in a VPC but not a classic network.

#### Can I add an existing CVM to a cluster?

Yes. After creating a cluster, you can add an existing CVM to it. For more information, see Adding a Node.

#### Why does my service keep starting?

If there is no process running in the container, the service may keep starting. For more information on service startup, see Event FAQs.

#### How do I perform network planning before creating a cluster?

When creating a cluster, make sure that the IP ranges of the cluster network and container network do not overlap. Generally, you can select a subnet of a VPC instance as the node network of the cluster. For more information, see Container Network and Cluster Network Descriptions.

#### How do I access a created service?

Different access methods have different access entries. For more information, see the "Service Access" section in Service Management Overview.

\*\*How does a container access the public network?

If the host where the container resides has a public IP address and public bandwidth, the container can directly access the public network. Otherwise, a NAT gateway is required for accessing the public network.

#### Can I use TKE if I don't know how to create an image?

The features related to Helm 3.0 that are integrated in TKE enable you to create products and services such as Helm Chart, TCR, and software services. Created applications will run in the cluster you specify to offer corresponding capabilities. For more information, see Managing Applications.

#### How do I manage configuration files or environment variables for my services?

You can manage configuration files by editing configuration items.

#### How do services access each other?

In a cluster, services with the same namespace can directly access one another, whereas those with different namespaces access one another by using service-name>.<namespace-name>.svc.cluster.local.

## 5. Feedback and Suggestions

If you have any doubts or suggestions when using TKE products and services, you can submit your feedback through the following channels. Dedicated personnel will contact you to solve your problems.

For questions about the product documentation, such as links, content, or APIs, click **Send Feedback** on the right of the document page.

If you have any questions about products, submit a ticket.