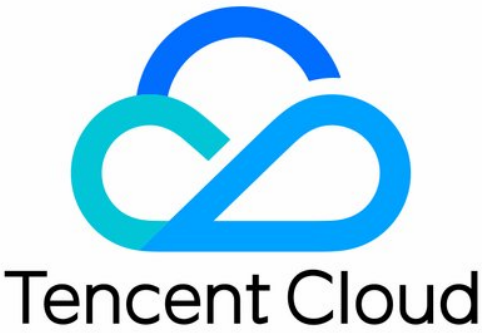
Tencent Kubernetes Engine

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, TKE provides container-centric, highly scalable and high-performance container management services. You can easily run applications on a hosted CVM instance cluster. Tencent Cloud also provides Elastic Kubernetes Service (EKS) and Tencent Kubernetes Engine for Edge (TKE Edge) so that you can choose the service you need.

TKE enables you to manipulate clusters and services through the TKE console and Kubectl.

2. TKE Billing

TKE charges cluster management fees based on the specifications of the managed clusters, and charges cloud resources fees based on the actual usage. For more information about the billing modes and prices, see TKE Billing Overview.

3. Using TKE

3.1 Registration and authentication

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.

3.3 Creating a cluster

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

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Cluster.

If you need more types of clusters, please see Creating Elastic Cluster 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.

Features	Reference
To connect to a TKE cluster from a local client using Kubectl, the Kubernetes command line tool	Connecting to a Cluster
To upgrade a running Kubernetes cluster	Upgrading a Cluster
To add a pod to the created Kubernetes cluster	Adding a Node
To manage nodes in a Kubernetes cluster	Creating a Node Pool
To operate native Kubernetes objects on the console	Kubernetes Object Management
To provide a fixed access entry for a set of containers through service	Basic Features
To configure different forwarding rules through Ingress resources	Ingress Management
To leverage TKE's storage capability	Storage Management Overview
To assign the IP addresses within the container network address range to containers in the cluster	Container Network Overview
To store and analyze service logs in Kubernetes clusters	Log Collection
To monitor clusters	TPS Instance Management
To 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

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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` .

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5. Feedback and Suggestion

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.

- If you have any questions regarding CLS documentation, such as links, content, or APIs, please click **Send Feedback** on the right of the documentation page.
- If you have any questions about products, please submit a ticket.

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