

Tencent Kubernetes Engine

Purchasing Guidelines

Product Introduction



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Purchasing Container Clusters

Purchasing Quota of Container Clusters

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Purchase Limits for Container Clusters

For each user, fixed quotas are allocated for Tencent Cloud TKE clusters in each region.

1) You can find below different container cluster quotas that one user can purchase in different regions. If you need more clusters, submit a [quota request ticket](#) for application.

Beijing	Shanghai	Guangzhou
5	5	5

2) Each cluster can have 20 nodes at most. If you need more CVMs for your cluster, submit a [quota request ticket](#) for application.

3) The purchase restrictions for cloud services apply to CVMs generated by Tencent Cloud TKE. Click to view [Details](#).

Network Settings of Containers and Nodes

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Node network and container network are the most fundamental attributes of a cluster. You can implement the network segmentation of a cluster by setting node network and container network.

- Node network: The system assigns the IP addresses within the node network address range to the CVMs in the cluster. A node network is a Tencent Cloud VPC. You can choose a subnet in the VPC as the node network of the cluster. For more information, please see [Private Network and Subnet](#).
- Container network: The system assigns the IP addresses within the container network address range to the containers in the cluster. You can customize three private IP address ranges as the container network.

Relationship between node network and container network

- IP address ranges of node network and container network cannot conflict with each other.
- IP address ranges of the container networks of different clusters in the same VPC cannot conflict with each other.
- In case of a conflict between container network and VPC routing, the container network is preferably adopted for forwarding.

Communication between container network and other Tencent Cloud resources

- Containers in a cluster are interconnected with each other.
- Containers in a cluster are directly interconnected with nodes.
- Containers in a cluster are interconnected with [Cloud Database](#), [Cloud Redis](#) and [Cloud Memcached](#).

Container pod can directly access resources within a VPC or containers in the same cluster. If not, access via SNAT.

Disk Settings of Container Nodes

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Description

When creating a cluster and add a cluster for container services, you can set the type and size of the system disk and the data disk of the container node, and choose from different disks to satisfy your individual business demands.

Suggestions

1. The directory of the container is stored in the system disk. It is recommended that you create a system disk with a capacity of 50 GB.
2. If there is requirement for system disk, you can adjust the Docker's directory to the data disk when initializing the cluster.

Public IP of Container Service Node

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How to Use Public IP of Container Service Node

About Enabling Public IP

By default, public IP will be assigned to the cluster node if you create a cluster. With the assigned public IP, you can:

- log in to the cluster node server through the public IP.
- access the public network services through the public IP.

If you do not want your business to be directly exposed to the public network, but need to access the public network, you can use Tencent Cloud NAT gateway. Click to view [NAT gateway details](#). The following shows how to use the NAT gateway to access the public network.

About Purchasing Public Network Bandwidth

When you create public network services, the public network load balancer uses bandwidth and traffic of the node. If you need public network services, public network bandwidth is required for nodes.

If your business does not require public network services, you can choose not to purchase public network bandwidth.

How to Use NAT Gateway

The CVM is not bound to an EIP; all traffic from accessing the Internet is forwarded through the NAT gateway. With this method, the traffic from the CVM accessing the Internet will be forwarded to the NAT gateway through the private network. That means this traffic will not be subject to the public network bandwidth limit specified when the CVM was purchased, nor will the traffic generated at the NAT gateway occupy the public network bandwidth egress of the CVM.

Tips on usage:

Step 1: Create a NAT gateway

- Log in to Tencent Cloud Console, select "Virtual Private Cloud" tab, and select "NAT Gateway".
- Click the "New" button at the upper left corner, and enter or specify the following parameters in the pop-up box:
- After selection, click "OK" to complete the creation of NAT gateway.
- After the creation of a NAT gateway, you need to configure the routing rules in the Routing Tables page in the Virtual Private Cloud console to direct the subnet traffic to the NAT gateway.

Note: The rental fee will be frozen for 1 hour during the creation of NAT Gateway.

Step 2: Configure the routing table associated with the subnet

- Log in to Tencent Cloud Console, and click "Virtual Private Cloud" in the navigation bar to enter the VPC Console. Select "Routing Tables".
- In the routing table list, click the routing table ID with which the subnet that needs to access the Internet is associated to enter its details page, and click "Edit" button in the "Routing Rules".
- Click "New line", fill in the "Destination" field, select "NAT Gateway" in "Next hop type", and select the created NAT gateway ID.
- Click "OK". After the above configuration is made, the traffic generated when the CVM in the subnet associated with the routing table accesses the Internet will be directed to the NAT gateway.

Others: Use EIP

The CVM is only bound to an EIP, and the NAT gateway will not be used. With this method, all traffic from the CVM accessing the Internet will go out from the EIP. That means this traffic will not be subject to the public network bandwidth limit specified when the CVM was purchased. The cost resulting from accessing the public network will be charged based on the network billing mode of the CVM.

If you are using NAT gateway and EIP at the same time, with this method, all traffic from the CVM actively accessing the Internet can only be forwarded to the NAT gateway through the private network, and the returning packets will be returned to the CVM through the NAT gateway as well. This traffic will not be subject to the public network bandwidth limit specified when the CVM was purchased, nor will the traffic generated at the NAT gateway occupy the public network bandwidth egress of the CVM. If the traffic from the Internet actively accesses the elastic public IP of the CVM, the returning packets of the CVM will be uniformly returned through the EIP. This way, the resulting outbound traffic of the public network will be subject to the public network bandwidth limit specified when the CVM was purchased. The cost resulting from accessing the public network will be charged based on the network billing mode of the CVM.

Note: For users with a Bandwidth Package for bandwidth sharing, the outbound traffic generated at the NAT gateway will be billed as per the Bandwidth Package (the 0.8 CNY/GB network traffic fee will not be charged separately). It's recommended that you set a limit on the outbound bandwidth of the NAT gateway, so as to avoid any high Bandwidth Package charge due to excessively high amount of such bandwidth.

Security Group Settings of Container Service

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TKE Security Group Configuration

Security has always been our major concern. By listing security as the top priority of the product design, Tencent Cloud requires its products fully isolated and provides multiple security protections with its basic network. TKE is a typical example. It adopts VPC as the underlying network of TKE in Phase I. This document mainly introduces the best practices of the security group under the TKE to help you select the security group policy.

What Is the Security Group?

Security group is a virtual firewall with a stateful packet filtering feature and critical network security isolation means to set network access control for one or more CVM(s). For more information on security groups, please see [Security Details](#).

Principles on Security Group Selection with TKE

1. It is recommended that CVMs in the same cluster are bound to the same security group. The cluster's security group does not add other CVMs.
2. Security groups grant the minimum permission externally.
3. The following TKE rules need to be open to the Internet:
 - Container network and node network
 - Container network and node network of the cluster if different clusters in the same VPC cannot be connected
 - Port 22 in SSH login node
 - Port 30000-32767 for TKE access

Suggestions

It is recommended that you configure the security groups for the cluster through the security group template provided by the TKE.

Pricing

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No service fee is charged for container services. The fee is only charged by the actual usage of cloud resources. By using container services you may need the following products. For more information, please see product billing methods.

- [Postpaid CVM](#)
- [Postpaid Disk](#)
- [Load Balancer Billing Instructions](#)

Purchasing Channels

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Purchase from Official Website

Purchase TKE products on [Tencent Cloud TKE Purchase Page](#).