

# Cloud Virtual Machine

## Product Introduction

## Product Documentation



## Copyright Notice

©2013–2025 Tencent Cloud. All rights reserved.

Copyright in this document is exclusively owned by Tencent Cloud. You must not reproduce, modify, copy or distribute in any way, in whole or in part, the contents of this document without Tencent Cloud's the prior written consent.

## Trademark Notice



All trademarks associated with Tencent Cloud and its services are owned by the Tencent corporate group, including its parent, subsidiaries and affiliated companies, as the case may be. Trademarks of third parties referred to in this document are owned by their respective proprietors.

## Service Statement

This document is intended to provide users with general information about Tencent Cloud's products and services only and does not form part of Tencent Cloud's terms and conditions. Tencent Cloud's products or services are subject to change. Specific products and services and the standards applicable to them are exclusively provided for in Tencent Cloud's applicable terms and conditions.

# Contents

## Product Introduction

CVM Overview

Strengths

Basic Concepts

Regions and Zones

Tutorial

# Product Introduction

## CVM Overview

Last updated: 2025-11-07 16:52:07

### What Is CVM?

Cloud Virtual Machine (CVM) is a scalable computing service provided by Tencent Cloud that allows you to obtain a secure and reliable virtual computing environment within minutes without the need to purchase expensive physical hardware. CVM eliminates the need to estimate capacity and make initial investments required for traditional servers, enabling you to start any number of instances on demand and quickly deploy your businesses. Simultaneously, you can customize and adjust all resources, such as CPU, memory, hard disk, network, and security, at any time, achieving pay-as-you-go and auto scaling. Furthermore, CVM provides a rich selection of images and features such as automatic backups, monitoring and alarms, and elastic public IP addresses to help reduce Ops costs while improving business continuity and security.

Understanding the following related concepts can help you better understand CVM:

Concept	Description
Instance	A CVM instance on the cloud, including the basic computing components such as vCPU, memory, operating system, network, and disk. Tencent Cloud provides different CPU, memory, storage, and network configurations for CVM instances. For details, see <a href="#">Instance Specifications</a> .
Image	A preset template used for rapid instance creation, including the operating system and pre-installed software required to start CVM instances.
Cloud Block Storage (CBS)	A distributed block storage service that serves as the system disk or data disk for CVM instances, providing persistent data storage.
Virtual Private Cloud (VPC)	A virtual, customizable, and logically isolated network space provided by Tencent Cloud.
Private IP	Provides local area network (LAN) services, allowing CVM instances within VPC to communicate with each other.

addresses	
Public IP addresses	Provides wide area network (WAN) services, allowing CVM instances within VPC to access external services.
Security group	A virtual firewall with stateful detection and data packet filtering features, which is used for network access control of one or multiple CVM instances.

## Why Choose Tencent Cloud CVM?

Tencent Cloud CVM transforms traditional IT processes of "purchasing servers — deploying — cabling — Ops" into a rapid, streamlined mode of "three-minute startup, second-level configuration adjustment, and pay-as-you-go", delivering cost efficiency, elasticity, security, Ops, and reliability all at one time.

**Cost:** There is no need to purchase physical hardware, and billing by second and pay-as-you-go are supported. Flexible configuration downgrade is supported during off-peak periods, and you only need to pay for the actually used computing resources.

**Elasticity:** Perform the hot upgrade of CPU, memory, and bandwidth with one click. Vertical scale-out can be completed within 30 seconds, while hundreds of instances can be scaled out within seconds to smoothly handle traffic surges.

**Security:** The underlying multi-replica distributed storage ensures second-level failover during hardware failures. Capabilities such as anti-DDoS, vulnerability scanning, and host security are integrated. Key data can be protected through snapshots, regular backups, and cross-region disaster recovery with one click.

**Ops:** Tencent Cloud manages all hardware and IDC Ops. You can remotely perform installation, configuration adjustments, monitoring, and restarts through the console or APIs. System patching and failure recovery are completed automatically on the platform, allowing you to focus solely on business.

**Reliability:** Support the single-instance availability of 99.975% and data durability of 99.9999999%. Imperceptible migration upon downtime, snapshot rollback, and cloud monitoring and alarms are supported, ensuring the stability and security of your servers.

## How Is Tencent Cloud CVM Billed?

Tencent Cloud CVM resources mainly involve billing for instances, images, block storage, public network bandwidth, and other related resources, with the following billing modes:

- **Yearly/Monthly subscription:** Prepaid mode requiring usage of at least one month. It is suitable for scenarios with long-term stable and predictable resource consumption, providing lower unit prices.

- Pay-as-you-go: Postpaid mode billed by second and paid by hour, allowing instances to be created or released at any time. It is suitable for surging or short-term resource demands.
- Spot instance: Postpaid mode with prices fluctuating according to the market (typically 3%–20% of the pay-as-you-go instance price). However, instances may be reclaimed by the system proactively, making this mode suitable for business scenarios that can tolerate interruptions.
- Underwriting: Prepaid mode requiring annual resource commitment with monthly payments, without support for refunds or configuration adjustments during the period. It is suitable for long-term stable and price-sensitive business scenarios.

## How to Get Started with Tencent Cloud CVM?

By registering a Tencent Cloud account, you can create, use, or release CVM instances through the following methods provided by Tencent Cloud:

- Web console: On the Tencent Cloud official website, click **Console** in the upper right corner to perform visual management of CVM resources through the console interface, meeting daily Ops needs.
- **CVM API**: Call APIs through methods such as Explorer, CLI, and SDKs to schedule and manage CVM resources, meeting efficient Ops needs.
- **API Explorer**: Provide online calls, signature verification, SDK code generation, and quick API search capabilities. You can view request content and response results for each call, along with automatically generated examples of SDK calls.
- **Tencent CLI**: Through Tencent Cloud Command Line Interface (TCCLI), you can quickly and easily call TencentCloud API to manage your cloud resources.
- **SDK**: TencentCloud provides a supporting software development kit (SDK) for APIs that supports multiple programming languages, making it easier to call APIs.
  - [Tencent Cloud SDK 3.0 for Python](#)
  - [Tencent Cloud SDK 3.0 for Java](#)
  - [Tencent Cloud SDK 3.0 for PHP](#)
  - [Tencent Cloud SDK 3.0 for Go](#)
  - [Tencent Cloud SDK 3.0 for Node.js](#)
  - [Tencent Cloud SDK 3.0 for .NET](#)
  - [Tencent Cloud SDK 3.0 for C++](#)

## Guide of Common CVM Operations

Common Operation	Reference Documentation
------------------	-------------------------

Create a Tencent Cloud CVM instance and customize its specifications, storage media, capacity, network bandwidth, and security groups.	<a href="#">Purchasing a Customized Windows Instance</a> or <a href="#">Purchasing a Customized Linux Instance</a>
Ensure that the instance name/host name follows a certain naming convention.	<a href="#">Batch Sequential Naming or Pattern String-Based Naming</a>
Upgrade or downgrade the configurations of CVM instances.	<a href="#">Adjusting the Instance Specifications</a>
Take SSH keys as the encrypted login method for the CVM instance and manage them accordingly.	<a href="#">Managing Instance SSH Keys</a>
Change or reset the instance login password.	<a href="#">Resetting the Instance Password</a>
Create a custom image, and use the image to create more instances with the same custom items as those of the original instance.	<a href="#">Creating a Custom Image</a>
Obtain shared images from other users to obtain the required components and add custom content.	<a href="#">Sharing a Custom Image</a>
Import system disk image files from local servers or servers on other platforms into the custom image of CVM instances.	<a href="#">Importing an Image</a>
Migrate the systems and applications of source servers from original environments, such as self-built IDCs and the cloud platform, to Tencent Cloud.	<a href="#">Online Migration Overview</a>
Expand the cloud disk size to increase storage space.	<a href="#">Expanding a Cloud Disk</a>
Convert public IP addresses to Elastic IP (EIP) instances to avoid instance faults.	<a href="#">Elastic IP</a>
Configure security groups based on actual scenarios.	<a href="#">Security Group Use Cases</a>
Categorize and manage CVM resources from various dimensions, such as business, purpose, and owner.	<a href="#">Managing Instances via Tags</a>
View monitoring data such as CPU, memory, network bandwidth, and disk of CVM instances.	<a href="#">Obtaining Instance Monitoring Data</a>
Build your own website or forum on CVM instances.	<a href="#">Building a Website</a>

## Other Related Products

- You can use Auto Scaling (AS) to automatically increase or decrease the number of instances in a cluster on schedule or based on specific conditions. For more information, see [AS Product Documentation](#).
- You can use Cloud Load Balancer (CLB) to automatically distribute request traffic from the client across multiple CVM instances. For more information, see [CLB Product Documentation](#).
- You can use Tencent Kubernetes Engine (TKE) to manage the lifecycle of container applications on CVM instances. For more information, see [TKE Product Documentation](#).
- You can deploy relational databases on the cloud or use Tencent Cloud databases. For more information, see [TencentDB for MySQL](#).
- You can use the Tencent Cloud Observability Platform (TCOP) service to monitor the CVM instances and their system disks. For more information, see [Cloud Monitor Product Documentation](#).

# Strengths

Last updated: 2025-11-10 17:32:55

Cloud Virtual Machine (CVM) of Tencent Cloud provides secure and reliable elastic computing services and builds a basic computing power service that combines stability and flexibility by using software-defined computing, networking, and storage. Without the need to estimate resource usage or make initial investments, you can quickly obtain and use computing resources on the cloud and scale them in real time based on business needs, effectively reducing software and hardware purchase costs and IT Ops complexity.

## Comprehensive Coverage: Global Resources and Support for Scenario-based Computing Power

CVM provides a full-stack computing service capability to meet diverse business scenario needs:

- **Global infrastructure:** Tencent Cloud CVM resources are available in multiple regions across China, Asia-Pacific, Europe, and the Americas, enabling application deployment on the clients close to users' business locations and significantly reducing access latency.
- **Comprehensive scenario coverage:** Tencent Cloud provides diverse options for various users, including instance families such as general computing, high I/O, big data, and heterogeneous computing, to meet different business scenario needs.
- **Industry-wide coverage:** Tencent Cloud CVM provides comprehensive solutions across global industries through multi-region deployment, diverse computing power support, and deep industry adaptation.
  - **Games/Pan-entertainment:** Tencent Cloud CVM provides high-performance, low-latency global node deployments for major games such as Honor of Kings, League of Legends, and PUBG, supporting massive concurrent player loads.
  - **Pan-financial service industry:** The highly reliable architecture on the cloud meets the stability requirements of payment systems and trading databases. High I/O instances ensure low latency and data security for financial businesses.
  - **Retail and consumption:** CVM, combined with Cloud Object Storage (COS) and Cloud Load Balancer (CLB), supports high-concurrency order processing and large-traffic promotional campaigns.
  - **Healthcare:** Computing instances support high-performance computing scenarios such as gene analysis and drug discovery; big data instances handle medical imaging and clinical data.
  - **Emerging Web3 field:** GPU instances accelerate deep learning and blockchain computing; edge security platforms ensure global node protection.

## Elasticity: Minute-Level Resource Adjustment

CVM achieves industry-leading elasticity, which supports dynamic scaling of businesses:

- **Hardware elasticity:** Instances based on Cloud Block Storage (CBS) can instantly upgrade and downgrade CPU, memory, and disk configurations (regardless of the billing type).
- **Network elasticity:** Support real-time bandwidth scaling and billing mode (bandwidth/traffic-based billing) switch.
- **System elasticity:** Support a flexible switch between Windows/Linux operating systems in the Chinese mainland regions.
- **Architectural elasticity:** Achieve network logical isolation through custom IP range segmentation, routing policies, and security group rules within Virtual Private Cloud (VPC).
- **Scalability coordination:** Integrate with the Auto Scaling (AS) service to automatically scale instances based on load metrics, reducing idle costs by over 30%.

## Reliable Assurance: Full-Linkage High Availability Architecture

CVM ensures business continuity through the multi-level disaster recovery design:

- **Instance reliability:** Support the single-instance availability of 99.975%, data durability of 99.9999999%, and imperceptible migration upon downtime.
- **Storage reliability:** CBS provides data reliability of 99.9999999% and supports snapshot backups.
- **Network architecture:** Operate in T3+ data centers, using NIC binding and network virtualization technologies to ensure high availability of the network.
- **Fault tolerance and disaster recovery:** The self-developed scheduling system VStation enables seamless business migration through cross-AZ deployment, stateless design, and minute-level disaster recovery failover mechanisms.

## Ultra-Fast Experience: Breakthroughs in Both Performance and Efficiency

- **Deployment efficiency:** Hundreds of compute instances can be created in batches within minutes. A single instance can be created in just 3 seconds, achieving a record of deploying 1 million core instances in 8 days.
- **Network quality:**
  - **Public network:** 20-line BGP coverage across all major ISPs with second-level failover.

- Private network: underlying 10 Gbps/1 Gbps networks, with low-latency communication between data centers in the same region.
- Scheduling performance: The self-developed VStation system achieves elastic scale-out of 1,000 instances within 28 seconds, with the API processing capability achieving over 10,000 QPS.

## Security Assurance: End-to-End Protection System

Tencent Cloud security team builds a five-dimensional integrated security protection system based on CVM:

- Infrastructure security: Security groups and network access control lists (ACLs) implement port-level access control, and support logical isolation within VPC.
- Data security: The recycle bin mechanism protects yearly/monthly subscription instances that are expired from accidental deletions, preventing data loss.
- Security service: Free 24/7 protection is provided, including anti-DDoS, intrusion detection, vulnerability scanning, and website Trojan detection.
- Ops security: Multiple access methods such as key-based login, password login, and VNC login are supported, with traceability of the operation process.
- Fault prediction: Use the live migration technology to proactively avoid faulty nodes, resulting in an 80% reduction in fault rates perceived by customers.

## Lower Costs: Flexibly Optimizing Investments

Tencent Cloud provides various billing methods to reduce traditional IT Ops costs, while optimizing the unit computing power costs continuously, therefore achieving leading comprehensive cost-effectiveness.

- Hardware innovation: Self-developed high-density servers significantly reduce unit computing power costs by increasing the virtual machine deployment density of a single physical server, optimizing costs by over 45%.
- Efficient combination: AMD EPYC processor + 200 Gbps network architecture. Only half the number of devices is required to handle the same business load as that of the original cluster, reducing Ops and energy consumption costs.
- Flexible billing: Support pay-as-you-go (PAYG), saving plan, yearly/monthly subscription, and spot instances to meet different workload scenario needs.
  - Stable business: The 5-year long-term scheme further reduces costs by 30%, securing long-term returns.

- Elastic business: The spot instance provides the lowest discounts, supporting scheduled automatic scaling.

Tencent Cloud CVM, as the core foundational service at the IaaS layer, has supported over 2 million subscribed customers, ranking first in scheduling scale within the industry. With comprehensive strengths including coverage, elasticity, reliability, ultra-fast experience, security, and low cost, CVM has become the preferred choice in terms of the general computing base for enterprises migrating to the cloud.

# Basic Concepts

Last updated: 2024-01-06 18:00:25

## Instance

An instance is a Cloud Virtual Machine (CVM), which is a virtual computing resource containing CPU, memory, OS, network, disks, and other basic computing components.

CVM instances provide secure, reliable and elastic computing services in the cloud to meet computing requirements. As business demands change, computing resources can be scaled in real time to lower your software and hardware costs and simplify IT OPS work.

## Instance Type

Tencent Cloud provides various configurations of CPU, MEM, storage, and networking capacity for CVM instances. For more information, please see [Instance Types](#).

## Image

An image is a pre-configured template containing an operating system and applications that CVM instances run on. Tencent Cloud CVM provides pre-configured images for Windows, Linux, etc.

## Cloud Block Storage

Cloud Block Storage (CBS) is a highly available, highly reliable, low-cost, and customizable block storage device. It can be used as a standalone and expandable disk for CVM, providing efficient and reliable [storage](#) devices.

## VPC

A VPC is a logically isolated virtual network space in Tencent Cloud.

## IP Addresses

Tencent Cloud provides [private IP address](#) and [public IP address](#). Private IP address is for the interconnection of CVM instances within the same LAN, while public IP address is for public-facing services.

## Elastic IP

Elastic IP (EIP) is static public network IP addresses designed especially for dynamic networks to meet the demands for fast troubleshooting.

An EIP is a public IP address that can be applied for independently. It supports dynamic binding and unbinding. You can bind it to or unbind it from the CVM (or NAT Gateway instances) under your account. Its main uses are:

- To retain an IP. ICP domain name filing is required for Chinese mainland IP and DNS.
- To mask an instance failure. For example, a DNS name is mapped to an IP address through dynamic DNS mapping. It may take up to 24 hours to propagate this mapping to the entire Internet, while an elastic IP enables quick remapping of an IP from one CVM to another. When one CVM fails, you can just start and remap another instance to quickly respond to instance failures.

## Security Group

A security group is a virtual firewall that features stateful data packet filtering. It is used to configure the network access control of CVMs. You can add CVM instances with the same network security isolation requirements in the same region to the same security group, to filter the inbound and outbound traffic of the CVM through the network policies of the security group.

## Login Method

The password is a unique login credential for the CVM instance. To ensure instance security, Tencent Cloud provides the following two encrypted login methods:

- [SSH key pairs](#) are easier to use. You can log in to instances remotely with a few simple configuration steps on the console and your local client, and do not need to enter a password when you log in again.
- [Login password](#) allows anyone with the password to log in to the CVM instance remotely through a public network address allowed by the security group.

## Regions and Availability Zones

Physical locations where CVM instances and other resources reside and are launched.

- A region refers to a geographical location where data centers hosted by Tencent Cloud are located. Each region has multiple availability zones.
- An availability zone is a Tencent Cloud IDC with an independent power supply and network in the above region. It can ensure business stability, as failures in one AZ are isolated without affecting other AZs in the same region.

# Regions and Zones

Last updated: 2025-11-07 16:53:14

## Concept Introduction

### Regions

Regions refer to the geographic areas where physical data centers of Tencent Cloud are located. You can learn more about [Regions and AZs](#) of a product on the Tencent Cloud official website.

Tencent Cloud ensures maximum stability and fault tolerance between different regions through physical resource isolation.

Networks in different regions are completely isolated. Cloud products cannot communicate over private networks by default. Communication can only be achieved through [public IP addresses](#) or [Cloud Connect Network \(CCN\)](#).

### AZs

Availability zones (AZs) refer to physical data centers within the same region, but with separate power supplies and networks. For more information, see [List of Regions and AZs](#).

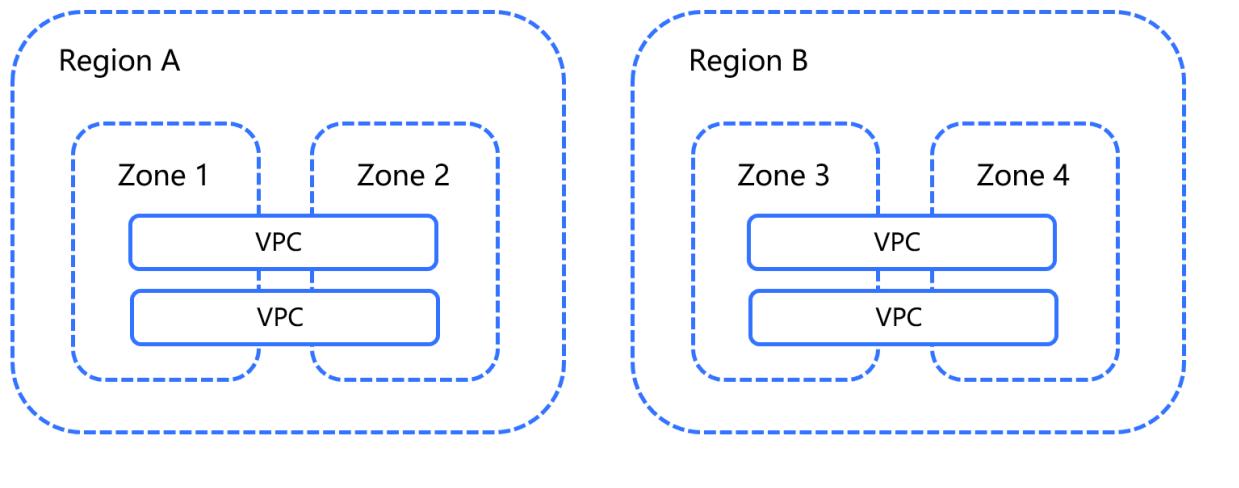
Faults between AZs are isolated from each other (except for large-scale disasters or major power outages), preventing the business impact caused by IDC device faults.

Within the same region, Virtual Private Cloud (VPC) instances can be deployed across AZs. The private networks within the same VPC instance across different AZs are interconnected, allowing direct access through [private IP addresses](#).

### Relationship Between a Region and an AZ

A region consists of one or more AZs. The private networks within the same VPC instance across different AZs in the same region are interconnected. AZs in different regions are completely independent.

Tencent Cloud



## How to Select a Region and an AZ?

When you select a region and an AZ, the following factors need to be considered:

Factor	Description
Geographic location	<ul style="list-style-type: none"><li>The closer the distance between the user and the resource deployment region, the lower the network latency and the faster the access speed.</li><li>To reduce access latency and improve access speed, it is recommended to select the region closest to your customers when purchasing CVM instances.</li></ul>
Business communication	<ul style="list-style-type: none"><li>It is recommended to deploy multiple types of cloud products under the same business in the same AZ of a region, enabling communication over the private network to reduce access latency and improve access speed.</li><li>For different businesses requiring private network interconnection, deploy them in the same region. If there are no private network interconnection requirements for businesses, deploy them across different regions as needed.</li></ul>
Disaster recovery	<ul style="list-style-type: none"><li>It is recommended to deploy your businesses at least in the same VPC instance that is in the same region but across different AZs, ensuring fault isolation between AZs and achieving cross-AZ disaster recovery.</li><li>There may be network communication latency between different AZs. Evaluate it according to your actual business requirements to find the optimal balance.</li></ul>

between high availability and low latency.

## List of Regions and AZs

### China

Region	Region ID	Number of AZs	AZ	AZ ID
South China (Guangzhou)	ap-guangzhou	2	Guangzhou Zone 6	ap-guangzhou-6
			Guangzhou Zone 7	ap-guangzhou-7
East China (Shanghai)	ap-shanghai	3	Shanghai Zone 2	ap-shanghai-2
			Shanghai Zone 5	ap-shanghai-5
			Shanghai Zone 8	ap-shanghai-8
East China (Nanjing)	ap-nanjing	2	Nanjing Zone 1	ap-nanjing-1
			Nanjing Zone 3	ap-nanjing-3
North China (Beijing)	ap-beijing	3	Beijing Zone 6	ap-beijing-6
			Beijing Zone 7	ap-beijing-7
			Beijing Zone 8	ap-beijing-8
Southwest China (Chengdu)	ap-chengdu	1	Chengdu Zone 1	ap-chengdu-1
Southwest China (Chongqing)	ap-chongqing	1	Chongqing Zone 1	ap-chongqing-1
Northwest China (Zhongwei)	ap-zhongwei	1	Zhongwei Zone 1	ap-zhongwei-1
Hong Kong (China), Macao (China), and Taiwan (China)	ap-hongkong	2	Hong Kong (China) Zone 2	ap-hongkong-2
			Hong Kong	ap-hongkong-3

(China) Zone 3

**!** Note:

Tencent Cloud has a total of 12 regions and 42 AZs in China. If you need to use AZs not listed above (due to AZ policy adjustments or industry-specific zones), contact the Tencent Cloud salesperson to purchase.

## Other Countries and Regions

Region	Region ID	Number of AZs	AZ	AZ ID
Asia Pacific and the Middle East (Singapore)	ap-singapore	4	Singapore Zone 1	ap-singapore-1
			Singapore Zone 2	ap-singapore-2
			Singapore Zone 3	ap-singapore-3
			Singapore Zone 4	ap-singapore-4
Asia Pacific and the Middle East (Jakarta)	ap-jakarta	3	Jakarta Zone 1	ap-jakarta-1
			Jakarta Zone 2	ap-jakarta-2
			Jakarta Zone 3	ap-jakarta-3
Asia Pacific and the Middle East (Seoul)	ap-seoul	2	Seoul Zone 1	ap-seoul-1
			Seoul Zone 2	ap-seoul-2
Asia Pacific and the Middle East (Tokyo)	ap-tokyo	2	Tokyo Zone 1	ap-tokyo-1
			Tokyo Zone 2	ap-tokyo-2
Asia Pacific and the Middle East (Bangkok)	ap-bangkok	2	Bangkok Zone 1	ap-bangkok-1
			Bangkok Zone 2	ap-bangkok-2
Asia Pacific and the Middle East (Saudi Arabia)	me-saudi-arabia	2	Riyadh Zone 1	me-saudi-arabia-1
			Riyadh Zone 2	me-saudi-arabia-2

Europe and the Americas (São Paulo)	sa-saopaulo	1	São Paulo Zone 1	sa-saopaulo-1
Europe and the Americas (Silicon Valley)	na-siliconvalley	2	Silicon Valley Zone 1	na-siliconvalley-1
			Silicon Valley Zone 2	na-siliconvalley-2
Europe and the Americas (Virginia)	na-ashburn	2	Virginia Zone 1	na-ashburn-1
			Virginia Zone 2	na-ashburn-2
Europe and the Americas (Frankfurt)	eu-frankfurt	2	Frankfurt Zone 1	eu-frankfurt-1
			Frankfurt Zone 2	eu-frankfurt-2

**!** Note:

Tencent Cloud has a total of 10 regions and 22 AZs outside China. You can contact the Tencent Cloud salesperson to purchase.

## Resource Location Description

CVM-related resources have region and AZ attributes. For details, see the following table.

Resource	Resource ID Format	Type	Description
User account	Unlimited	Unique in the world	Users can use the same account to access resources of Tencent Cloud all over the world.
SSH key	skey-xxxxxxxx	Available for all regions	Users can use the SSH key to bind CVM instances in any region under their account.
CVM instance	ins-xxxxxxxx	Available in a single AZ	Users can only create CVM instances in specific AZs.
Custom image	img-xxxxxxxx	Available for multiple AZs in a single region	Users can create custom images of instances and use them across different AZs in the same region. To use them in other regions, use the image replication feature to replicate the custom images to other regions.

Elastic IP (EIP)	eip-xxxxxxxx	Available for multiple AZs in a single region	Elastic IP addresses are created in a certain region, and can only be associated with instances in the same region.
Security group	sg-xxxxxxxx	Available for multiple AZs in a single region	Security groups are created in a certain region, and can only be associated with instances in the same region. Tencent Cloud creates three default security groups for users automatically.
Cloud Block Storage (CBS)	disk-xxxxxxxx	Available in a single AZ	Users can only create cloud disks in specific AZs and attach them to instances in the same AZ.
Snapshot	snap-xxxxxxxx	Available for multiple AZs in a single region	After a snapshot is created for a certain cloud disk, users can use the snapshot to perform other operations (such as creating cloud disks) in the region.
Cloud Load Balancer (CLB)	clb-xxxxxxxx	Available for multiple AZs in a single region	CLB can be bound to CVM instances deployed across different AZs in the same region for traffic forwarding.
VPC	vpc-xxxxxxxx	Available for multiple AZs in a single region	A VPC instance is created in a certain region, and resources belonging to the same VPC instance can be created in different AZs.
Subnet	subnet-xxxxxxxx	Available in a single AZ	Within a VPC instance, a subnet can only belong to a single AZ.
Route table	rtb-xxxxxxxx	Available for multiple AZs in a single region	Users need to specify a specific VPC when creating a route table, and the route table inherits the location attributes of the VPC.

## API-related Operations

For more information on APIs related to regions and AZs, see [DescribeZones](#).

# Tutorial

Last updated: 2025-11-27 16:17:41

This document helps you quickly get started with Tencent Cloud Virtual Machine (CVM) instance.

## 1. Overview

Tencent Cloud CVM is a scalable cloud computing service that frees you from estimation of resource usage and upfront investment. With Tencent Cloud CVM, you can start CVMs and deploy applications immediately.

## 2. Learn about CVM

See the following documents to learn more about CVM instances.

- [CVM Overview](#)
- [Instance Billing Modes](#)
- [Use Limits Overview](#)
- [Concepts](#).

## 3. Create CVM Instances

You can flexibly select the region, model, image, public network bandwidth, purchase quantity and validity period on the [Custom Configuration](#) page to purchase CVM instances to meet your business needs.

To create CVMs in a custom way, please see [Customizing Linux CVM Configurations](#) or [Customizing Windows CVM Configurations](#).

Custom Configuration

1. Select a Model    2. Complete Configuration    3. Confirm Configuration

Billing Mode: Pay as you go    Spot Instances    [Detailed Comparison](#)

Region: Guangzhou    Shanghai    Nanjing    Beijing    Chengdu    Chongqing    Taipei, China **NEW**    Hong Kong, China

Singapore    Bangkok    Mumbai    Seoul    Tokyo    Silicon Valley    Virginia    Toronto

Frankfurt    Moscow

Tencent Cloud products in different regions cannot communicate via private network. Selecting the region closest to your customers can reduce access latency and increase download speed. CVM's region cannot be changed after the creation. [View My CVM Region](#)    [Detailed Comparison](#)

Availability Zone: Random AZ    Guangzhou Zone 3    Guangzhou Zone 4    Guangzhou Zone 6 **NEW**

Network: Available IPs in the subnet: 4091

The current network is the default VPC/subnet. You can adjust it as needed.  
If the existing VPC/subnet do not match your requirements, please go to the Console to [Create a VPC](#) or [Create a Subnet](#). After purchasing the CVM, you can switch VPC/subnet by "Switch VPC" on console.

Instance: All CPU    All Mem

All Models    Standard    High IO    MEM-optimized    Compute    GPU-based    Big Data    Cloud Physical Machine 2.0

All types    Standard S5 **Promo**    Standard SA2 **NEW**    Standard S4    Standard Network-optimized SN3ne    Standard S3

Standard SA1    Standard S2    Standard S1

Model	Specification	vCPU	MEM	CPU	Private network	Send/Receive	Supported availability	Note	Fee
Selected Model: S5.SMALL2(Standard S5, 1-core, 2 GB)	Configuration Fee: 10 USD/hr ( <a href="#">Fee details</a> )								
Quantity: 1	Network Fee: 10 USD/GB								
<a href="#">Next: Complete Configuration</a>									

## 4. Log in to CVM Instances

After you purchase CVM instances, you can log in to them. For more information, see:

- [Logging in to a Linux Instance](#)
- [Logging in to a Windows Instance](#)

Then you can log in to them to store your local files, use them as your virtual machines or build websites. For more information and practices, see the following contents.

## 5. Relevant Information

### Overview of console features

Feature	Reference
---------	-----------

Create CVM instances	<a href="#">Guidelines for Creating Instances</a>
Name instances or CVMs according to a rule	<a href="#">Batch Sequential Naming or Pattern String-Based Naming</a>
Upgrade or downgrade the CVM specification	<a href="#">Changing Instance Configuration</a>
Select SSH key pair as the encrypted CVM login method and manage SSH keys	<a href="#">Managing SSH Keys</a>
Change or reset your instance password	<a href="#">Resetting Instance Passwords</a>
Terminate, release or return a CVM instance	<a href="#">Terminating Instances</a>
Obtain the CVM instance list of a region	<a href="#">Export Instances</a>
Search for CVM instances and other resources	<a href="#">Cross-region Search</a>
Create a custom image and use this image to start more new instances that have the same custom configurations as the original one	<a href="#">Creating Custom Images</a>
Obtain images shared by other users, get the necessary components and add custom contents	<a href="#">Sharing Custom Images</a>
Import the system disk image on local computers or other platforms to the custom image on the CVM	<a href="#">Overview</a>
Create and export a Linux image	<a href="#">Creating Linux Images</a>
Create and export a Windows image	<a href="#">Creating Windows Images</a>
Migrate systems and applications on the source servers from your IDCs or other cloud platforms to Tencent Cloud	<a href="#">Overview</a>
Expand cloud disks to increase the storage capacity	<a href="#">Expanding Cloud Disks</a>
Convert a public IP to an EIP to mask an instance failure	<a href="#">Elastic IP</a>
Configure security groups based on use cases	<a href="#">Security Group Use Cases</a>
Use tags to categorize and manage your CVM resources	<a href="#">User Guide on Tags</a>

View the monitoring data of CVM instances such as the CPU, memory, network bandwidth, and disks

[Getting Monitoring Statistics](#)

## Advanced usage

You can build a personal website or forum on CVM instances as instructed in [Setting up a Website](#).

## Developer tools

Tencent Cloud API provides a variety of tools including API Explorer, TCCLI, SDK, and API Inspector, helping you easily use and quickly manage Tencent Cloud services with a few codes.

## 6. Feedback and Suggestions

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

- To report product documentation issues such as link, content, or API errors, you can click [Send Feedback](#) at the bottom of the document.
- If you encounter product-related problems, please [submit a ticket](#).