

# **TencentDB for SQL Server**

## **Product Introduction**

### **Product Documentation**



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# Product Introduction

## Product Overview

Last updated : 2019-08-14 16:11:48

TencentDB for SQL Server offers the most recent features and is authorized by Microsoft to avoid risks associated with unauthorized software usage. It is on-demand, reliable, secure, and scalable. It also features high-availability framework, data security protection, and instant failure recovery to let you focus on application development.

As one of the earliest commercial database products, SQL Server supports complex SQL queries with excellent performance. Thanks to its comprehensive support for applications based on the Windows .NET Framework, it is widely used in such fields as government services, finance, healthcare, retail, education, and gaming.

TencentDB for SQL Server supports the following editions:

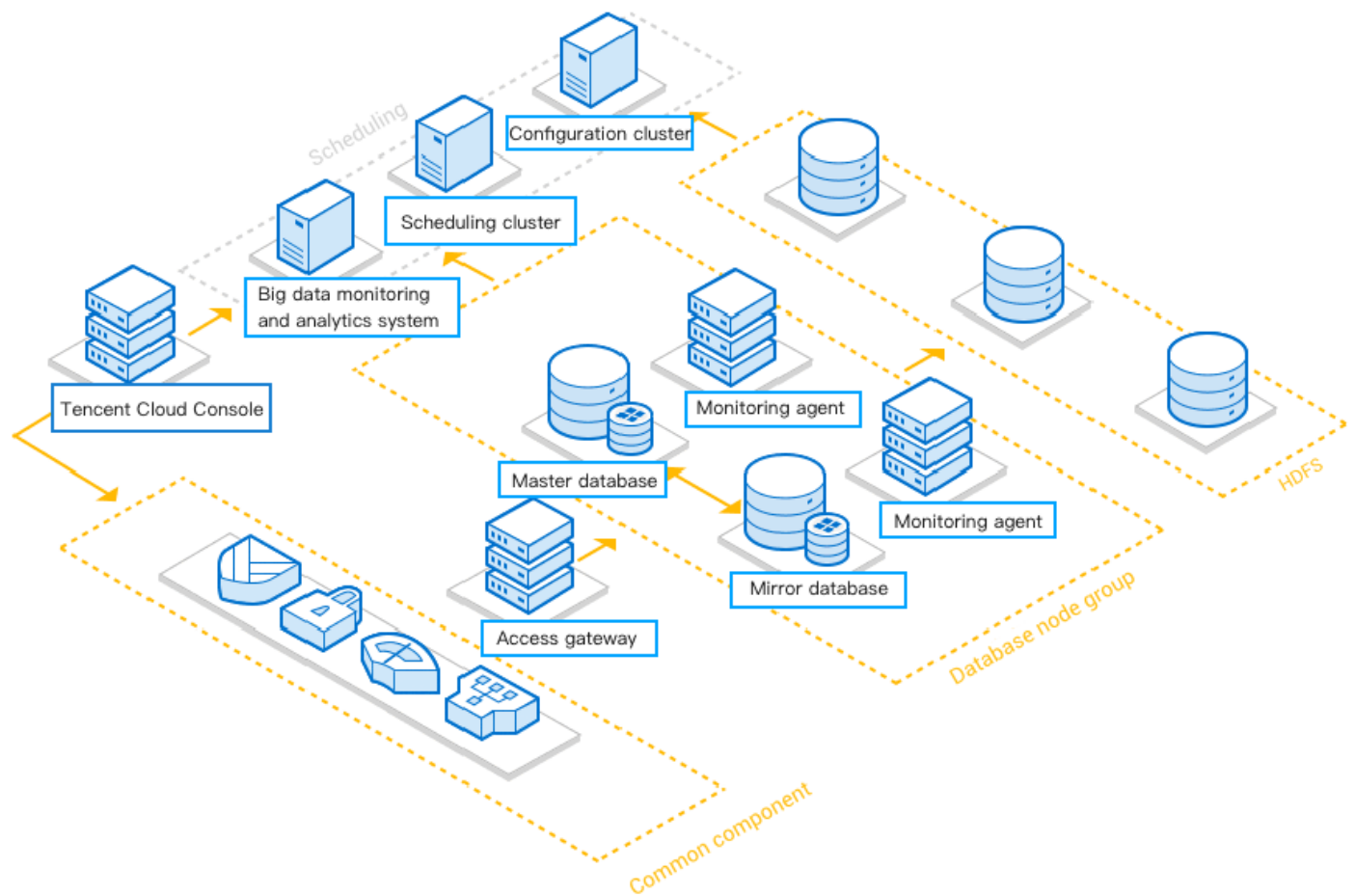
Region	Database Edition
Regions in Mainland China	SQL Server 2008 Enterprise SQL Server 2012 Enterprise SQL Server 2016 Enterprise SQL Server 2017 Enterprise
Regions outside Mainland China	SQL Server 2016 Standard

# Product Architecture

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## Backend Architecture

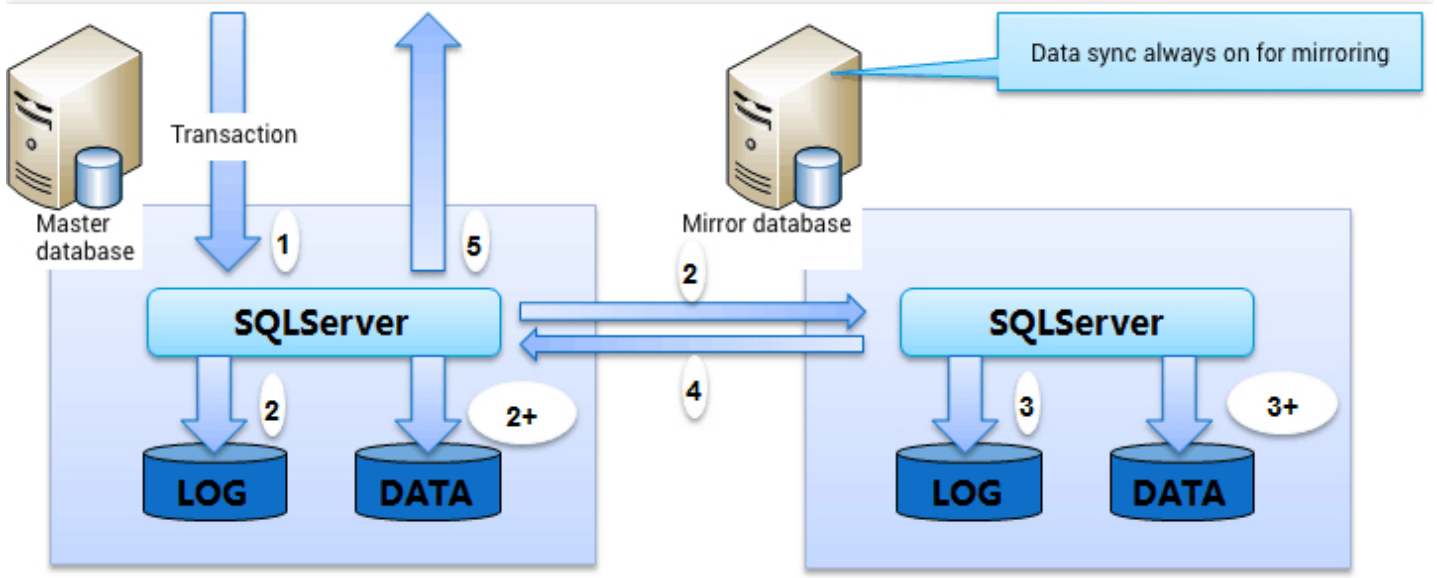
The architecture is as follows:



TencentDB for SQL Server consists of a master database and a mirror database that are deployed in different racks. Each database corresponds to a group of monitoring agents which monitor the database in real time based on the heartbeat. The cluster management scheduling center consists of two sets of independently deployed decision-making clusters and configuration clusters and is mainly used to manage the normal operations of the database node group, access gateway cluster and HDFS. The Hadoop distributed file system (HDFS) makes available data disaster recovery service with cold backup. The gateway cluster is accessed to provide a unique IP, and if the data node is switched, the IP won't change.

## Database Mirroring

Currently, TencentDB for SQL Server is supported by the database mirroring (high-availability replication) scheme by default.

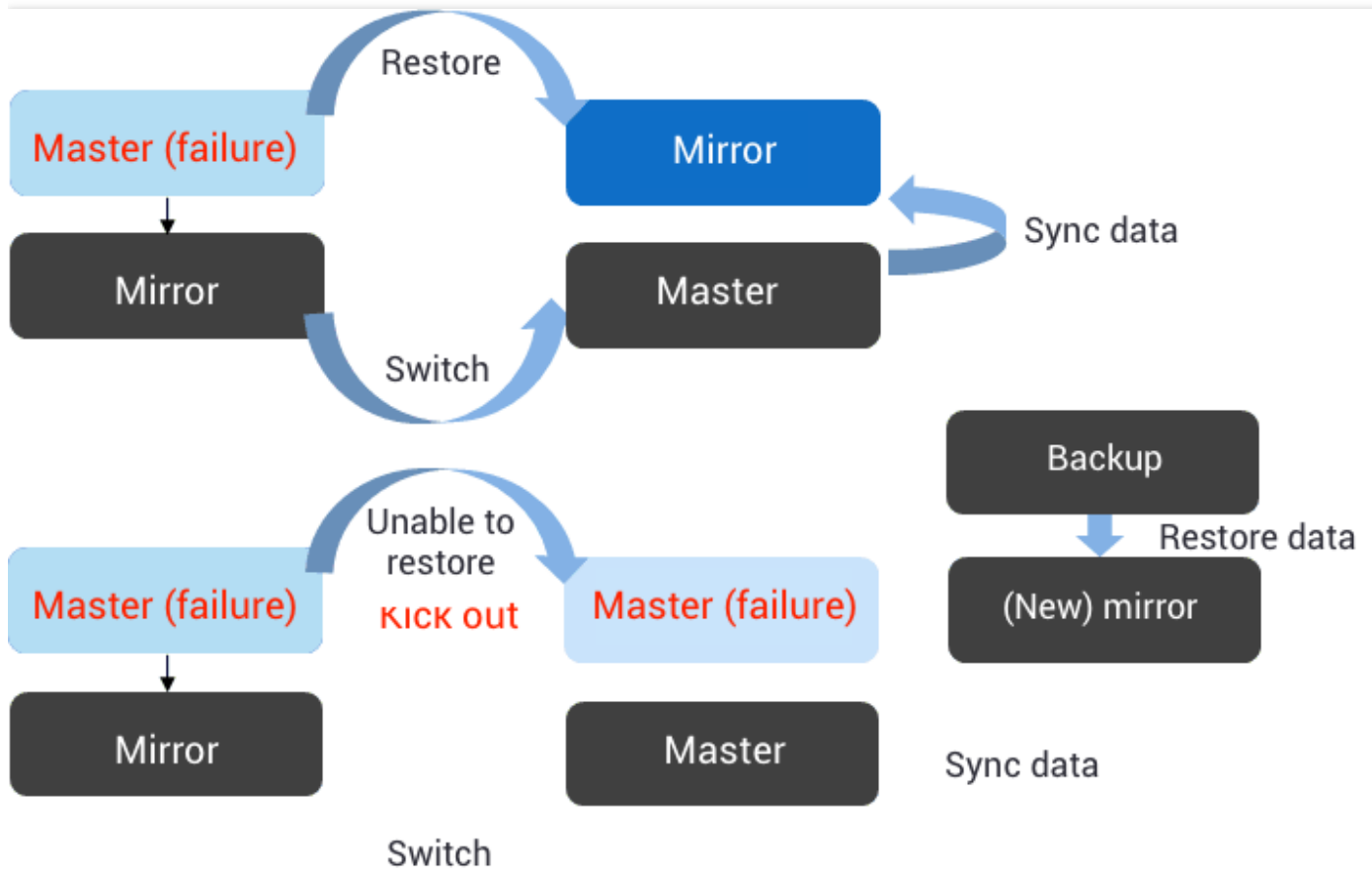


This enables automatic switching in seconds, lowering the data loss to "zero".

## Automatic Node Recovery

TencentDB for SQL Server supports automatic rebuilding of database nodes, so if a node fails, it will be automatically restored/reconstructed. The node switchover is imperceptible to the business, and the

database access IP does not change.



# Product Advantages

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## Genuine License

Licensed by Microsoft, TencentDB for SQL Server continuously provides you with the latest features, helping you avoid the risks of using unauthorized software and enhancing the trustworthiness of your business in competitive markets.

## Stability and Reliability

TencentDB for SQL Server boasts 99.9996% data reliability and 99.95% service availability. Its master-slave dual-node database architecture allows for switching from a faulty instance to a healthy one in a matter of seconds and enables automatic backup, so the database can be restored to a previous point in time through rollback.

## Best-in-class Performance

TencentDB for SQL Server uses enterprise-grade PCI-E SSDs to deliver industry-leading I/O throughput, outperforming user-built databases and supporting commercial-grade high-volume concurrent business requests.

## Ease of Management

Various management tasks can be finished with ease in Tencent Cloud Console or SQL Server Management Studio, such as database management, permission setting, monitoring and alarming, eliminating concerns over database installation and OPS.

## Performance Monitoring

Dozens of important metrics can be viewed in the console, such as the number of connections and requests, disk I/O and buffer hit rate, helping you comprehensively monitor database running conditions and accurately understand the database load and system health.



## System Alarming

TencentDB for SQL Server supports user-defined resource threshold alarms to help OPS engineers discover database anomalies in a timely manner and quickly respond to and resolve potential system problems.

# Network Environment

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TencentDB for SQL Server supports two types of networks: **VPC and basic network**.

## Network Limitations

- Tencent Cloud services in the same region can communicate with one another over the private network.
- A CVM instance in a VPC can communicate with a TencentDB for SQL Server instance on the basic network in a different AZ in the same region only after a subnet is configured and a VPC IP is assigned.
- Tencent Cloud services on the basic network in different regions cannot communicate with one another over the private network. They can communicate across VPCs only after a **peering connection** is configured.


Currently, TencentDB for SQL Server currently doesn't support public IP. If you need to use a public IP, you can use the port mapping function of SSH2 to connect to, configure, and manage an instance from the internet. For more information, see [Connect to Instance](#).

When purchasing TencentDB for SQL Server, it is recommended to select the same region as your CVM instance to reduce access delay.

## Network Connectivity Test

The network connectivity test tool provided on the [TencentDB for SQL Server purchase page](#) can be used to check whether there are CVM instances in the selected region/AZ and network type that can communicate with TencentDB for SQL Server over the private network.

Network Type  VPC  Basic Network

4093 subnet IPs in total, with 4086 available 

You can also go to the console to [Create VPC](#) or [Create Subnet](#)

In the Guangzhou region 和 and under VPC: Default-VPC , the servers that can be connected via private network are : 1[View Details](#)

Click **View Details** to view the information of eligible CVM instances, including ID/instance name, AZ, configuration (CPU, memory, disk, and network), and master IP address. You can also use the search

function to quickly determine whether a specific CVM instance can communicate with TencentDB for SQL Server over the private network.

### Servers can be connected via private network ×

The number of servers that can be connected via private network: 1

ID/Instance Name	Availability Zone	Configuration	Primary IP address
<a href="#">ins-qcmodi8w</a> Unnamed	Guangzhou Zone 4	1-core/2 GB Disk:50 GB Network:Default-VPC/Default-Subnet	172.16.0.8

# License Statement

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## License Included

Tencent Cloud offers TencentDB instances with **license included**. The price of a **license included** model includes a SQL Server software license, underlying hardware resources and TencentDB management functions, so there is no need to purchase a Microsoft SQL Server license separately.

You only need to pay for instance specifications and usage duration, and don't have to worry about hardware and licensing costs when using a "license included" database. You can cut IT costs by only paying low variable costs instead of high fixed costs.

- Purchasing TencentDB for SQL Server does not mean that you purchased a Microsoft SQL Server long-term license contract; therefore, you should not use the TencentDB license outside of this service. For more information, see [Microsoft Volume Licensing Product Terms and Online Services Terms](#).
- The basic price of TencentDB for SQL Server **does not include** other Microsoft or Tencent Cloud services.

# Regions & Availability Zones

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## Region and Availability Zone

### Mainland China

Region	AZ
South China (Guangzhou) ap-guangzhou	Guangzhou Zone 2 ap-guangzhou-2
	Guangzhou Zone 3 ap-guangzhou-3
	Guangzhou Zone 4 ap-guangzhou-4
East China (Shanghai) ap-shanghai	Shanghai Zone 1 ap-shanghai-1
	Shanghai Zone 2 ap-shanghai-2
	Shanghai Zone 3 ap-shanghai-3
North China (Beijing) ap-beijing	Beijing Zone 1 ap-beijing-1
	Beijing Zone 2 ap-beijing-2
	Beijing Zone 3 ap-beijing-3

### Global

Region	AZ
Asia Pacific (Seoul) ap-seoul	Seoul Zone 1 (nodes in Seoul can cover Northeast Asia) ap-seoul-1

SQL Server Enterprise edition is available in East China (Shanghai), South China (Guangzhou), and North China (Beijing). SQL Server Standard edition is available in Korea (Seoul).

## Network

### Network Restrictions

- Tencent Cloud services in the same region can communicate with each other via private network.
- If a CVM instance on a private network need to access TencentDB for SQL Server on a basic network in a different AZ in the same region, you need to manually configure the subnet and assign a private network IP to enable communication.
- Tencent Cloud services in different regions cannot communicate with one another through a private basic network. Their communication through a private network requires Peering Connection.
- Currently, public IP is not supported by TencentDB for SQL Server. If you need to use a public IP, you can use the port mapping function of SSH2 to connect, configure, and manage an instance from the internet.
- When purchasing TencentDB for SQL Server, we recommend selecting the same region as your CVM instance to reduce the access delay.

### Network Connectivity Test

The network connectivity test tool provided on the [TencentDB for SQL Server purchase page](#) can be used to check if there are CVM instances that can communicate with TencentDB for SQL Server over a private network for the selected regions/AZ and network types.

Network Type  VPC  Basic Network

Default-VPC  Default-Subnet  4093 subnet IPs in total, with 4090 available

You can also go to the console to [Create VPC](#) or [Create Subnet](#)

**In the Guangzhou region 和 under VPC Default-VPC , the servers that can be connected via private network are : 1 [View Details](#)**

Click **View Details** to view information about the eligible CVM instances, including ID/instance name, AZ, configuration (CPU, memory, disk, and network), and master IP address. You can also use the search

function to easily find eligible CVM instances.

**Servers can be connected via private network**



The number of servers that can be connected via private network: 1



ID/Instance Name	Availability Zone	Configuration	Primary IP address
<a href="#">ins-qcmodi8w</a> Unnamed	Guangzhou Zone 4	1-core/2 GB Disk:50 GB 网络:Default-VPC/Default-Subnet	

# Use Cases

Last updated : 2019-10-25 12:16:31

## Cloud-based Business System

TencentDB for SQL Server can be used as the basic database for building a business system directly in Cloud, as it provides stable and high-performance database support solution and improves business system performance effectively .

## Remote (In-cloud) Data Disaster Recovery

Electronic data is the core asset of every company. Data loss by force majeure and man-made mistakes can have serious consequences. However, remote disaster recovery from self-building remote IDC is not cost-effective. Using TencentDB as a remote database for disaster recovery is a good solution.

With Direct Connect, VPN and database synchronization tools, companies can sync data from self-built data centers or other cloud vendors to TencentDB for SQL Server in real time. Even if the data in the self-built data centers is completely lost, data will still be securely stored in TencentDB.

## Mobile Office

TencentDB for SQL Server supports quick deployment of your mobile office platforms such as OA, ERP and sales management, where the data is stored in Tencent Cloud's secure subnets and the database is protected by multiple measures for improved reliability.

## Data Warehouse and Data Analytics Platform

TencentDB for SQL Server helps you create a cloud-based data warehouse and data analytics platform with SQL Server's built-in business intelligence, IT dashboards and collaboration with SharePoint.

## Business Elasticity

Business promotion and major events result in high peaks, and self-built data centers are usually not optimized for cost considerations. In contrast, Cloud is scalable and an elastic IDC can be built in the



cloud data center to be scaled at any time. With CVM and TencentDB for SQL Server, elastic business needs can be met.

# Service Level Agreement

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Please see the [Database TencentDB Service Level Agreement](#) for TencentDB for SQL Server's SLA.