TencentDB for MySQL

Getting Started

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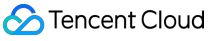

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Getting Started

Last updated: 2023-09-01 14:55:22

This document describes how to get started with TencentDB for MySQL from instance creation to basic use. To use an instance, you need to complete the following operations.

1. Create a TencentDB for MySQL instance

In the TencentDB for MySQL console, you can create MySQL instances with different billing modes and configurations. For more information, see Creating MySQL Instance.

2. Connect to the TencentDB for MySQL instance

After creating the TencentDB for MySQL instance, you can connect to it in many ways and then perform various database management operations. For more information, see Connecting to MySQL Instance.
If you encounter connection failure, see Instance Connection Failure.

Creating MySQL Instance

Last updated: 2025-11-28 17:43:52

This document describes how to create a TencentDB for MySQL instance in the console.

Preparations

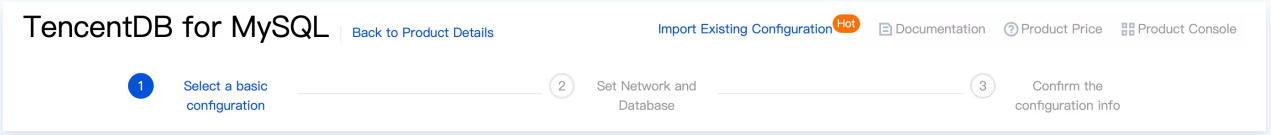
You have registered a Tencent Cloud account and completed identity verification.

- To register a Tencent Cloud account: Click here.
- To complete identity verification: Click here.

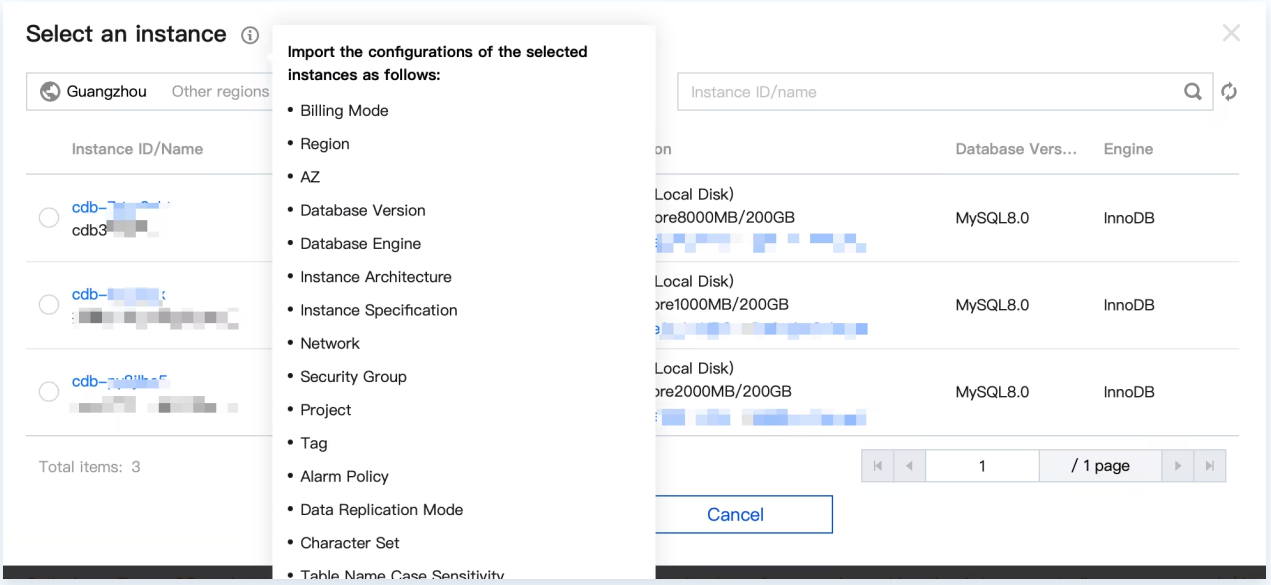
Note

The new purchase page allows you to **import existing configuration**. If the logged-in account has an existing TencentDB for MySQL instance, this feature can automatically configure the new instance parameters on the purchase page, making it easier for you to adjust the existing configuration or directly purchase a new instance as follows:

1. On the purchase page, click **Import Existing Configuration** in the top-right corner.



2. In the pop-up window, select the existing target instance in the corresponding region and click **OK**.



Purchasing in the console

1. Log in to the TencentDB for MySQL purchase page, complete **Basic Configuration** and **Instance Configuration** as needed, and click **Next: Set Network and Database**.
Basic Configuration

- **Billing Mode**: Monthly subscription and pay-as-you-go billing are supported.
  - If your business has a stable long-term demand, we recommend you select monthly subscription.
  - If the request volume of your business fluctuates greatly and instantaneously, we recommend you choose pay-as-you-go billing.
- **Region**: Select the region that you want your TencentDB for MySQL instance to be deployed in. We recommend that you select the same region as the CVM instance to be connected to. Tencent Cloud services in different regions cannot communicate with each other over the private network. The region cannot be modified after purchase.
- **Database Version**: Currently, TencentDB for MySQL supports MySQL 5.5, 5.6, 5.7, and 8.0. For more information on the features of each version, see MySQL official documentation.

> **Note:**
> We recommend using newer database versions, such as MySQL 8.0 and 5.7. If you need to use MySQL 5.5, you can submit a ticket for application.

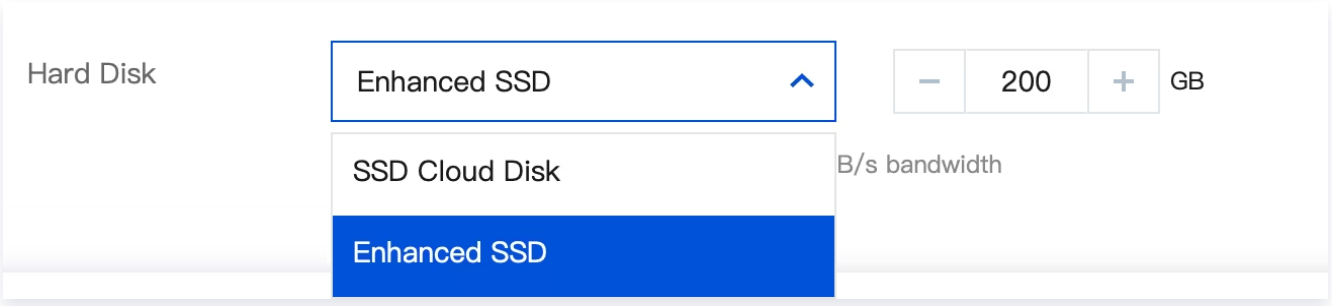
- **Engine**: Select InnoDB or RocksDB.
  - InnoDB: The most commonly used OLTP storage engine, with complete transaction support and powerful capability of highly concurrent reads/writes.
  - RocksDB: A key-value storage engine, with efficient writing and high compression. If it is selected, the architecture will be two-node.
- **Architecture**: Single-node, two-node, or three-node. For more information, see Database Architecture Overview.
- **Disk Type**: The hard disk is used to store the files required by MySQL execution. TencentDB for MySQL supports local disk and cloud disk.
  - Two-node and three-node instances use local SSD disks.
  - Single-node instances use cloud disks.
- **AZ**: Select different source and replica AZs for two-node and tree-node architecture (i.e., multi-AZ deployment) to protect your database from failures and AZ outages.

> **Note**
> - If the source and replica nodes are in different AZs, there may be an additional network sync delay of 2-3 ms.

- When you purchase Tencent Cloud services, we recommend that you select the region closest to your end users to minimize access latency and improve download speed.

Instance Configuration

- **Filter**: You can quickly filter the needed CPU and memory specifications for the instance. By default, all CPU and memory specifications are selected.
- **Type**: General or dedicated. For more information, see Resource Isolation Policy
- **Instance Specs**: Select specifications as needed.
- **Hard Disk**: The disk space is used to store the files required by MySQL execution. Select the size of the hard disk space.
  - The single-node architecture supports SSD cloud disks and enhanced SSD cloud disks. For more information about disk types, see Disk Types. Available disk capacity: 20 – 32,000 GB.



2. Configure **Network and Others** and **Database Settings** and click **Next: Confirm the configuration info**.

Network and Others

- **Network**: You can select the network and subnet for the instance. VPC is supported. If existing networks do not meet your requirements, you can create VPCs or subnets.

Note

- A subnet is a logical network space in a VPC. You can create subnets in different AZs in the same VPC, which communicate with each other over the private network by default.
- After you select a network, the subnet IPs in the AZ of the selected instance are displayed by default. You can also select subnet IPs in other AZs in the region of the instance. Business connections adopt nearby access, so the network latency will not be increased.

> - We recommend that you select the same VPC in the same region as the CVM instance to be connected to. Otherwise, the MySQL instance cannot connect to the CVM instance over the private network.

- **Custom Port**: The database access port, which is 3306 by default.
- **Security Group**: For more information on security group creation and management, see TencentDB Security Group Management.

> **Note**
> Port 3306 must be opened for the TencentDB for MySQL instance through the inbound rule of the security group. The instance uses private network port 3306 by default and supports custom port. If the default port is changed, the new port should be opened in the security group.

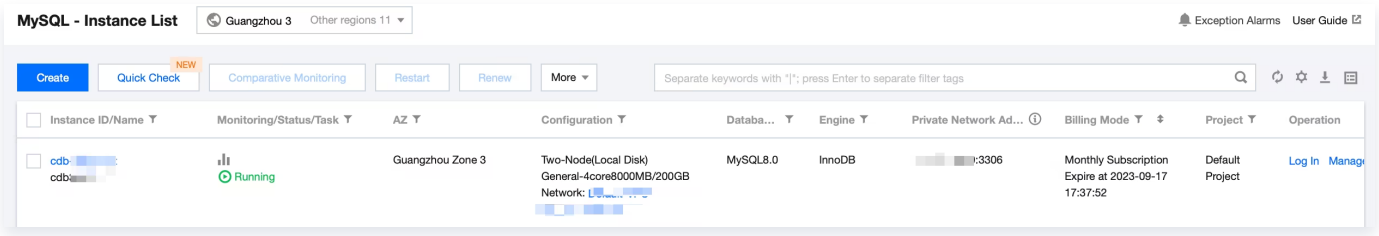
- **Project**: Select a project to which the database instance belongs. The default project will be used if you don't specify one.
- **Tag**: Categorize and manage resources with tags. For more information, see Tag Overview.
- **Alarm Policy**: Create alarm policies to trigger alarms and send notifications when the status of Tencent Cloud services changes. For more information, see Alarm Policy.

Database Settings

- **Instance Name**: Set a name for the instance now or later.
- **Data Replication Mode**: Async, semi-sync, and strong sync replication modes are supported. For more information, see Database Instance Replication.
- **Parameter Template**: Besides the system parameter template provided by TencentDB, you can create a custom parameter template. For more information, see Managing Parameter Template.
- **Character Set**: LATIN1, GBK, UTF8, and UTF8MB4 character sets are supported. The default value is UTF8. After purchasing the instance, you can change the character set on the instance details page in the console. For more information, see Use Limits > Notes on character set.
- **Collation**: The instance character set provides a case- and accent-sensitive collation for system data.
- **Table Name Case Sensitivity**: Specify whether the table name is case-sensitive. Note that this configuration cannot be modified once set for MySQL 8.0.
- **Password Complexity**: You can set the password complexity to improve the database security, which is disabled by default. For more information, see Setting Password Complexity.

- **Root Password**: Set the password of the root account (the default user name for a new MySQL database is "root"). If you select **Set After Creation**, you can reset the password after creating the instance. For more information, see [Resetting Password](https://www.tencentcloud.com/document/product/236/31901)

3. Confirm the selected configuration items (if you need to modify them, click **Edit** to return to the corresponding step and make changes), read and indicate your consent to the **Terms of Service**, confirm the **Validity Period** and **Quantity**, and click **Buy Now**.
4. You will be returned to the instance list after you purchase the instance. The instance will be in the **Delivering** status. You can use the instance after around 3-5 minutes when its status changes to **Running**.



See Also

You can access the TencentDB for MySQL instance over both private and public networks from a Windows or Linux CVM instance. For more information, see Connecting to MySQL Instance.

Connect to MySQL Instance
Connecting to MySQL Instance

Last updated: 2023-09-01 15:22:48

This document describes how to connect to an initialized TencentDB for MySQL instance over the private or public network.

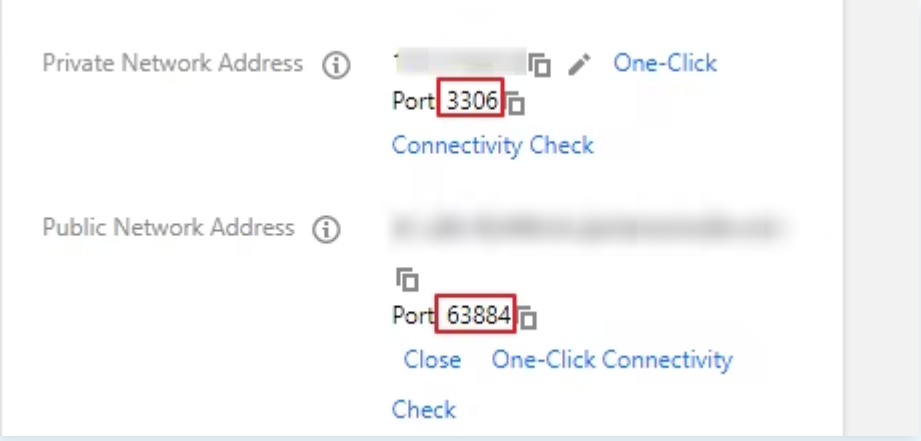
Prerequisites

- You have created a TencentDB for MySQL instance. For more information, see Creating MySQL Instance.
- Prepare a database account and authorize the IP addresses allowed to access MySQL. For more information, see Creating Account and Modifying Authorized Host Addresses. You can also use the root account directly.
- You have configured security group rules for the CVM instance and the TencentDB for MySQL instance to allow specific IPs or IP ranges to access the TencentDB for MySQL instance. For more information, see TencentDB Security Group Management.

Connection Methods

Note

To connect to a TencentDB for MySQL instance, no matter whether over the private or public network, you must open its port. You can log in to the TencentDB for MySQL console, click an **instance ID** in the instance list, and view its port number on the instance details page.



- TencentDB for MySQL uses private network port 3306 by default and supports customizing the port. If the default port is changed, the new port should be opened in the security group.

- The TencentDB for MySQL public port is automatically assigned by the system and cannot be customized. After the public network access is enabled, it will be controlled by the ACL of the security group. When configuring the security policy, you need to open the private port 3306.
- The security group rules displayed on the **Security Group** page in the TencentDB for MySQL console take effect for private and public (if enabled) network addresses of the TencentDB for MySQL instance.

TencentDB for MySQL can be connected in the following methods:

- **Private network connection**: A CVM instance can be used to connect to the private network address of a TencentDB instance. This method utilizes the high-speed private network of Tencent Cloud and features low delay.
- The CVM and TencentDB instances must be under the same account and in the same VPC in the same region, or both in the classic network.
- The private network address is provided by default and can be viewed in the instance list or on the instance details page in the TencentDB for MySQL console.

> **Note**
> For CVM and TencentDB instances in different VPCs (under the same or different accounts in the same or different regions), please refer to Cloud Connect Network for private network connection methods.

- **Public network connection**: If you cannot access the private network, you can connect to your TencentDB for MySQL instance at its public network address. The public network address needs to be manually enabled. It can be viewed on the instance details page in the TencentDB for MySQL console and can be disabled if no longer needed. To enable public network access, you also need to properly configure the security group as instructed in TencentDB Security Group Management.
- The public network address can be enabled for source instances in Guangzhou, Shanghai, Beijing, Chengdu, Chongqing, Nanjing, Hong Kong (China), Singapore, Seoul, Tokyo, Silicon Valley, Virginia, and Frankfurt regions. The latest information about the regions where the public network address can be enabled for read-only instances can be found in the console.
- Enabling the public network address will expose your database services to the public network, which may lead to database intrusions or attacks. We recommend that you use the private network to connect to the database.
- Public network connection to TencentDB is suitable for development or auxiliary management of databases but not for business access in the production environment, as

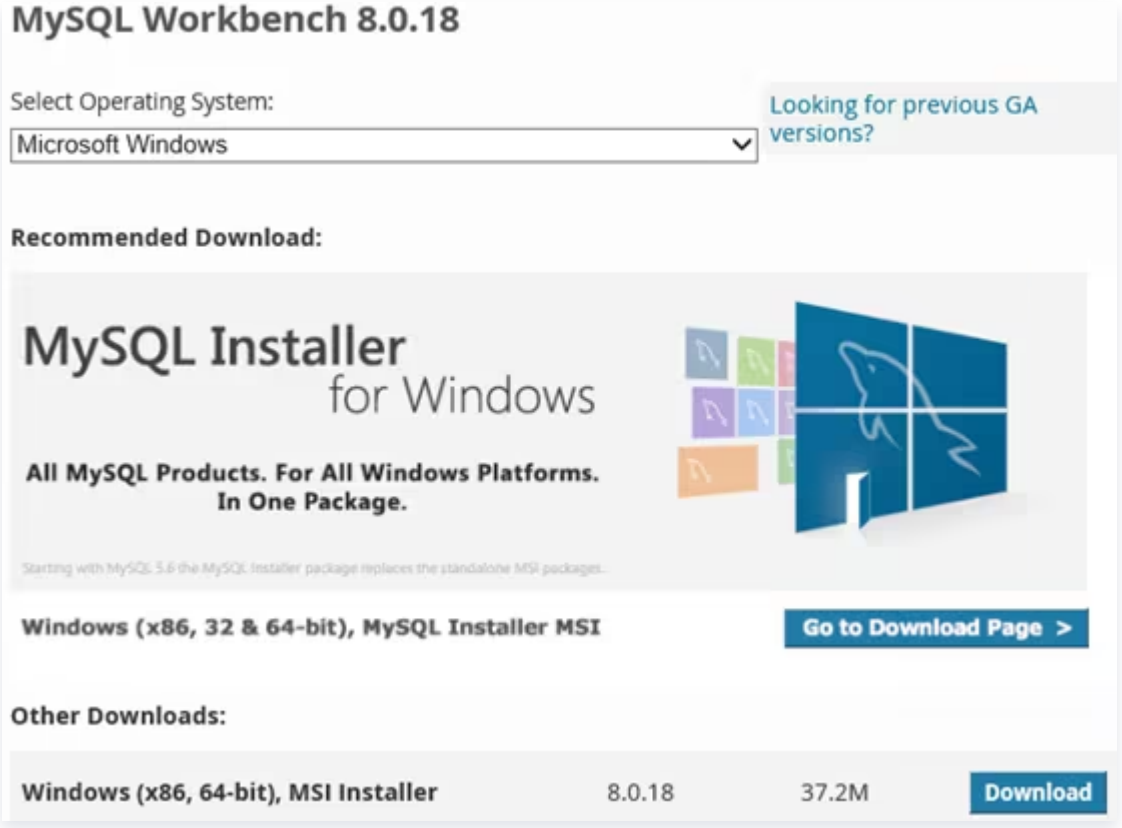
potentially uncontrollable factors may lead to unavailability of the public network connection, such as DDoS attacks and bursts of high-traffic access.

The following describes how to log in to a TencentDB for MySQL instance from Windows and Linux CVM instances over the private and public networks.

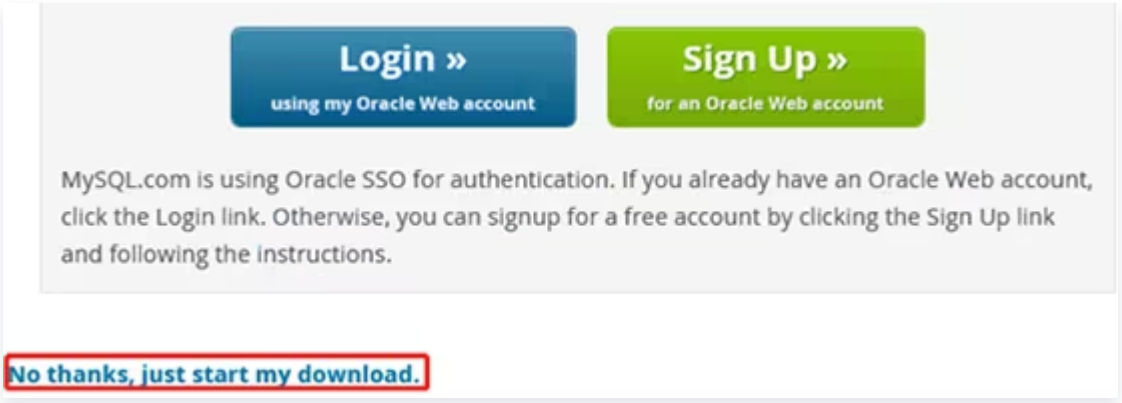
Connecting from a Windows CVM instance

1. Log in to a Windows CVM instance. For more information, see Customizing Windows CVM Configurations.
2. Download a standard SQL client.

> **Note**
> We recommend that you download MySQL Workbench. Click here and download an installer based on your operating system.

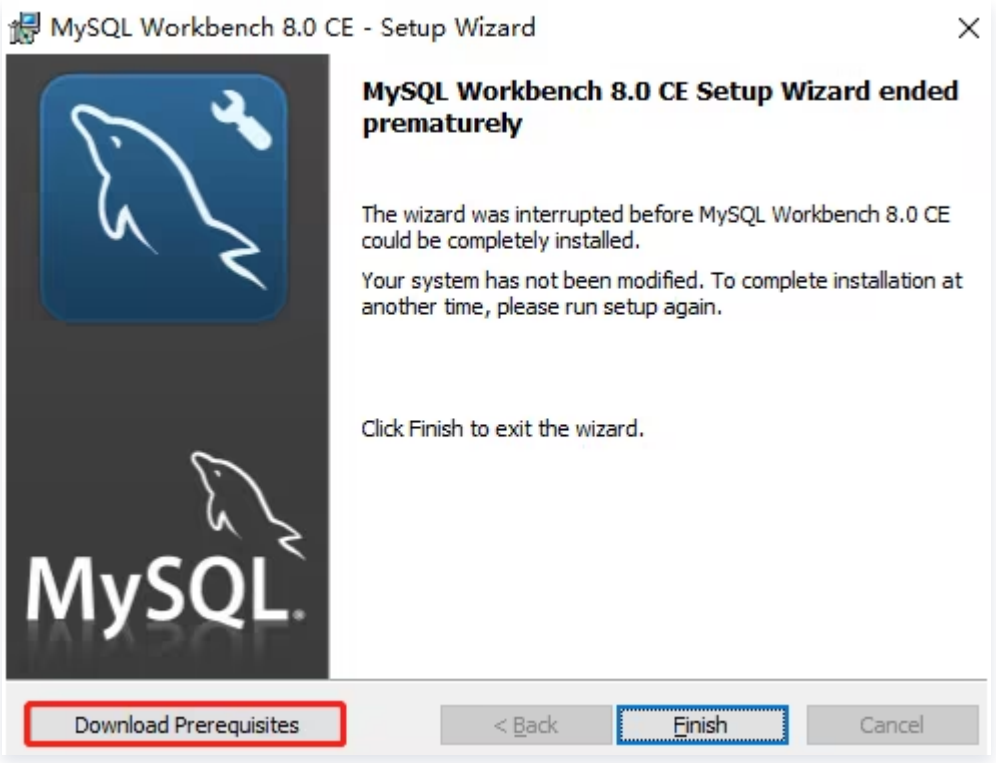


3. **Login**, **Sign Up**, and **No thanks, just start my download.** will appear on the page. Select **No thanks, just start my download.** to download quickly.



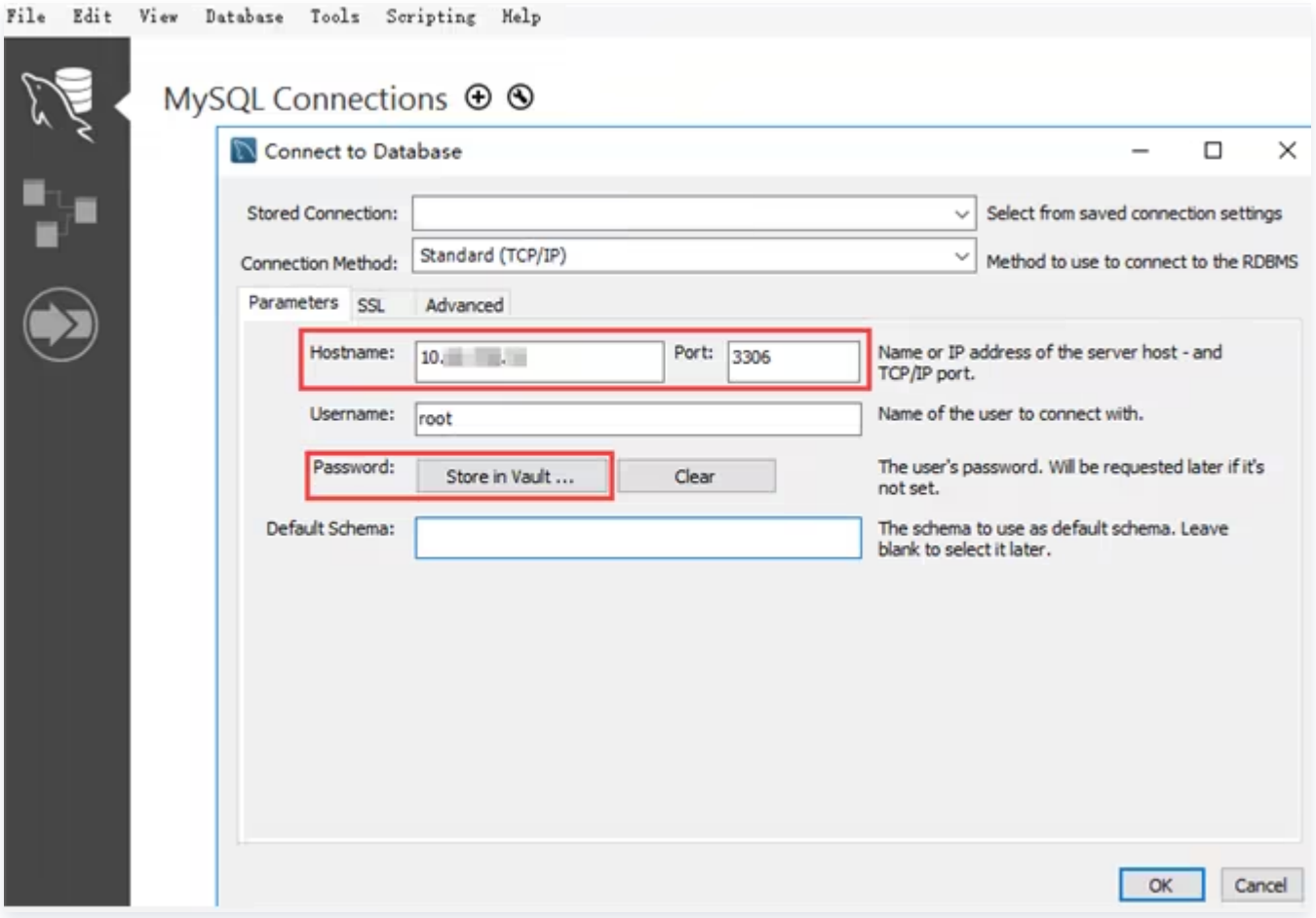
4. Install MySQL Workbench on this CVM instance.

> **Note**
> - Microsoft .NET Framework 4.5 and Visual C++ Redistributable for Visual Studio 2015 are required for the installation.
> - You can click **Download Prerequisites** in the MySQL Workbench installation wizard to enter the corresponding page to download and install them. Then, install MySQL Workbench.



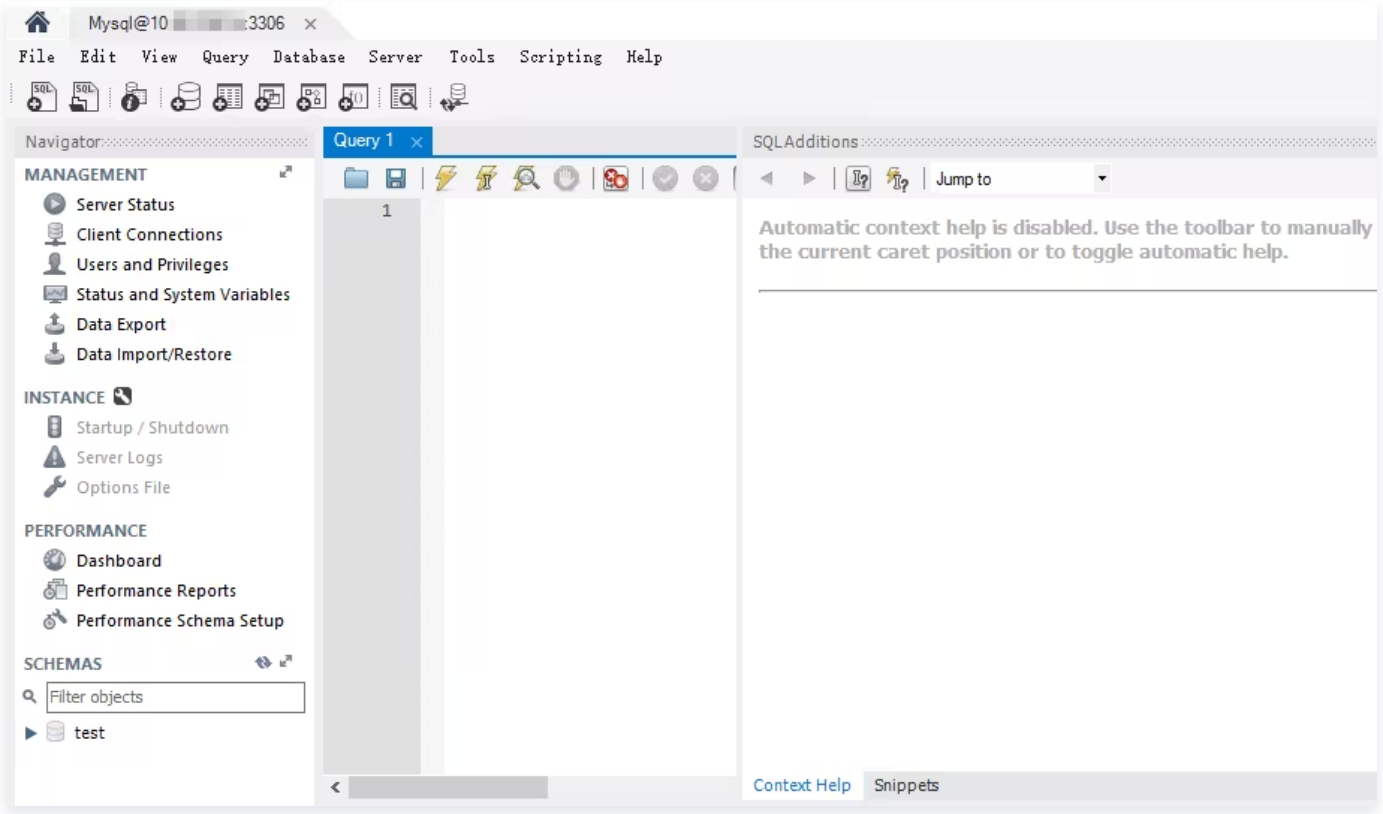
5. Open MySQL Workbench, select **Database** > **Connect to Database**, enter your MySQL database instance's private (or public) network address, username, and password, and click **OK** to log in.

- Hostname: enter the private (or public) network address, which can be viewed with the port on the instance details page in the TencentDB for MySQL console. For public network address, check whether it has been enabled as instructed in Enabling Public Network Address.
- Port: private (or public) network port
- Username: The default username is root. For public network connections, it is recommended to create a separate account for easier connection control and management.
- Password: The password corresponding to `Username`. If you forgot the password, reset it as instructed in Resetting Password.



6. After successful login, the following page will appear, where you can view the modes and objects of the MySQL database, create tables, and perform operations such as data

insertion and query.

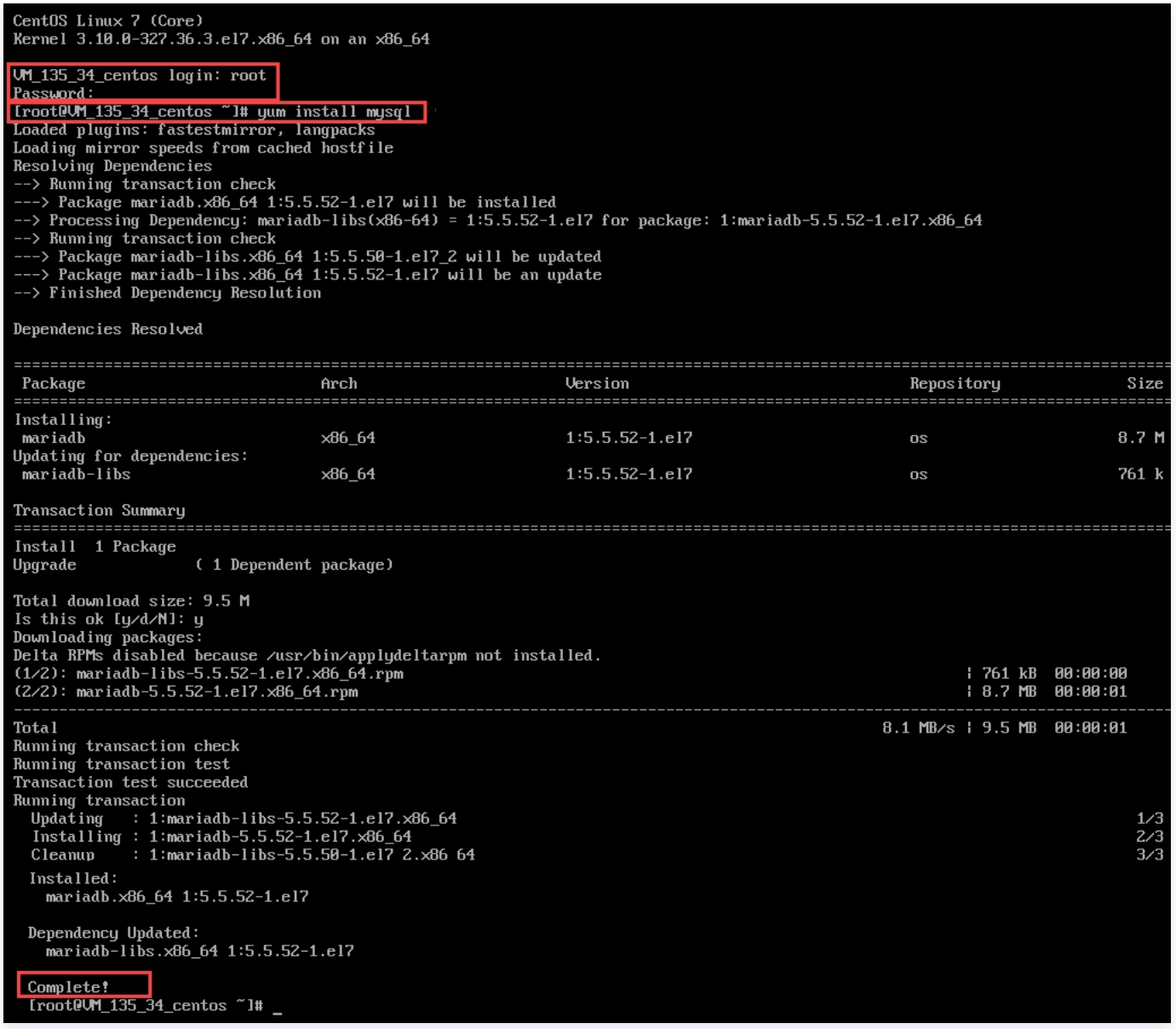


Connecting from a Linux CVM Instance

1. Log in to the Linux CVM instance. For more information, see Quickly Configuring Linux CVM.
2. Taking a CVM instance on CentOS 7.2 (64-bit) as an example, run the following command to install the MySQL client.

```
yum install mysql
```

If `Complete!` is displayed, it means the MySQL client is installed successfully.



3. Perform the corresponding operation based on the connection method:

- **When connecting via private network:**

  3.1 Run the following command to log in to the TencentDB for MySQL instance:

  ```
  mysql -h hostname -u username -p
  ```

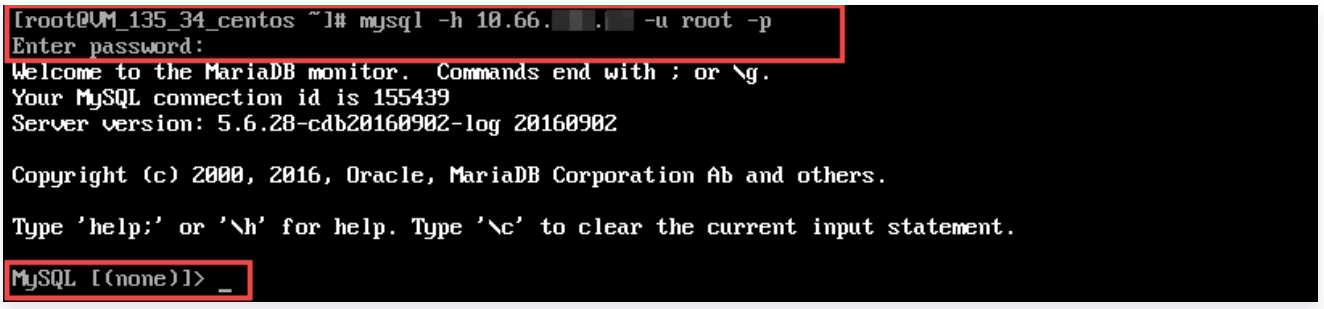
  - hostname: Replace it with the private network address of the target TencentDB for MySQL instance, which can be viewed on the instance details page in the TencentDB for MySQL console.

  > **Note**
  > - The default port number of MySQL is 3306.

- If the port number is 3306, you only need to replace `hostname` with the IP address. For example, if the private network address is 10.16.0.11:3306, set `hostname` to `10.16.0.11`.
- If the port number is not 3306, you need to specify the port in the connection command in the format of `mysql -h hostname -P port -u username -p`, such as `mysql -h 10.16.0.11 -P 5308 -u username -p`.

- username: Replace it with the default username `root`.

3.2 After the prompt `Enter password:`, enter the password corresponding to the root account of the MySQL instance. If you forget the password, you can refer to Reset Password to modify it.
In this example, the prompt `MySQL [(none)]>` indicates a successful login to MySQL.



- **When connecting via public network:**

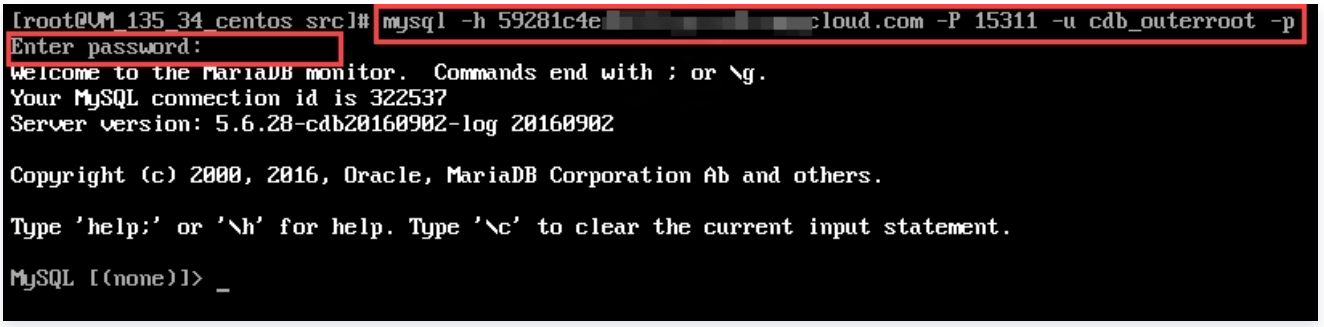
3.3 Run the following command to log in to the TencentDB for MySQL instance:

```
mysql -h hostname -P port -u username -p
```

- hostname: Replace it with the public network address of the target TencentDB for MySQL instance, which can be viewed together with the port on the instance details page in the TencentDB for MySQL console. If the public network address has not been enabled, enable it as instructed in Enabling Public Network Address.
- port: Replace it with the public network port number.
- username: Replace with the public network connection username. For public network connections, it is recommended to create a separate account for easier connection control and management.

3.4 When prompted with `Enter password:`, enter the password corresponding to the public network connection username. If you have forgotten the password, you can refer to Reset Password to modify it.
In this example, the hostname is 59281c4exxx.myqcloud.com, and the public network

port number is 15311.



4. At the `MySQL [(none)]>` prompt, you can send SQL statements to the target MySQL server. For specific command-line instructions, see MySQL Client Commands.
   In the following example, the `show databases;` command is used:

Appendix 1. Troubleshooting connection errors

If you encounter connection errors, we recommend that you use One-Click Connectivity Checker to troubleshoot the problem first and then find the corresponding solution in Instance Connection Failure according to the check report.

Appendix 2. Network Connectivity Verification Method

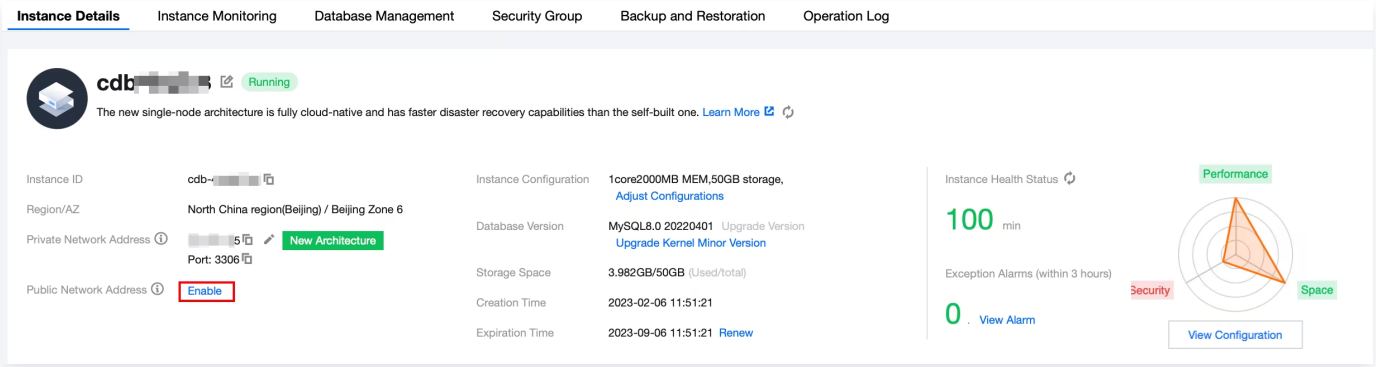
We recommend that you troubleshoot and locate network connectivity problems quickly with the `telnet` command. For more information, see Prohibition of Ping Command.
If the verification with `telnet` found that the network access of the TencentDB instance was normal, but an error was reported when you tried to log in to it via the command line in the CVM instance, see Connection.

Appendix 3. Enabling public network access

Watch video

1. Log in to the TencentDB for MySQL console. In the instance list, click an **instance ID** or **Manage** in the **Operation** column to enter the instance details page.
2. In the **Basic Info** section, click **Enable** next to **Public Network Address**.

> **Note**
> If the **Basic Info** section displays the public IP and port, the public network address has been enabled.



3. In the pop-up dialog box, click **OK**.

> **Note**
> - Once enabled successfully, the public network address can be found in the basic info section.
> - The public network access can be disabled using the switch. When it is enabled again, the public network address corresponding to the domain name remains the same.

Public Network Connection

Last updated: 2026-03-24 10:45:11

This document introduces methods for connecting to the database using CVM or third-party applications via the public network address of TencentDB for MySQL.

Background

In scenarios where private network connection is unavailable, you can connect via public network, but it requires that TencentDB for MySQL has enabled public network. We recommend connecting to the database via public network only for development or auxiliary database management purposes.

Note:

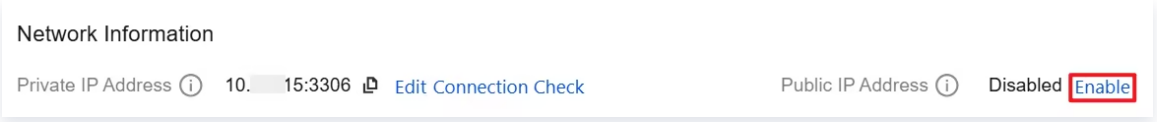
- Currently, source instances in the regions of Guangzhou, Shanghai, Beijing, Chengdu, Chongqing, Nanjing, Hong Kong (China), Singapore, Seoul, Tokyo, Silicon Valley, Virginia, Frankfurt, Jakarta, and Riyadh support enabling public network connection addresses. For regions where read-only instances support enabling public network, please refer to the console.
- To enhance the security and reliability of the database's public network link, starting from May 2024, TencentDB for MySQL uses CLB as the underlying architecture for the public network. After the public network address is enabled, your resources will be added with a new CLB instance (a load balancing instance automatically created due to the enabling of the public network address, which you can try for free). After the public network address is disabled, this CLB instance will be automatically deleted. You can also configure monitoring alarms for this CLB instance. For details, see Enable public network connection address.

Join Method	Scenario	Description	Billed or not
Connection through private network	CVM and MySQL belong to the same Tencent Cloud root account, are in the same region, and are in the same VPC. For details, see Scenario 1.	The private network offers high speed and low latency.	Currently free of charge

public network connection	In scenarios where private network connection is unavailable, you can connect via public network. For details, see Scenario 2. **Note:** Public network connection is susceptible to network fluctuations. If you have high network requirements, we recommend using private network connection or CCN connection.	• Supports third-party applications connecting to the service. • The public network address needs to be enabled manually. • Enabling the public network address will expose your database service to the public network, which may result in the database being compromised or attacked. • Suitable for development or auxiliary database management. It is not recommended for formal business connections, as uncontrollable factors may cause public network connections to become unavailable (such as DDOS attacks, sudden high-volume traffic, and so on).	Currently free of charge
CCN connection	CVM and MySQL are in different VPCs, or use Lighthouse to connect to MySQL. For details, see Scenario 3.	• Full Network Interconnection. • Low latency, high-speed transmission.	CCN billing details

Preparations

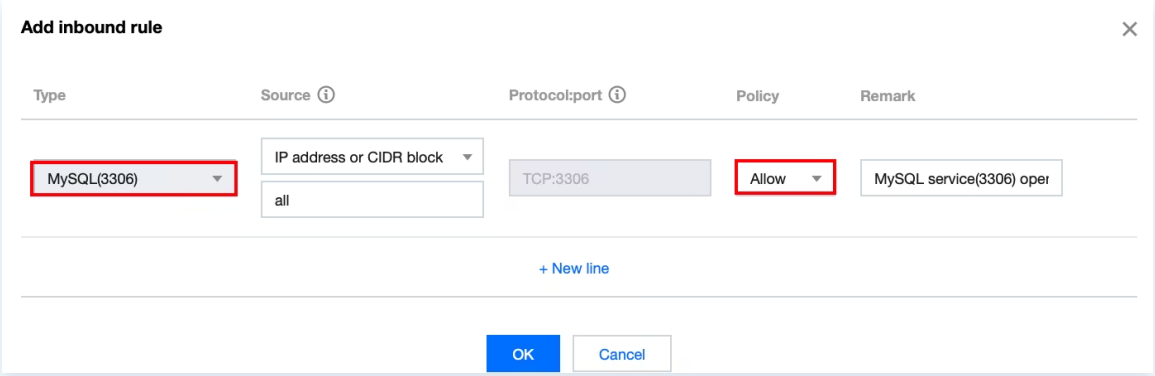
- Prepare the MySQL instance. See Create a MySQL instance.
- Prepare the CVM. See Custom Configuration for Linux CVM.
- Enable public network access for the MySQL instance enabling public network access.



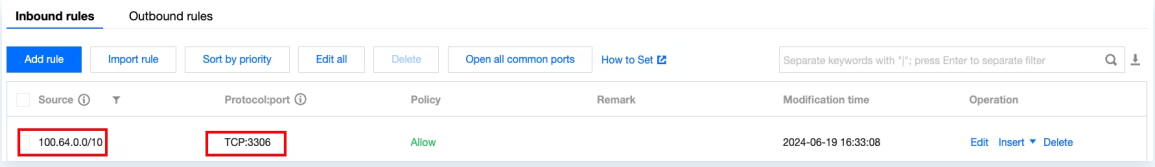
- Security group settings allow the private network port.

Note:

- After public network access is enabled, it will be controlled by the security group's network access policy. When the security policy is configured, **you must allow private network access on port 3306**. If you are unsure about the private network port, you can view it on the instance details page in the console. For operations, see Managing Cloud Database Security Groups.



- You can also restrict the source IP addresses or CIDR blocks based on your actual situation. Currently, after public network access is enabled for a TencentDB for MySQL instance, the CLB architecture is used. The health probe source IP address for CLB is in the 100.64.0.0/10 CIDR block. After public network access is enabled, if the health status of your simple CLB instance shows as abnormal, you can **allow the 100.64.0.0/10 CIDR block** when configuring the security group for the TencentDB for MySQL instance.



Operation Instructions

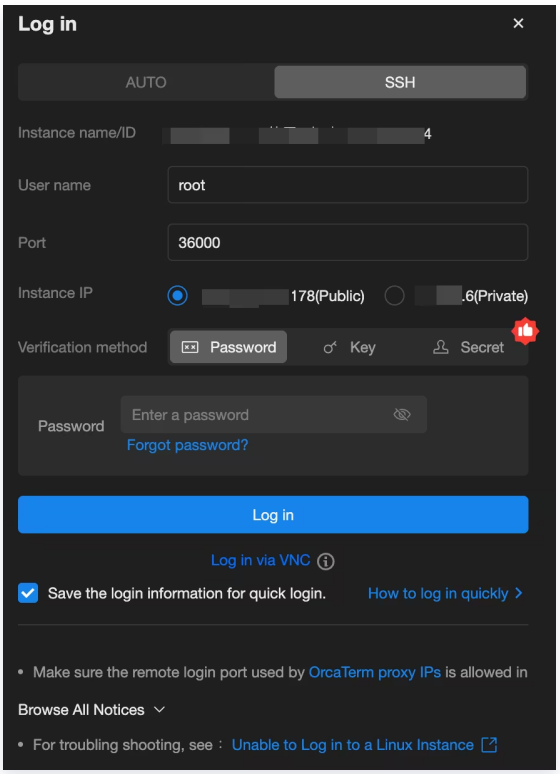
- Connecting to TencentDB for MySQL from the public network of CVM
- Connecting to TencentDB for MySQL from the public network of third-party applications

Connecting to TencentDB for MySQL from the public network of CVM

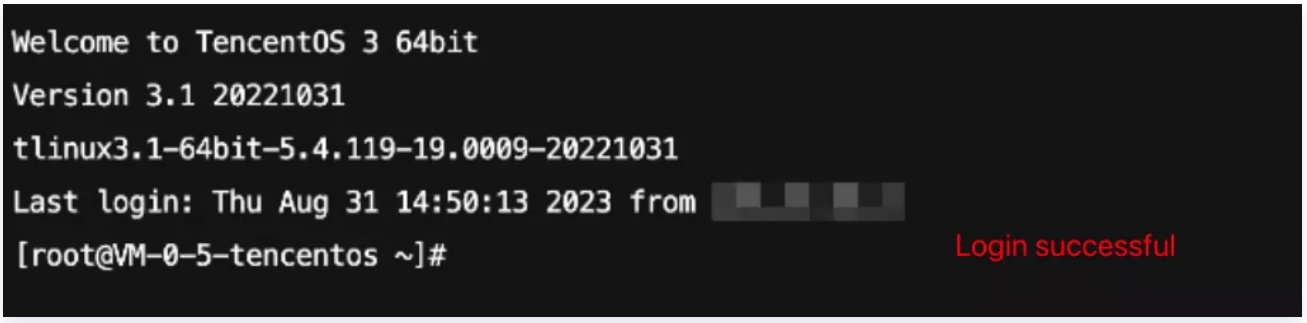
Step 1: Log in to CVM

1. Log in to the CVM console, locate the target CVM instance in the instance list, and click **Login** in the operation column on the right.

2. In the **Login** window, select Password login, enter the CVM username and password, and click **Log in** to log in successfully, as shown below:



3. After successful login, the page is displayed as shown below:



Step 2: Install the MySQL client (if it has been previously installed on this CVM, you may skip Step 2)

Run the following command to install the MySQL client:

```
yum install mysql
```

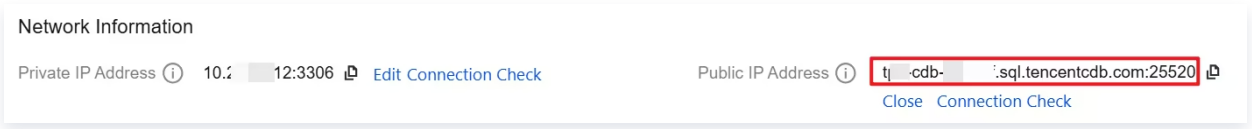
Prompt: `Complete!` indicates that the MySQL client installation is complete.

Step 3: Connect to TencentDB for MySQL using CVM

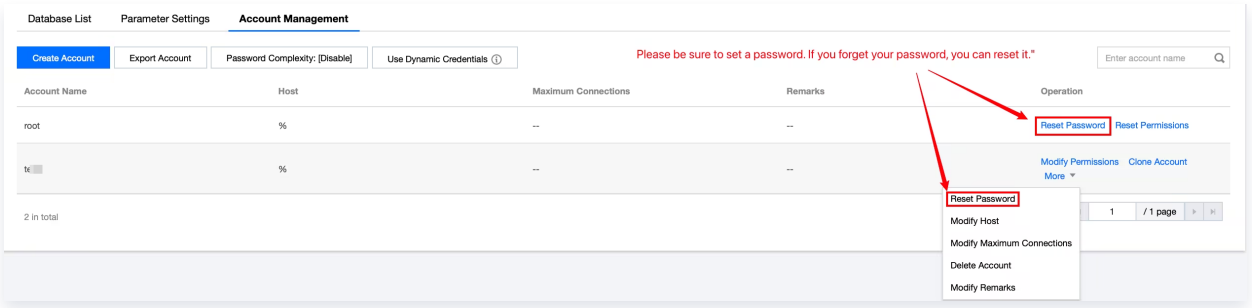
1. Run the following command in the CVM to log in to the MySQL database instance.

```
mysql -h <public IP address> -u <username, default root> -P <public
port number> -p
```

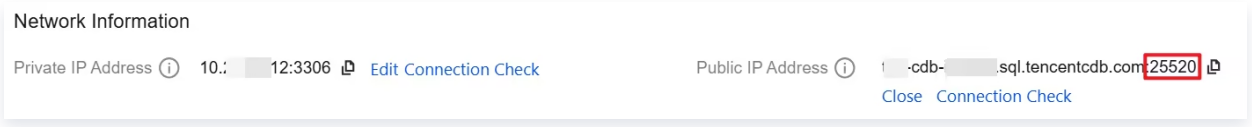
   - <public IP address>: Replace with the public IP address of the target MySQL database instance. You can view the public IP address on the instance details page in the MySQL console. If the public IP address is not enabled, see Enable Public Network Access to enable it.



   - <username, default root>: Replace with the account name of the target MySQL database instance. The default account name is root.



   - <public port number>: Replace with the public port number of the target MySQL database instance. The public port number can be viewed on the instance details page in the MySQL console.



2. After the prompt `Enter password:`, enter the password corresponding to the MySQL instance account. If you forget the password, refer to Reset Password to modify it.

In this example, the prompt `mysql>` indicates a successful login to MySQL.

```
[root@VM-0-5-tencentos ~]# mysql -h[redacted] -u root -P 63[redacted] -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 1985
Server version: 8.0.30-txsql 20221220

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```
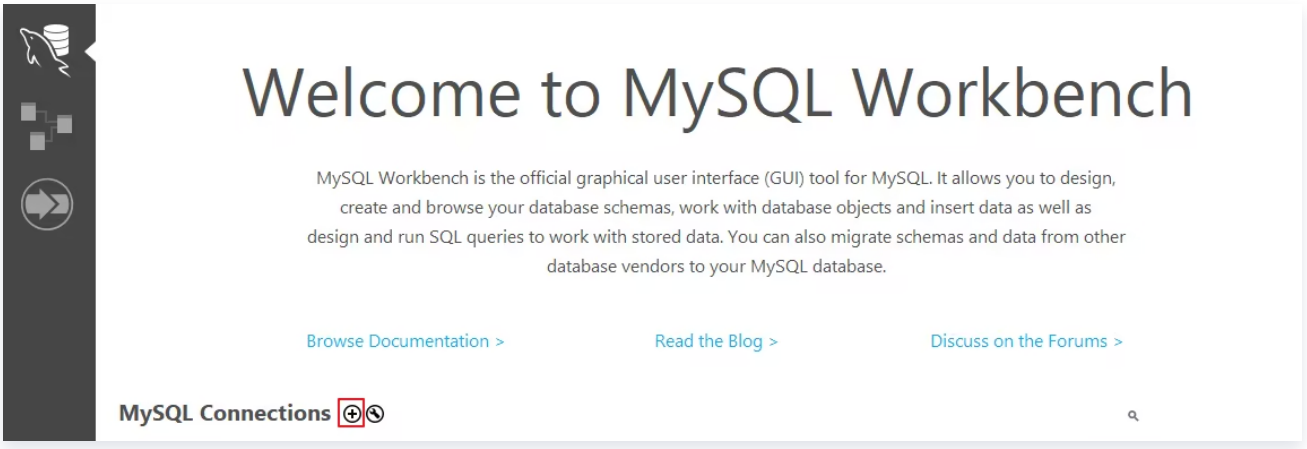
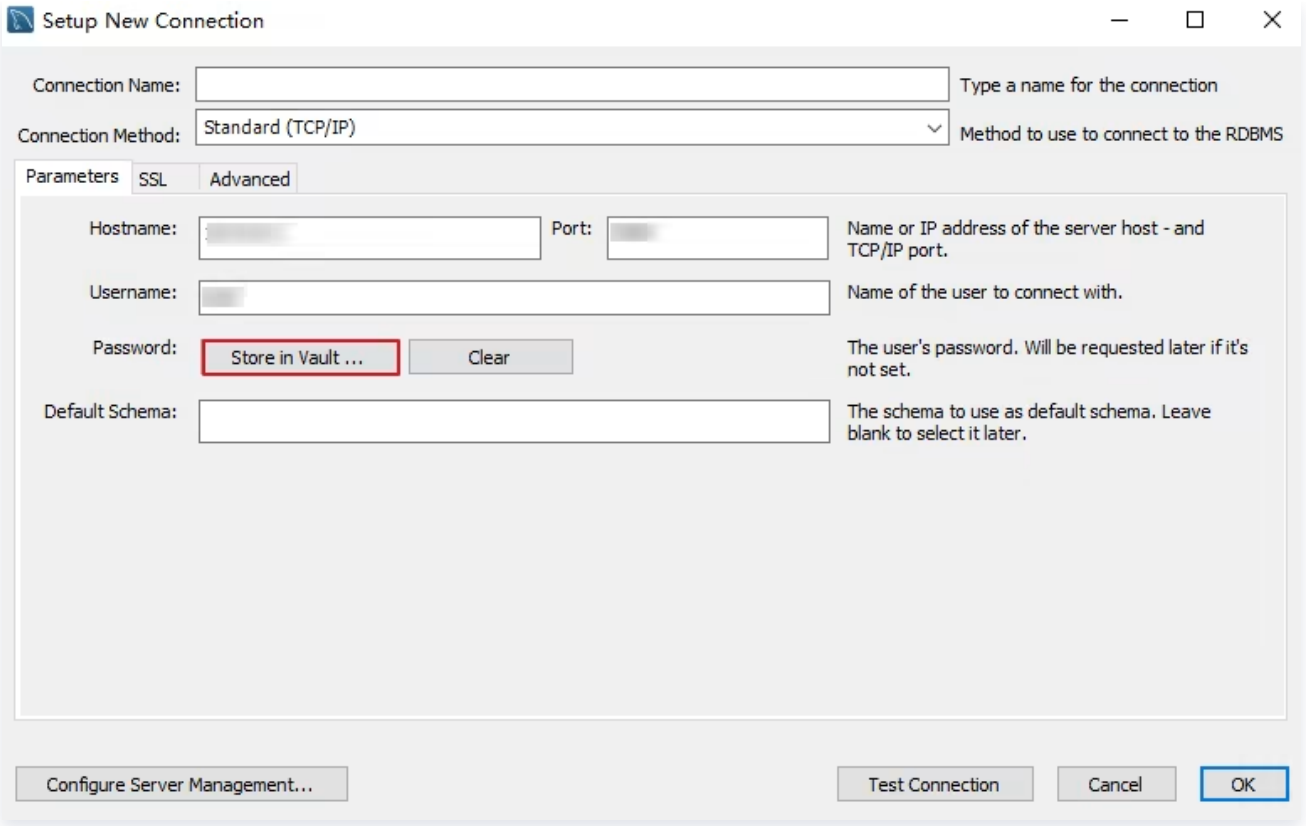

Connecting to TencentDB for MySQL from the public network of third-party applications

1. For MySQL Workbench installation, see the official download page at MySQL Workbench.
2. Go to the download page and click on **MySQL Workbench.**
3. After navigating to the page, click **Downloads** after Windows (x86, 64-bit), MSI Installer.
4. Click **No thanks, just start my download**.
5. After the installation is complete, open MySQL Workbench and click the plus sign after MySQL Connections to add the instance information to be connected.

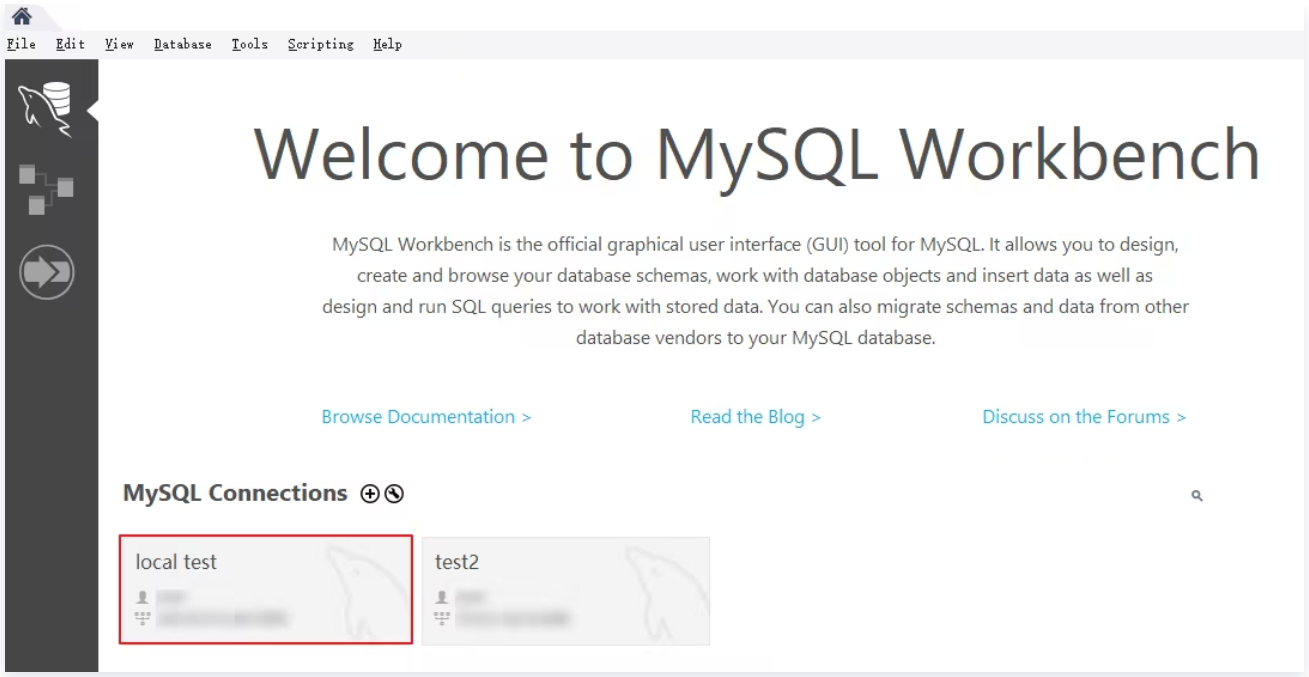


6. In the pop-up window, after completing the following configurations, click **OK**.

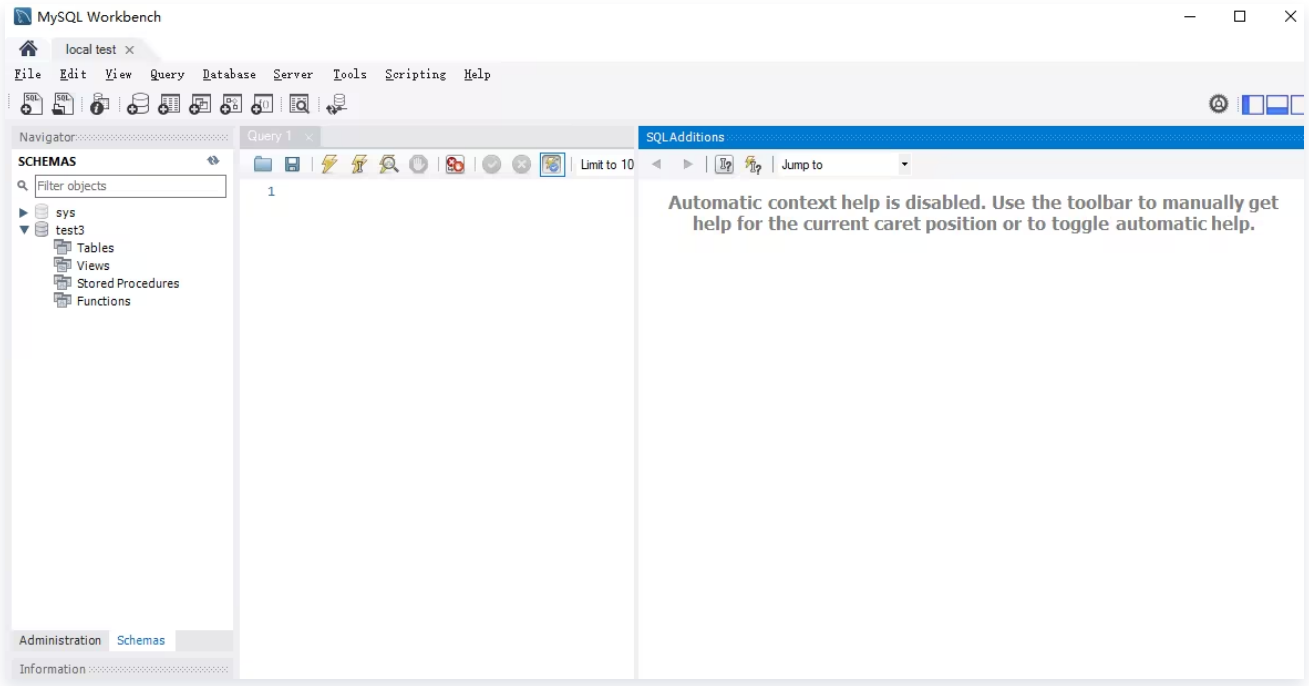


Parameter	Description
Connection name	Name this connection.
Connection Method	Connection Method: Standard (TCP/IP).
Hostname	Enter the public IP address of the TencentDB for MySQL instance. You can query the public IP address information on the instance details page.
Port	Enter the public network port number of the TencentDB for MySQL instance. The port number for the public IP address can be queried on the instance details page.
Username	Enter the username for the target MySQL instance.
Store in Vault...	Enter the account password for the target MySQL instance, and the password will be saved.

7. Return to the MySQL Workbench homepage and click the newly created target instance information to connect to the MySQL instance.



8. After a successful connection, the interface is as shown below.



FAQs

Is there a charge for public network connections?

Public network connections are free of charge and currently incur no fees.

Why does a public network connection need to allow access to the MySQL private network port?

After the public network address is enabled for a TencentDB for MySQL instance, Tencent Cloud's backend cluster accesses the database's private network port internally, performs port mapping, and forwards traffic to implement public network access. Therefore, after enabling the public network address, you must allow access to the MySQL private network port for the backend cluster in the security group.

Can the public network port be modified?

It cannot be modified.

How secure are public network connections?

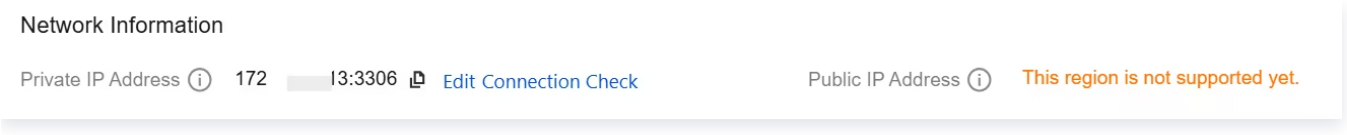
Enabling the public network address exposes your database service to the public network, which may result in database intrusion or attacks. It is generally recommended to connect to the database via private network. Public network connections for cloud databases are suitable for development or auxiliary database management purposes. However, it is not recommended for formal business connections due to potential uncontrollable factors that may cause public network unavailability (such as DDOS attacks, sudden high-volume traffic, and so on).

After the public network address is enabled, how to restrict access to only specified IPs while blocking others?

Restrictions on host permissions can be implemented by modifying the authorized host address for the database account in the TencentDB for MySQL Console to restrict database access. See Modifying Authorized Host Addresses.
Alternatively, you can consider using a public network CLB for forwarding to enable external access, implementing source restrictions through the security group policies of the CLB. See Enabling Public Network Services via CLB.

Why can't I enable the public network connection?

Currently, source instances in the regions of Guangzhou, Shanghai, Beijing, Chengdu, Chongqing, Nanjing, Hong Kong (China), Singapore, Seoul, Tokyo, Silicon Valley, Virginia, and Frankfurt support enabling public network connection addresses. For regions where RO instances support enabling public network connection addresses, please refer to the console. If an instance is deployed in a region that does not support public network access, it will be unable to enable public network connections.



How to troubleshoot public network connection errors?

Possible causes of connection failure via the public network address are typically related to account credentials, port settings, security groups, network issues, or instance problems. The self-check methods for various scenarios are described below.

1. After logging in to the CVM, if you repeatedly fail to log in to the cloud database via command, you can check whether there are errors in the account and password used for database login.

   In the command line: mysql -h <public IP address> -u <username, default root> -P <public port number> -p. The account and password used for login must be correct. If you are using a non-root account to log in, you need to enter the password corresponding to that non-root account. When the password is entered on the CVM page, the password will not be displayed as you type; you need to enter it correctly at once and press Enter. If you forget the password, you can reset the password and try again.
2. Check whether the security group configuration is reasonable and whether it restricts IP addresses.

   In the CVM security group, configure the outbound rules. **When the destination configuration of the outbound rules is not 0.0.0.0/0 and the protocol port is not set to ALL**, you need to add the public IP address and port of MySQL to the outbound rules.
   In the MySQL security group, configure the inbound rules. **When the source configuration of the inbound rules is not 0.0.0.0/0 and the protocol port is not set to ALL**, the private network port of the MySQL instance needs to be allowed in the inbound rules. The default value is 3306.
   For operations, see Security Group Configuration Issue Resolution.
3. Check whether it is a network issue.

   To connect to the database via a public network, failures may occur due to unstable network conditions, local network restrictions, or VPC-bound ACL policies. Switch your local network and remove relevant restrictions before retrying. We recommend using private network connections to the database for more stable and lower-latency access.
4. Check whether there are instance issues.
   - If the disk of the MySQL instance is full, it may affect the connection to the database. It is recommended to scale out the disk. For operations, see Adjusting Database Instance Specifications.
   - When the error message "ERROR 1040(00000):Too many connections" appears, it indicates that the maximum number of connections for the cloud database instance has exceeded the limit. Common causes and solutions:
     i. There are many sleep threads. It is recommended to lower the wait_timeout and interactive_timeout parameter values in the console. For operations, see Setting Instance Parameters.
     ii. There are few sleep threads and no slow query accumulation. It is recommended to

increase the max_connections parameter value in the console. For operations, see Setting Instance Parameters.

- Check whether the MySQL instance is in the "primary/secondary switching status". If the MySQL instance is undergoing primary/secondary switching when you attempt to connect, the connection will fail. Please wait for the switching to complete and then reconnect via command.

FAQs on Connectivity

Last updated: 2026-03-24 10:43:32

This document introduces common issues encountered when a connection is made to TencentDB for MySQL instances through different connection methods (private network connection, public network connection, CCN connection).

Common Issues

Regardless of which connection method you use to connect to the database, the following common issues are prone to occur. If the connection fails, during self-check, it is recommended that you first check and locate the cause based on the following suggestions.

- Account Password Issues

  After logging in to the CVM, if you repeatedly fail to log in to the cloud database via command, check whether the account and password used for database login are correct. In the command line: mysql -h <private/public IP address> -u <username, default root> -P <private/public port number> -p. The account and password used for login must be correct. If you are using a non-root account to log in, you need to enter the password corresponding to that non-root account. When the password is entered on the CVM page, the password will not be displayed as you type; you need to enter it correctly at once and press Enter. If you forget the password, you can reset the password and try again.
- TencentDB for MySQL Instance Issues

  If the instance itself has issues, the connection may fail. You can check whether the following instance issues exist.
  - If the disk of the MySQL instance is full, it may affect the connection to the database. It is recommended to scale out the disk. For operations, see Adjusting Database Instance Specifications.
  - When the error message "ERROR 1040(00000):Too many connections" appears, it indicates that the current maximum number of connections for the cloud database instance has exceeded the limit. Common causes and solutions:
    - A large number of sleep threads exist. It is recommended to decrease the values of the wait_timeout and interactive_timeout parameters in the console. For operations, see Setting Instance Parameters.

- The number of sleep threads is low, and there is no slow query backlog. It is recommended to increase the value of the max_connections parameter in the console. For operations, see Setting Instance Parameters.
- Check whether the MySQL instance is in the "primary/secondary switching status". If the MySQL instance is undergoing primary/secondary switching when you attempt to connect, the connection will fail. Please wait for the switching to complete and then reconnect via command.

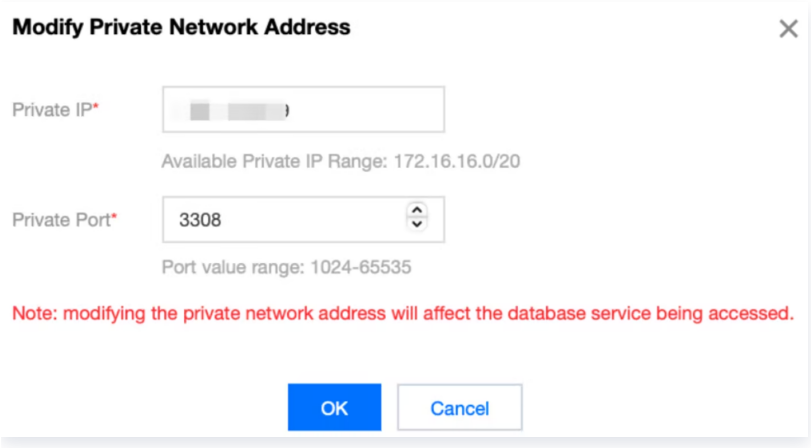
Common Issues with Private Network Connections

Whether private network connections are charged

Private network connection is free to use and currently not charged.

Can the private network port be modified?

It can be modified. You can log in to the MySQL console, navigate to the details page of the target instance, and click **Edit** after the private network address to make modifications.



How to troubleshoot private network connection errors

Possible causes of connection failure via the private network address are typically related to CVM types, account credentials, port settings, security groups, network issues, or instance problems. The self-check methods for various scenarios are described below. For more troubleshooting guidance, see Private Network Connection Failure.

1. Check whether the server used for connection is a CVM.

   To use a private network connection, the server must be a CVM. If you are using Lighthouse or other non-Tencent Cloud servers, connecting via private network address is not supported. You can refer to Custom Configuration of Linux CVM to create a new CVM and then connect to the database via private network address.
2. After logging in to the CVM, if you repeatedly fail to log in to the cloud database via command, you can check whether there are errors in the account and password used for database login.

In the command line: mysql -h <private IP address> -u <username, default root> -P <port number, default 3306> -p. The account and password used for login must be correct. If you are using a non-root account to log in, you need to enter the password corresponding to that non-root account. When the password is entered on the CVM page, the password will not be displayed as you type; you need to enter it correctly at once and press Enter. If you forget the password, you can reset the password and try again.

3. Check whether the security group configuration is reasonable and whether it restricts IP addresses.

   In the CVM security group, configure the outbound rules. **When the destination configuration of the outbound rules is not 0.0.0.0/0 and the protocol port is not set to ALL**, you need to add the private IP address and port of MySQL to the outbound rules.
   In the MySQL security group, configure the inbound rules. **When the source configuration of the inbound rules is not 0.0.0.0/0 and the protocol port is not set to ALL**, you need to add the IP address and port of MySQL to the inbound rules.
   For operations, see Security Group Configuration Issue Resolution.
4. Check whether it is a network issue.

   To ensure connectivity, the CVM and MySQL instance must reside in the same region and the same VPC network. Verify this in the CVM console and TencentDB for MySQL console. If they are not in the same VPC network, you can switch the network of the MySQL instance to match the CVM's network. If both the CVM and MySQL are confirmed to be in the same region and VPC network but network-related errors persist, check whether there are any network restrictions on your end.
5. Check whether there are instance issues.
   - If the disk of the MySQL instance is full, it may affect the connection to the database. It is recommended to scale out the disk. For operations, see Adjusting Database Instance Specifications.
   - When the error message "ERROR 1040(00000):Too many connections" appears, it indicates that the current maximum number of connections for the cloud database instance has exceeded the limit. Common causes and solutions:
     - A large number of sleep threads exist. It is recommended to decrease the values of the wait_timeout and interactive_timeout parameters in the console. For operations, see Setting Instance Parameters.
     - The number of sleep threads is low, and there is no slow query backlog. It is recommended to increase the value of the max_connections parameter in the console. For operations, see Setting Instance Parameters.
   - Check whether the MySQL instance is in the "primary/secondary switching status". If the MySQL instance is undergoing primary/secondary switching when you attempt to connect, the connection will fail. Please wait for the switching to complete and then reconnect via command.

Common public network connection issues

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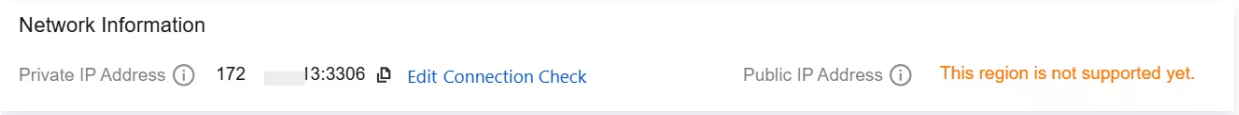
please refer to the console. If an instance is deployed in a region that does not support public network access, it will be unable to enable public network connections.



How to troubleshoot public network connection errors?

Possible causes of connection failure via the public network address are typically related to account credentials, port settings, security groups, network issues, or instance problems. The self-check methods for various scenarios are described below.

1. After you log in to the CVM, if you repeatedly fail to log in to the cloud database via command, you can check whether there are errors in the account and password used for database login.

   In the command line: mysql -h <public IP address> -u <username, default root> -P <public port number> -p. The account and password used for login must be correct. If you are using a non-root account to log in, you need to enter the password corresponding to that non-root account. When you enter the password on the CVM page, the password will not be displayed as you type; you need to enter it correctly at once and press Enter. If you forget the password, you can reset the password and try again.
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- When the error message "ERROR 1040(00000):Too many connections" appears, it indicates that the maximum number of connections for the cloud database instance has exceeded the limit. Common causes and solutions:
  i. There are many sleep threads. It is recommended to lower the wait_timeout and interactive_timeout parameter values in the console. For operations, see Setting Instance Parameters.
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- Check whether the MySQL instance is in the "primary/secondary switching status". If the MySQL instance is undergoing primary/secondary switching when you attempt to connect, the connection will fail. Please wait for the switching to complete and then reconnect via command.

CCN Connection Common Issues

Is CCN connection chargeable?

Using CCN incurs fees. For details, see CCN Billing Overview.

When would you use CCN to connect to TencentDB for MySQL?

1. CVM and TencentDB for MySQL instances reside in different VPCs (including same/different accounts, same/different regions). You can enable connections to the database via CCN.
2. If the server you purchased is Lighthouse, you need to enable connection to the database via CCN.

How can Lighthouse achieve private network interconnection?

Lighthouse instances are isolated using VPCs automatically assigned by Tencent Cloud. By default, they cannot communicate over the private network with other Tencent Cloud resources in VPCs (such as CVM and cloud databases). This requires association with CCN. For details, see Private Network Interconnection.

> **Note:**
> Lighthouse instances can only be associated with CCNs under the same account. Lighthouse instances across different accounts cannot communicate with each other.

What is the service level of CCN?

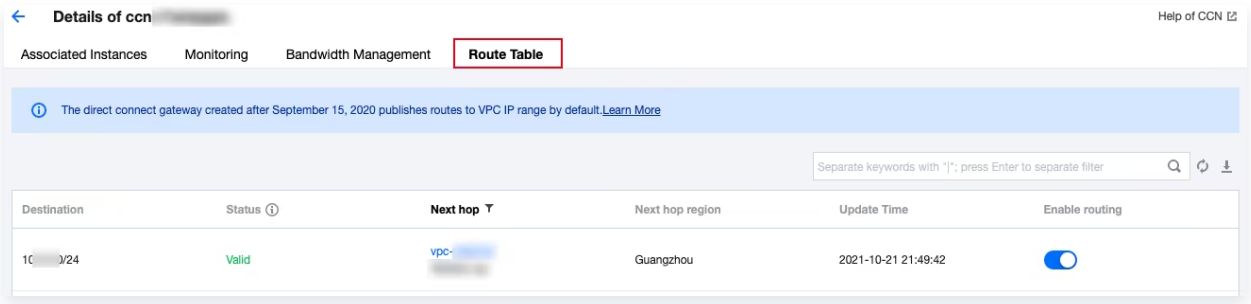
Tencent Cloud CCN offers three availability levels: Platinum, Gold, and Silver.

- The service level of data transfer in the same region is gold, which cannot be modified.

- Cross-region interconnection offers three service levels: Platinum, Gold, and Silver. You can select a service level when creating a CCN.
  Different service levels incur different fees. You can choose based on your business needs. For details, see Billing Overview.

How to troubleshoot CCN connection errors

1. Check whether the routing table of the CCN is valid. Check by performing the following steps:
   1.1 On the "Private Network Interconnection" page, click the "CCN ID" in the region card to navigate to the CCN details page.
   1.2 On the CCN details page, select the **Routing Table** tab.
   1.3 You need to confirm that the newly added route entry is "valid". If there is a CIDR conflict, the route entry may be invalid.



> **Note:**
> If you need to use invalid routes, see Disable Routes and Enable Routes. For conflict rules and limitations, see Use Limits.

2. After you are logged in to the Lighthouse instance, if you repeatedly fail to access the cloud database via command, check whether the account and password used for database login are correct.
   In the command line: mysql -h <private IP address> -u <username, default root> -P <port number, default 3306> -p. The account and password used for login must be correct. If you are using a non-root account to log in, you need to enter the password corresponding to that non-root account. When you enter the password on the Lighthouse page, the password will not be displayed as you type; you need to enter it correctly at once and press Enter. If you forget the password, you can reset the password and try again.
3. Check whether there are instance issues.
   - If the disk of the MySQL instance is full, it may affect the connection to the database. It is recommended to scale out the disk. For operations, see Adjusting Database Instance Specifications.

- When the error message "ERROR 1040(00000):Too many connections" appears, it indicates that the maximum number of connections for the cloud database instance has exceeded the limit. Common causes and solutions:
  i. There are many sleep threads. It is recommended to lower the wait_timeout and interactive_timeout parameter values in the console. For operations, see Setting Instance Parameters.
  ii. There are few sleep threads and no slow query accumulation. It is recommended to increase the max_connections parameter value in the console. For operations, see Setting Instance Parameters.
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