

TencentDB for MySQL

Get Started

Product Documentation



Copyright Notice

©2013-2022 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 Tencent Cloud Computing (Beijing) Company Limited and its affiliated companies. 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

Get Started

Overview

Creating MySQL Instance

Connecting to MySQL Instance

Get Started

Overview

Last updated : 2022-02-16 18:21:44

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 a MySQL instance where billing mode and configurations are customizable. 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 errors, see [Instance Connection Failure](#).

Creating MySQL Instance

Last updated : 2022-12-28 10:46:19

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

Prerequisites

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

- To register a Tencent Cloud account:

[Click here to sign up for](#)

- To verify your identity:

[Click here to verify your](#)

Purchasing a two-node/three-node instance

1. Log in to the [TencentDB for MySQL purchase page](#), configure the following instance information, and click **Buy Now**.

- **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 where you want to deploy your TencentDB for MySQL instance. We recommend you use 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 8.0, 5.7, 5.6, and 5.5. For more information on the features of each version, see [MySQL 5.7 Reference Manual](#).
- **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 [Overview](#).
- **Data Replication Mode:** Async, semi-sync, and strong sync replication modes are supported. For more information, see [Database Instance Replication](#).
- **Source AZ and Replica AZ:** Select different source and replica AZs (i.e., multi-AZ deployment) to protect your database from failures and AZ outages. For more information, see [High Availability \(Multi-AZ\)](#).

Note :

- If the source and replica are in different AZs, the network sync delay may increase by 2–3 ms.
- When you purchase Tencent Cloud services, we recommend you select the region closest to your end users to minimize access latency and improve download speed.

- **Instance 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.
- **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.

- **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](#).
 - **Table Name Case Sensitivity:** Whether the table name is case sensitive. This option is enabled by default.
 - **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](#).
 - **Alarm Policy:** You can create an alarm policy to trigger alarms and send messages when the Tencent Cloud resource state changes. For more information, see [Alarm Policies \(Cloud Monitor\)](#).
 - **Project:** Select a project to which the TencentDB instance belongs. The default project is used.
 - **Tag:** Categorize and manage resources with tags. For more information, see [Tag Overview](#).
 - **Instance Name:** Name the instance now or later.
 - **Quantity:** You can purchase up to ten pay-as-you-go instances in each AZ.
 - **Purchase Period:** Select the desired duration according to your business needs. The billing mode is monthly subscription, and the longer the purchase period, the higher the discount.
 - **Auto-Renewal:** Auto-renew the device monthly upon expiration if your account has sufficient balance in the monthly subscription billing mode.
 - **Terms of Service:** For more information, see [Terms of Service](#).
2. 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**.

Purchasing a single-node instance

Note :

The single-node architecture of the cloud disk edition is currently in beta test. To try it out, [submit a ticket](#).

1. Log in to the [TencentDB for MySQL purchase page](#), configure the following instance information, and click **Buy Now**.

- **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 where you want to deploy your TencentDB for MySQL instance. This architecture is currently supported in Shanghai 、 Chengdu、 Guangzhou、 Beijing and Hongkong regions and will be available in more regions in the future. We recommend you use 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 8.0 and 5.7 for the single-node architecture. For more information on the features of each version, see [MySQL 5.7 Reference Manual](#).
- **Engine:** The default engine is InnoDB, which is the most commonly used OLTP storage engine, with complete transaction support and powerful capability of highly concurrent reads/writes.
- **Architecture:** Select **Single-node**.

Note :

As it takes a long time for the basic edition instances to recover, we recommend you use the two-node or three-node version for production environments, which ensures up to 99.99% availability.

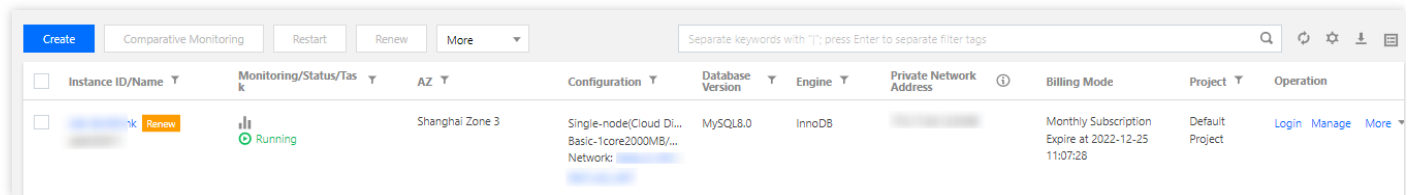
- **Disk Type:** Cloud disk. For more information, see [Cloud Disk Types](#).
- **AZ:** Select an AZ for instance deployment. Tencent Cloud services in different AZs in the same VPC can communicate with each other over the private network; for example, a CVM instance in Shanghai Zone 2 can access a MySQL instance in Shanghai Zone 3 in the same VPC over the private network.
- **Instance Specs:** Select specifications as needed.
- **Disk:** The disk space is used to store the files required by MySQL execution. You can select **SSD Cloud Disk** or **Enhanced SSD**. The supported disk capacity range is 20–32000 GB. For more information, see [Cloud Disk Types](#).


The screenshot shows a disk configuration interface. On the left, the text 'Hard Disk' is displayed. A dropdown menu is open, showing three options: 'Enhanced SSD' (highlighted in blue), 'SSD Cloud Disk', and another 'Enhanced SSD' option. To the right of the dropdown, there is a control for disk capacity, consisting of a minus sign, the number '200', a plus sign, and the unit 'GB'. Below the dropdown, the text '/s bandwidth' is visible.

Note :

Next configuration steps are the same as those for purchasing two-node/three-node instances. For more information, see [Purchase Methods](#).

2. 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**.



Instance ID/Name	Monitoring/Status/Tasks	AZ	Configuration	Database Version	Engine	Private Network Address	Billing Mode	Project	Operation
[Redacted]	 Running	Shanghai Zone 3	Single-node(Cloud Di... Basic-1core2000MB/... Network: [Redacted]	MySQL8.0	InnoDB	[Redacted]	Monthly Subscription Expire at 2022-12-25 11:07:28	Default Project	Login Manage More

Subsequent operations

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](#).

Connecting to MySQL Instance

Last updated : 2022-12-28 10:52:33

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

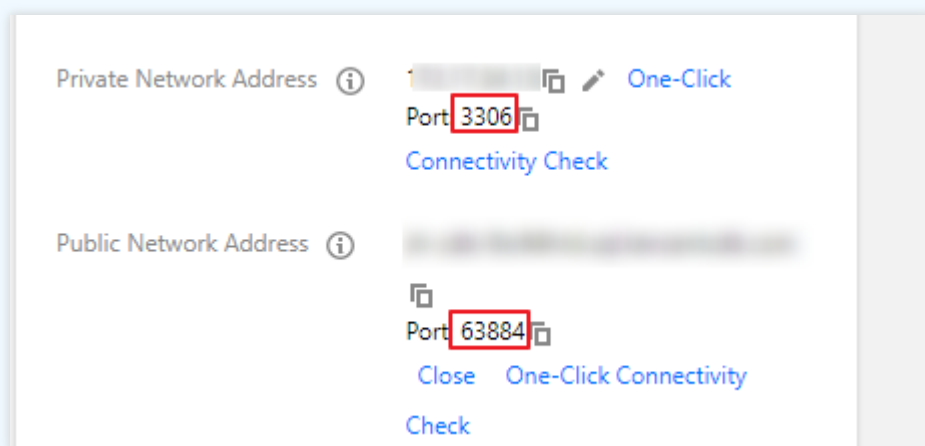
Preparations

- You have initialized a TencentDB for MySQL instance. For more information, see [Creating MySQL Instance](#).
- You have created a database account and authorized specific IPs or IP ranges to access the TencentDB for MySQL instance. Or, you can use the root account to do so. For more information, see [Creating Account](#) and [Modifying Host Addresses with Access Permissions](#).
- 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 two 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 TencentDB by default and can be viewed in the instance list or on the instance details page in the [TencentDB for MySQL console](#).

Note :

CVM and TencentDB instances in different VPCs (under the same or different accounts in the same or different regions) can be interconnected over the private network through [Cloud Connect Network](#).

- **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 access will expose your database services to the public network, which may lead to database intrusions or attacks. We recommend 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 you download MySQL Workbench. Click [here](#) and download an installer based on your operating system.



MySQL Workbench 8.0.18

Select Operating System:
Microsoft Windows

Looking for previous GA versions?

Recommended Download:

MySQL Installer for Windows

All MySQL Products. For All Windows Platforms. In One Package.

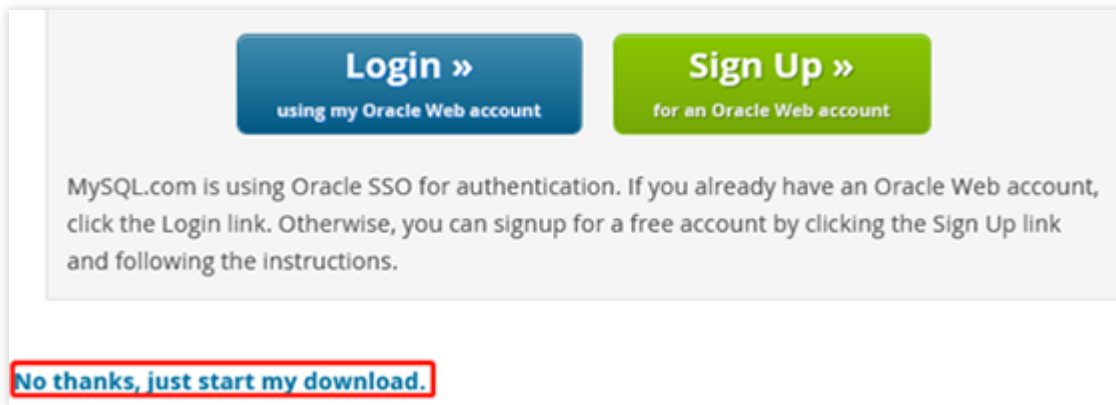
Starting with MySQL 5.6 the MySQL Installer package replaces the standalone MSI packages.

Windows (x86, 32 & 64-bit), MySQL Installer MSI [Go to Download Page >](#)

Other Downloads:

Download	Version	Size	Action
Windows (x86, 64-bit), MSI Installer	8.0.18	37.2M	Download

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.



Login »
using my Oracle Web account

Sign Up »
for an Oracle Web account

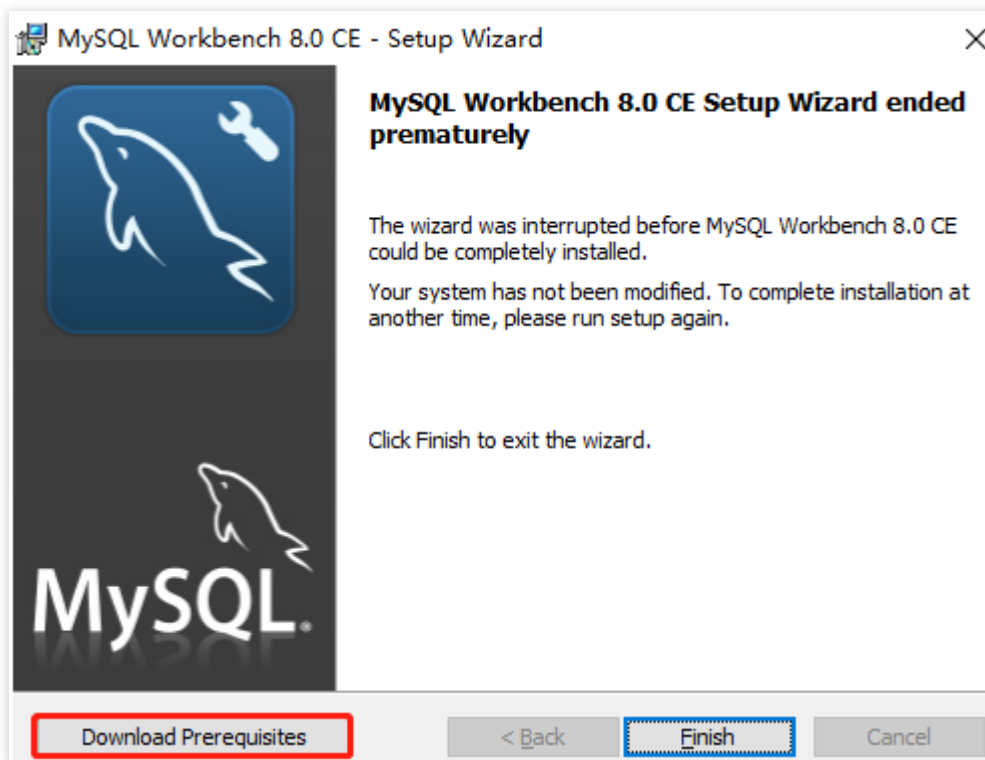
MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can sign up for a free account by clicking the Sign Up link and following the instructions.

No thanks, just start my download.

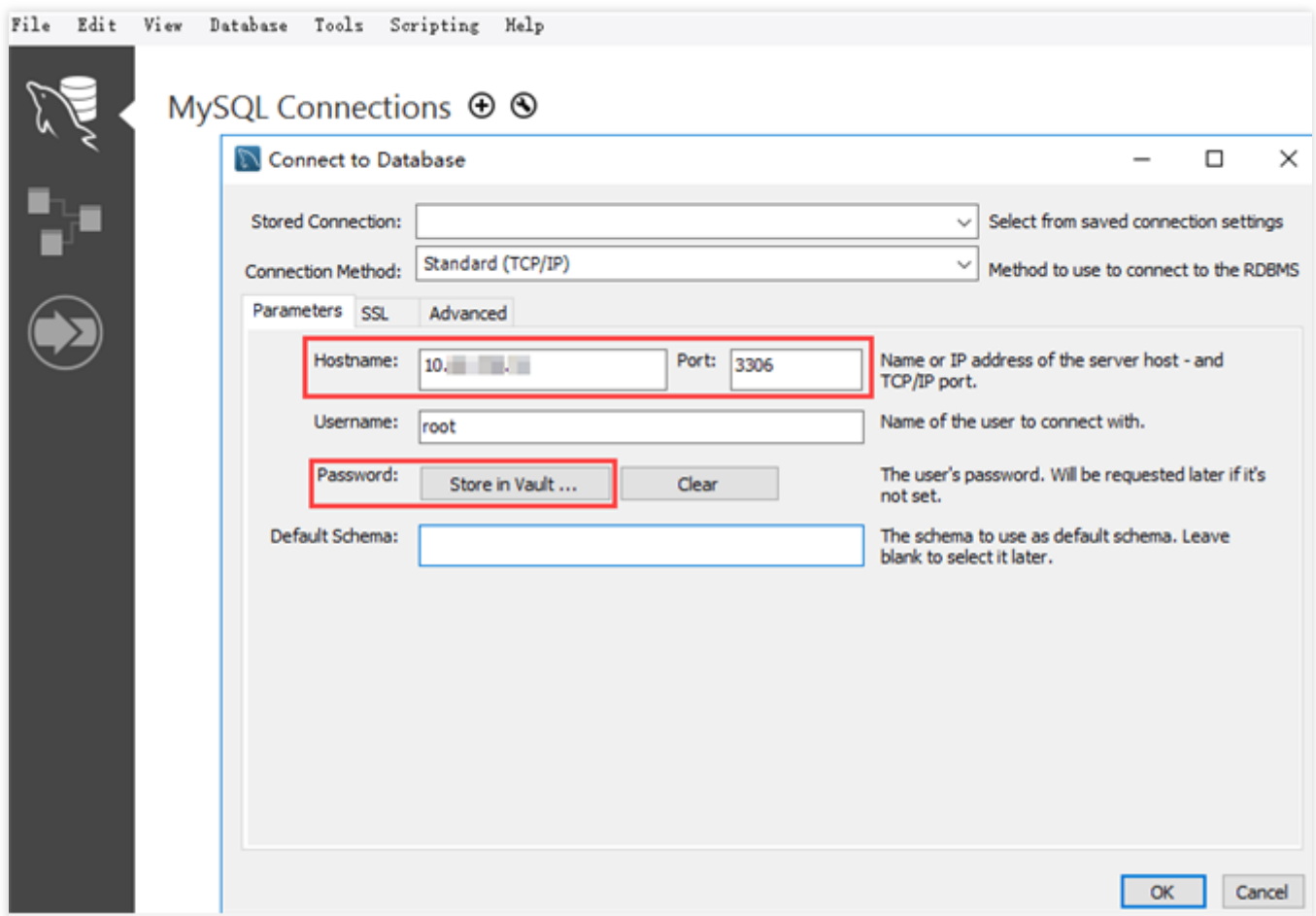
4. Install MySQL Workbench on this CVM instance.

Note :

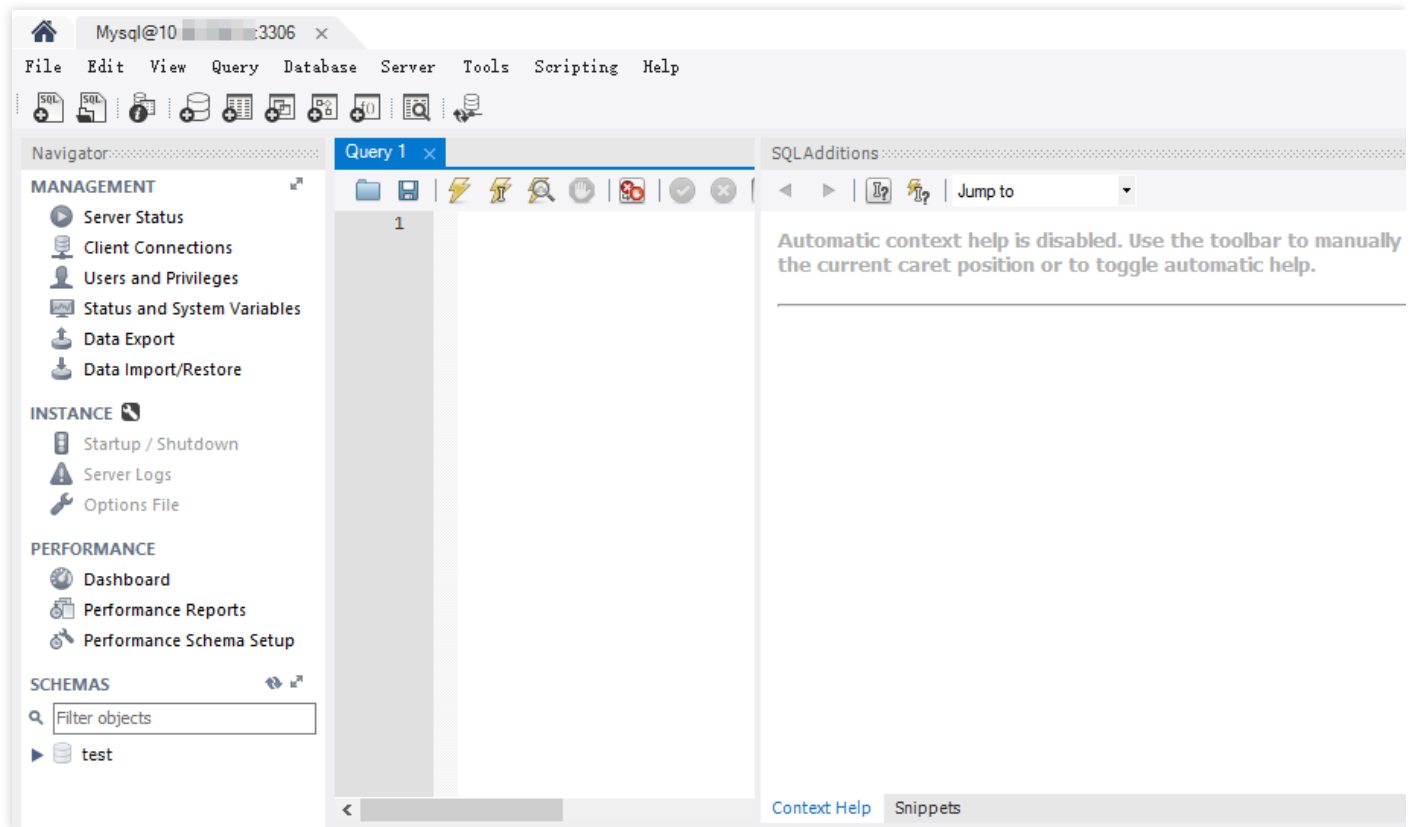
- Microsoft .NET Framework 4.5 and Visual C++ Redistributable for Visual Studio 2015 are required for the installation.
- You can click **Download Prerequisites** in the MySQL Workbench installation wizard to enter the corresponding page to download and install them. Then, install MySQL Workbench.



5. Open MySQL Workbench, select **Database > Connect to Database**, enter the private (or public) network address, username, and password of your MySQL instance 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 username is **root** by default. For public network connection, we recommend you [create a separate account](#) for easier connection control.
 - **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 [Customizing Linux CVM Configurations](#).
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, the MySQL client is installed successfully.

```
CentOS Linux 7 (Core)
Kernel 3.10.0-327.36.3.el7.x86_64 on an x86_64
UM_135_34_centos login: root
Password:
[root@UM_135_34_centos ~]# yum install mysql
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
Resolving Dependencies
--> Running transaction check
---> Package mariadb.x86_64 1:5.5.52-1.el7 will be installed
--> Processing Dependency: mariadb-libs(x86-64) = 1:5.5.52-1.el7 for package: 1:mariadb-5.5.52-1.el7.x86_64
--> Running transaction check
---> Package mariadb-libs.x86_64 1:5.5.50-1.el7_2 will be updated
---> Package mariadb-libs.x86_64 1:5.5.52-1.el7 will be an update
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                Arch             Version          Repository        Size
=====
Installing:
mariadb                x86_64           1:5.5.52-1.el7  os                8.7 M
Updating for dependencies:
mariadb-libs           x86_64           1:5.5.52-1.el7  os                761 k
=====

Transaction Summary
=====
Install 1 Package
Upgrade ( 1 Dependent package)

Total download size: 9.5 M
Is this ok [y/d/N]: y
Downloading packages:
Delta RPMs disabled because /usr/bin/applydeltarpm not installed.
(1/2): mariadb-libs-5.5.52-1.el7.x86_64.rpm | 761 kB 00:00:00
(2/2): mariadb-5.5.52-1.el7.x86_64.rpm | 8.7 MB 00:00:01
-----
Total | 8.1 MB/s | 9.5 MB 00:00:01
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Updating : 1:mariadb-libs-5.5.52-1.el7.x86_64 | 1/3
  Installing : 1:mariadb-5.5.52-1.el7.x86_64 | 2/3
  Cleanup : 1:mariadb-libs-5.5.50-1.el7_2.x86_64 | 3/3
Installed:
  mariadb.x86_64 1:5.5.52-1.el7

Dependency Updated:
  mariadb-libs.x86_64 1:5.5.52-1.el7

Complete!
[root@UM_135_34_centos ~]# _
```

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

- **Private network connection:**

- i. 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`.

ii. Enter the password corresponding to the `root` account of the TencentDB for MySQL instance after `Enter password:` is prompted. If you forgot the password, you can reset it as instructed in [Resetting Password](#).

If `MySQL [(none)]>` is displayed, you have logged in to MySQL successfully.

```
[root@UM_135_34_centos ~]# mysql -h 10.66.1.1 -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MySQL connection id is 155439
Server version: 5.6.28-cdb20160902-log 20160902

Copyright (c) 2000, 2016, Oracle, MariaDB Corporation Ab and others.

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

MySQL [(none)]> _
```

o Public network connection:

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

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

- o `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](#).
 - o `port`: Replace it with the public network port number.
 - o `username`: Replace it with the public network connection username. We recommend that you create a separate account for easier connection control. For more information, see [Creating Account](#).
- ii. Enter the password corresponding to the public network connection username after `Enter password:` is prompted. If you forgot the password, reset it as instructed in [Resetting Password](#).

In this example, `hostname` is `59281c4exxx.mysqlcloud.com` and public network port is `15311`.

```
[root@UM 135 34 centos src]# mysql -h 59281c4e[REDACTED]cloud.com -P 15311 -u cdb_outerroot -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MySQL connection id is 322537
Server version: 5.6.28-cdb20160902-log 20160902

Copyright (c) 2000, 2016, Oracle, MariaDB Corporation Ab and others.

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

MySQL [(none)]> _
```

4. Under the `MySQL [(none)]>` prompt, you can send a SQL statement to the MySQL server for execution. For specific command lines, see [mysql Client Commands](#).

Below takes `show databases;` as an example:

```
MySQL [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| test |
+-----+
4 rows in set (0.00 sec)
```

Appendix 1. Troubleshooting connection errors

If you encounter connection errors, we recommend 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

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.

The screenshot shows the 'Basic Info' section of the TencentDB for MySQL console. The fields and their values are as follows:

Field	Value
Instance Name	[Redacted]
Instance ID	[Redacted]
Status/Task	Running / --
Region/AZ	[Redacted]
Project	[Redacted]
GTID	Enabled
Character Set/Collation	UTF8 / UTF8_GENERAL_CI
Network	[Redacted]
Private Network Address	[Redacted] Port: 3306
Public Network Address	Enable
Tag	Modify

3. In the pop-up window, click **OK**.

Note :

- After the public network address is enabled successfully, it can be viewed in the basic information.
- The public network access can be disabled by using the switch. When it is enabled again, the public network address corresponding to the domain name remains the same.