

# **TDSQL-C for MySQL**

## **Getting Started**

### **Product Documentation**



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# Getting Started

## Creating Cluster

Last updated : 2022-09-20 00:03:26

This document describes how to create a cluster in the TDSQL-C for MySQL console.

## Prerequisites

To make a purchase, you need to complete identity verification first. For more information, see [Identity Verification Guide](#).

## Directions

1. Log in to the [purchase page](#), complete the **Database Configuration** settings, and click **Next**.
  - **Compute Billing Mode**: Monthly subscription, pay-as-you-go, and serverless billing modes are supported.
  - **Region**: Select a region for database deployment.
  - **Source AZ**: Select an AZ for deployment. Specific AZs in the selected region are shown on the actual purchase page.
  - **Multi-AZ Deployment**: Select whether to enable multi-AZ deployment. If you enable it, the replica AZ option will appear.
  - **Replica AZ**: It is disabled by default and can be selected after multi-AZ deployment is enabled.
  - **Network**: For performance and security considerations, only VPC network is supported currently. CVM instances can communicate with TDSQL-C clusters only in the same [VPC](#).
  - **Compatible Database**: MySQL 5.7 and 8.0 are supported.
  - **Compute Instance Quantity**: The instance quantity includes one read-write instance and one or more read-only instances. We recommend you select at least two instances to ensure the high availability of the cluster. After the cluster is created, you can expand its read capacity by adding read-only instances.
  - **Instance Specification**: For more information on calculating the instance specification and storage capacity, see [Billing Overview](#).

Instance Specification		All CPU Specs	All Memory Specs						
<input type="radio"/>	Dedicated	12-core	96GB	288000	36Gbps	80TB	4 AZs		0month
<input type="radio"/>	Dedicated	16-core	64GB	384000	48Gbps	100TB	4 AZs		USD/month
<input type="radio"/>	Dedicated	16-core	96GB	384000	48Gbps	100TB	4 AZs		SD/month
<input type="radio"/>	Dedicated	16-core	128GB	384000	48Gbps	100TB	4 AZs		0month
<input type="radio"/>	Dedicated	24-core	96GB	480000	60Gbps	150TB	4 AZs		SD/month

**Note :**

If your desired instance specification is sold out, you can click **Do you need it?**, and the pop-up window will display instances of the same specification in other AZs. If none of them meet your requirements, [submit a ticket](#) for assistance.

<input type="radio"/>	Dedicated	64-core	384GB	720000	90Gbps	400TB	4 AZs		
<input type="radio"/>	Dedicated	88-core	710GB	780000	98Gbps	400TB	0 AZs		

- Storage Billing Mode:

- Pay-as-you-go billing is supported, which means you don't need to specify a storage option when you buy. TDSQL-C for MySQL is billed by the actual storage used per hour.
- Monthly subscription billing is supported, which means you need to purchase monthly-subscribed storage space now (billed in the entirety regardless of whether it is used up).

**Note :**

- Monthly-subscribed storage space can be purchased only after you select the monthly subscription billing mode.
- For more information on how to select an appropriate billing mode for storage space, see [Selecting Billing Mode for Storage Space](#).

- Auto-Renewal:** Auto-renew the device monthly upon expiration if your account has sufficient balance.

2. Complete the **Basic Info** and **Advanced Configuration** settings, select the **Validity Period**, confirm the fees, and click **Buy Now**.

- Basic Info**

- **Cluster Name:** Name the cluster now or later with up to 60 letters, digits, hyphens, underscores, and dots.
- **Admin Username:** It is **root** by default.
- **Password:** The password can contain 8–64 characters in at least three of the following character types:  
uppercase letters, lowercase letters, digits, and special symbols `~!@#$$%^&* _+=| \ ( ) { }`  
`[ ] : ; ' & ! t ; > , . ? / .`
- **Default Character Set:** UTF8, GBK, LATIN1, and UTF8MB4 are supported.
- **Custom Port:** It is 3306 by default and can be customized.
- **Advanced Configuration**
  - **Security Group:** Select or create a security group.
  - **Parameter Template:** Select or create a parameter template.
  - **Table Name Case Sensitivity:** Select **Case-Insensitive** or **Case-Sensitive**.
  - **Project:** Specify a project for the cluster to be created.
  - **Alarm Policy:** Select or create an alarm policy.
  - **Tag:** Add a tag to facilitate resource categorization and management.
  - **Terms and Conditions:** Read and indicate your consent to the terms and conditions.

Cloud Native Database TDSQL-C (Former CynosDB)

1 Database Configuration 2 Basic Info 3 Complete

**Basic Info**

Cluster Name

Admin Username

Password

Confirm Password


Default Character Set

Custom Port

**Advanced Configuration**

Selected instance specification: Dedicated 2-core/4 GB MEM

Period      Quantity

Configuration Fees 

#### Note :

- When you hover over **Configuration Fees**, the details such as computing fees and storage fees will be displayed.

Billing Details

Billable Item	Original Price	Discount	Discounted Price
Computing Fees	USD	17% off	USD
Total	USD	17% off	USD

Configuration Fees USD

Previous Buy Now

- Cluster quantity  
Pay-as-you-go: You can purchase up to ten TDSQL-C for MySQL clusters in each AZ. If you need more, [submit a ticket](#) for assistance.  
Monthly subscription: You can purchase an unlimited number of clusters.
- When the amount of data stored in a cluster exceeds its maximum storage space, the cluster can only read but not write data. In this case, you can choose to delete redundant data or upgrade the specification.

3. After the purchase is completed, you will be redirected to the cluster list. After the status of the cluster becomes **Running**, it can be used normally.

## Subsequent operations

After purchasing the TDSQL-C for MySQL cluster, you can connect to it through its private or public network address or DMC. For more information, see [Connecting to Cluster](#).

# Connecting to Cluster

Last updated : 2022-07-29 11:51:46

## Connection Methods

You can connect to TDSQL-C for MySQL in the following ways:

- **Private network connection:** A CVM instance can be used to connect to the private network address of a TDSQL-C for MySQL instance. This method utilizes the high-speed private network of Tencent Cloud and features low delay.
- The CVM instance and the database must be under the same account and in the same [VPC](#) in the same region.
- The private network address is provided by the system by default and can be viewed in the cluster list or on the cluster details page in the [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:** You can connect to your TDSQL-C for MySQL cluster 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 console and can be disabled if no longer needed.
- Enabling the public network address 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 access to TencentDB is suitable for development or auxiliary database management but not for actual business access, because uncontrollable factors may cause public network access to be unavailable, such as DDoS attacks and sudden surges in access traffic.
- **DMC connection:** You can access TDSQL-C for MySQL through Database Management Console (DMC).

## Connection to TDSQL-C for MySQL over Private or Public Network

### Connecting from 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:**

Windows (x86, 64-bit), MSI Installer	8.0.18	37.2M	<a href="#">Download</a>
--------------------------------------	--------	-------	--------------------------

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

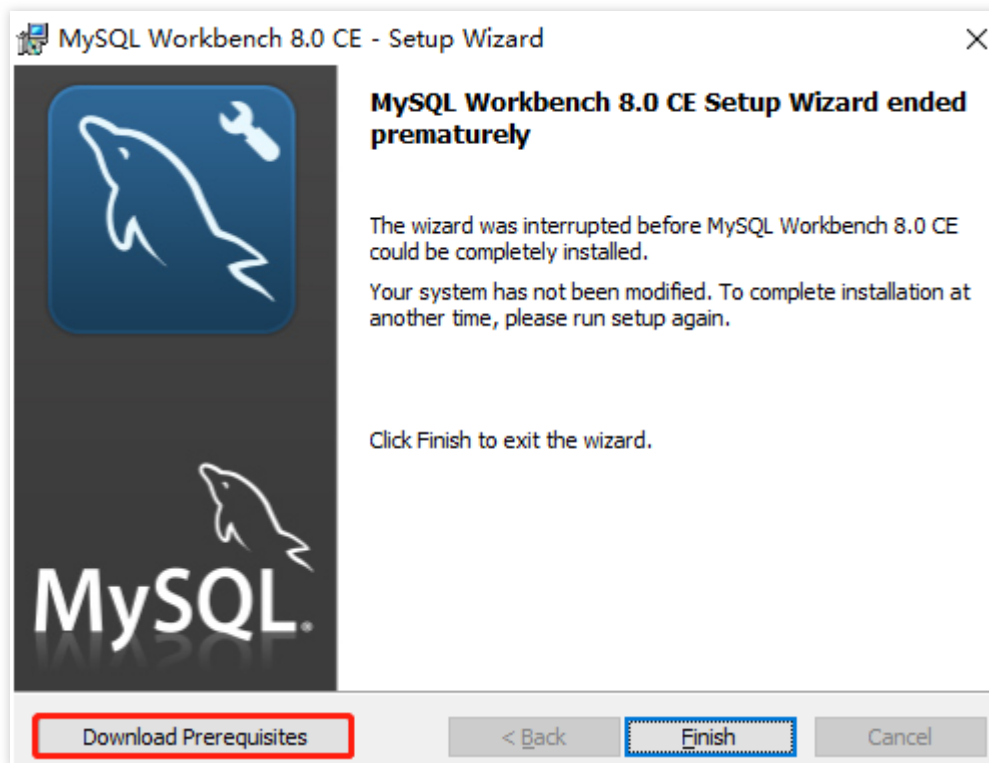
MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can signup for a free account by clicking the Sign Up link and following the instructions.

[No thanks, just start my download.](#)

4. Install MySQL Workbench on this CVM instance.

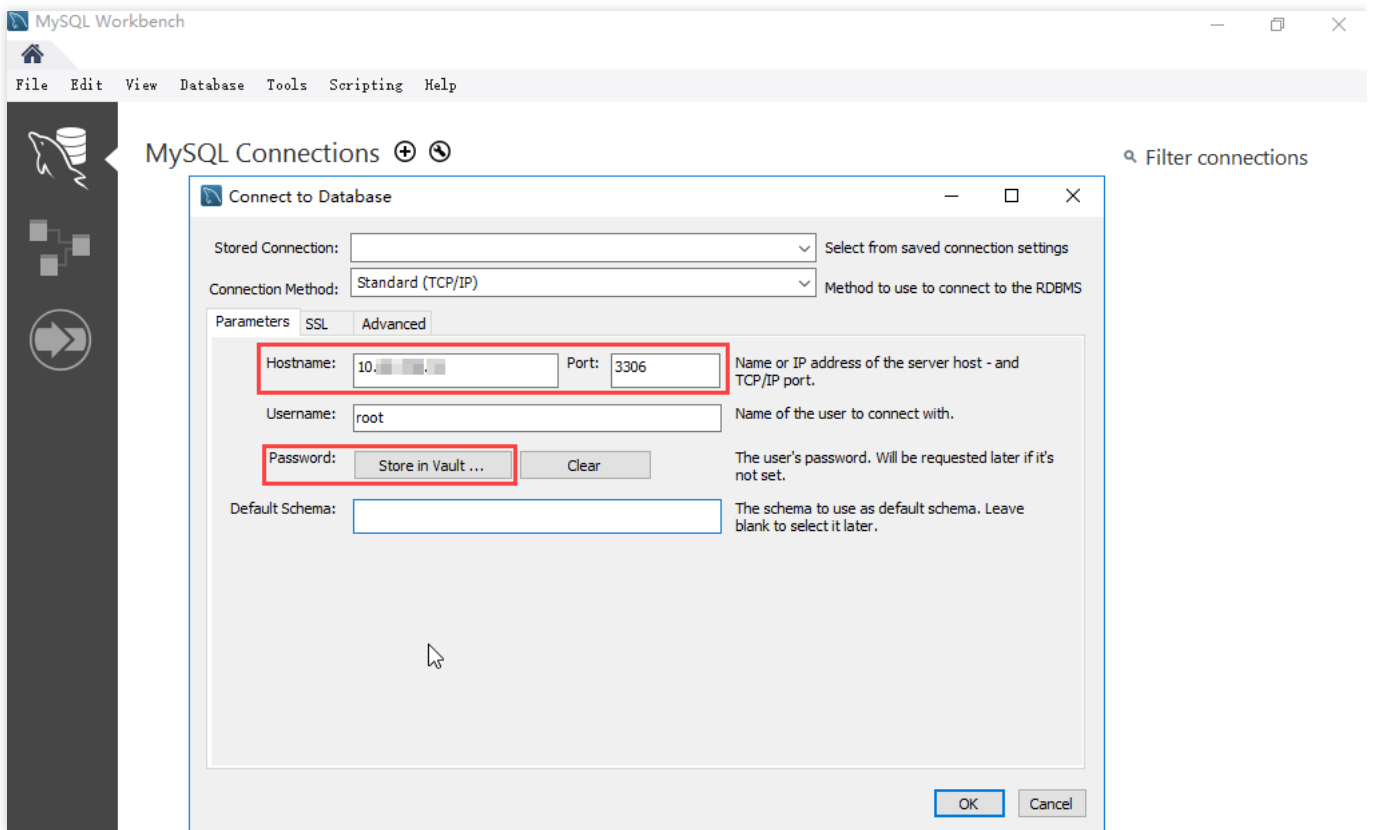
Note :

- 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.

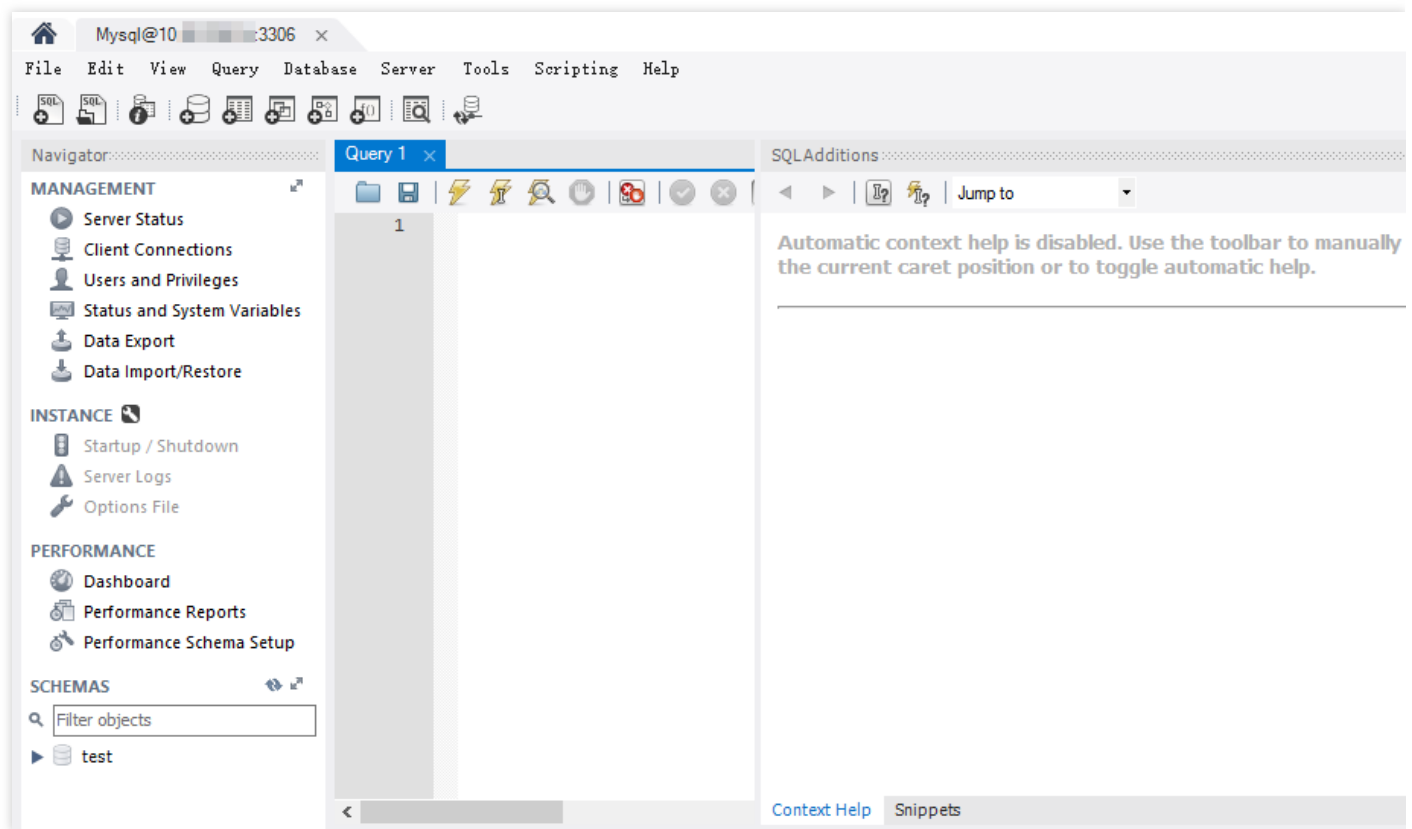


5. Open MySQL Workbench, select **Database > Connect to Database**, enter the private (or public) network address, username, and password of your MySQL instance and click **OK** to log in.
  - **Hostname**: Enter the private (or public) network address of the target database, which can be viewed on the cluster details page in the [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 value is `root`.

- **Password:** The password corresponding to the username. If you forgot the password, reset it in the console.



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



## Connecting from 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 TDSQL-C for MySQL cluster.

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

- hostname: Replace it with the private network address of the target cluster, which can be viewed on the cluster details page in the [console](#).
- port: Replace it with the private network port number.

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

For example, if the private network address is `10.0.168.14:5308` and the username is `root`, enter the following connection command: `mysql -h 10.0.168.14 -P 5308 -u root -p`.

- ii. Enter the password corresponding to the `root` account of the cluster after `Enter password:` is prompted. If you forgot the password, reset it in the console.

If `MySQL [(none)]>` is displayed, you have logged in to TDSQL-C for 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)]> _
```

- **Public network connection:**

- i. Run the following command to log in to the TDSQL-C for MySQL cluster.

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

- hostname: Replace it with the public network address of the target cluster, which can be viewed together with the port on the cluster details page in the [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 it with the public network connection username. We recommend you create a separate account in the console for easier connection control.
- ii. Enter the password corresponding to the public network connection username after `Enter password:` is prompted. If you forgot the password, reset it in the console.

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

```
[root@UM_135_34_centos src]# mysql -h 59281c4exxx.myqcloud.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)]> _
```

- Under the `MySQL [(none)]>` prompt, you can send an SQL statement to the TDSQL-C for 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)
```

## Connection Through DMC

- Log in to the [console](#) and click **Log In** in the **Operation** column in the cluster list.
- On the login page of DMC, enter "root" as the account and the password configured for the root account during cluster creation and click **Log In**.

Note :

DMC enables you to easily access instances, manipulate tables and databases, manage instance sessions, and monitor InnoDB lock waits, SQL window, etc. in real time.

Type	TDSQL-C for MySQL
Region	South China (Guangzhou)
Instance	cyno
Account	Database account
Password	Database password





Log In

## Appendix 1. Enabling Public Network Address

Note :

To connect over the public network, you need to enable the public network address of your database first.

1. Log in to the [console](#) and click a cluster ID in the cluster list to enter the cluster details page.
2. On the cluster details page, click **Enable** after the public network addresses.

Connection Info	
Private Read-Write Address:  	Public Read-Write Address: <a href="#">Enable</a>
Private Read-Only Address:  	Public Read-Only Address: <a href="#">Enable</a>

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

Note :

- Once enabled successfully, the public network address can be viewed in the connection information.
- The public network access can be disabled by using the switch. When it is enabled again, the public IP corresponding to the domain name remains the same.
- To access the public network, you need to enable and [configure a security group](#) policy and open the default (3306) or modified private network access port.



