

TencentDB for PostgreSQL

Quick Start

Product Documentation



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Quick Start

Initializing PostgreSQL Instances

Last updated : 2020-11-16 10:12:17

After creating a TencentDB for PostgreSQL instance, you need to initialize it before you can enable it.

Prerequisites

1. You have signed up for a Tencent Cloud account and verified your identity.

If you need to sign up for a Tencent Cloud account:

[Click here to sign up for a Tencent Cloud](#)

2. You have purchased a TencentDB for PostgreSQL instance.

Directions

1. Log in to the [TencentDB for PostgreSQL Console](#). In the instance list, locate the uninitialized instance, and click **Initialize** in the "Operation" column.

Instance ID / Name	Monitoring / Status	Availability Zone	Configuration	Database Version	Billing Mode [†]	Private address	Operation
postgres-12g8yuna test	To be initialized	Chengdu Zone 1	Dual-Server High-Availability Edition 10 GB/2 GB Network: hit_test_vpc - hit_test_sub1	PostgreSQL 9.3.5	Pay as you go	---	Manage Initialize More

2. In the pop-up dialog box, configure initialization parameters and click **OK**.
 - **Admin Username:** a username can contain 1–16 letters, digits, and special characters (_). It must start with a letter and end with a letter or digit, is case-insensitive, and cannot be `postgres` or start with `pg$ _`.
 - **Password:** a password can be a combination of 8–32 characters that must contain at least two of the following types of characters: letters, digits, and special characters `_+-&=!@#$$%^*() .`
 - **Confirm Password:** enter the password again.
 - **Support Character Set:** LATIN1 and UTF8 are supported.

3. You will be returned to the instance list. When the instance status changes to **Running**, the instance can be used.

Connecting to PostgreSQL Instances

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Operation Scenarios

After initializing a TencentDB for PostgreSQL instance, you can use a standard SQL client to access it over the private network or public network.

- **Private network access:** a CVM instance can be used to access the private network address automatically assigned to the TencentDB instance. This access method relies on the high-speed private network of Tencent Cloud and features low delay. Both instances should be under the same account and in the same [VPC](#) or in the basic network.

For more information on connection between CVM and database instances in different VPCs (under the same account/different accounts; in the same region/different regions) over the private network.

- **Public network access:** TencentDB for PostgreSQL can be accessed by using a public network address.

- For public network access, the database instance's public IP needs to be enabled, which may expose the database service to attacks or intrusions on the public network. Therefore, it is recommended to log in to the database over the private network.
- Public network access to TencentDB is suitable for development or auxiliary management of databases but not for formal business access, as potentially uncontrollable factors may lead to unavailability of the public network access, such as DDoS attacks and bursts of high-traffic access.
- Instances that currently support public network access are available only in Guangzhou, Shanghai, Beijing, Chengdu, Hong Kong (China), and Silicon Valley.

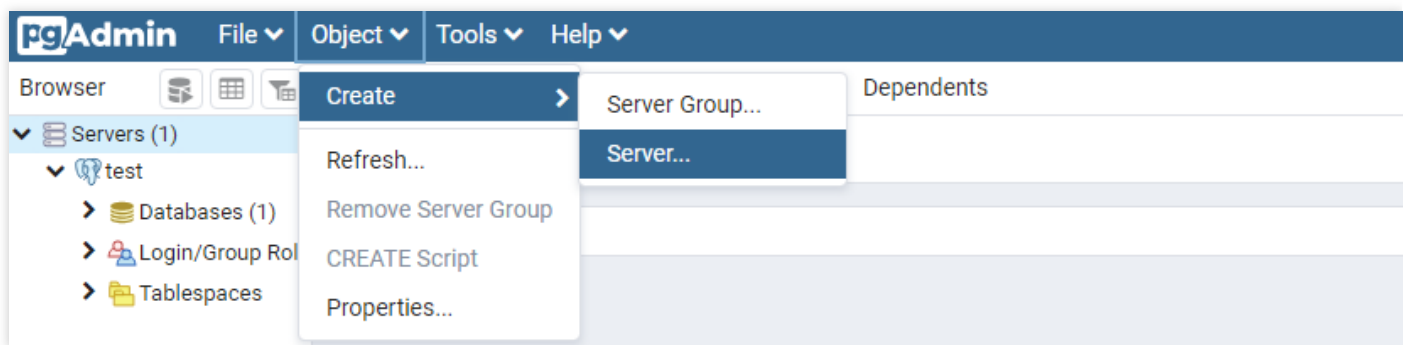
The following describes how to access TencentDB for PostgreSQL on Windows over the private network and public network.

Directions

1. Download and install a standard SQL client as instructed in [Getting Started with Windows CVM](#) or locally.

pgAdmin is used in this example. You can download the appropriate installer based on your system version [here](#).

2. In pgAdmin, select **Object > Create > Server**.

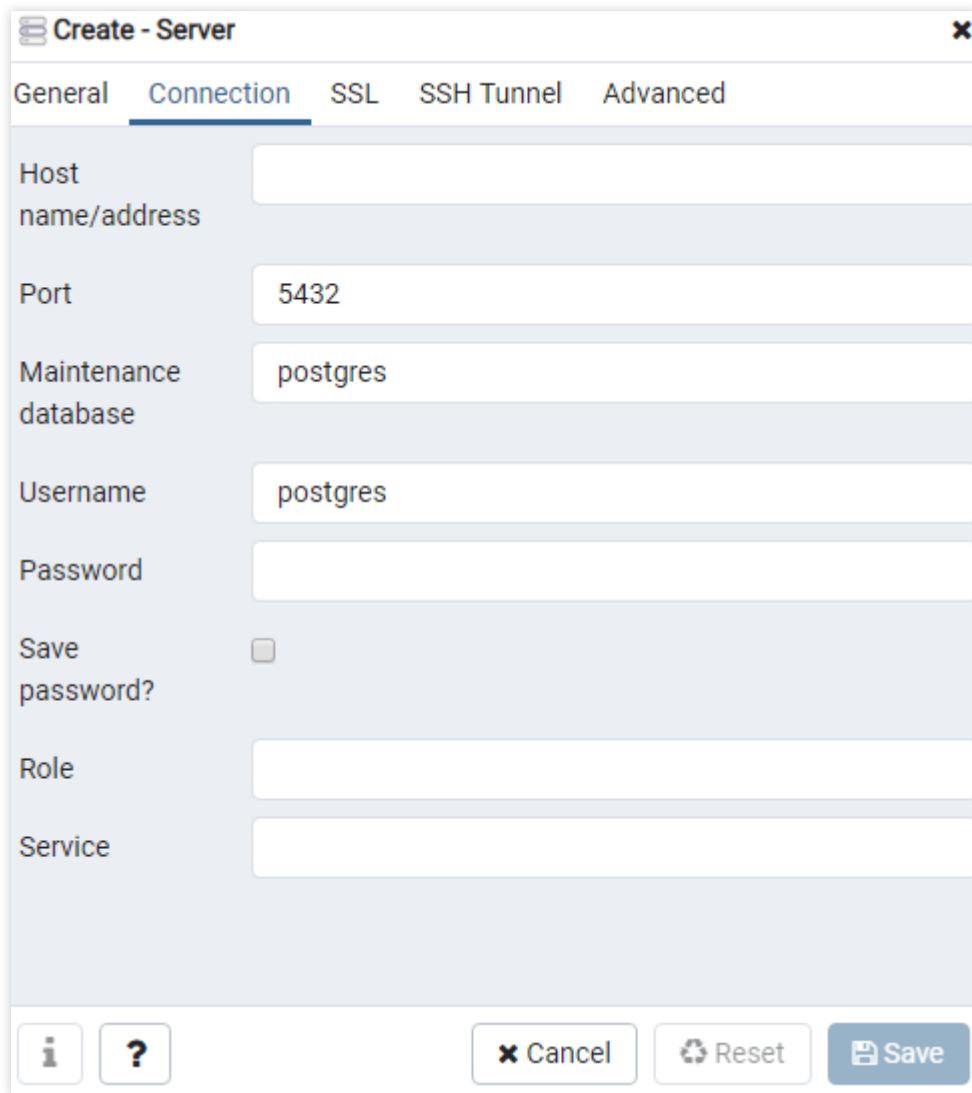


3. In the **Create - Server** dialog box, enter the information such as name, host IP address, port number, username, and password and then click **Save**.
 - Host IP address and port number: you can go to the [TencentDB for PostgreSQL Console](#) and view them in **Private Network Address** or **Public Network Address** on the instance details page. If public network access is not enabled, please see [Enabling Public Network Access](#).

Here, the private network address is VIP; database instances are accessed by connecting to the gateway cluster rather than the physical servers of database instances directly. Therefore, the private IP will remain unchanged in the event of server failures or master/slave switchover.

- Username and password: use the database admin username and password set when the instance is initialized. If you forget the password, you can go to the account management page

in the console to reset it.



Create - Server [Close]

General **Connection** SSL SSH Tunnel Advanced

Host name/address [Text Input]

Port 5432 [Text Input]

Maintenance database postgres [Text Input]

Username postgres [Text Input]

Password [Text Input]

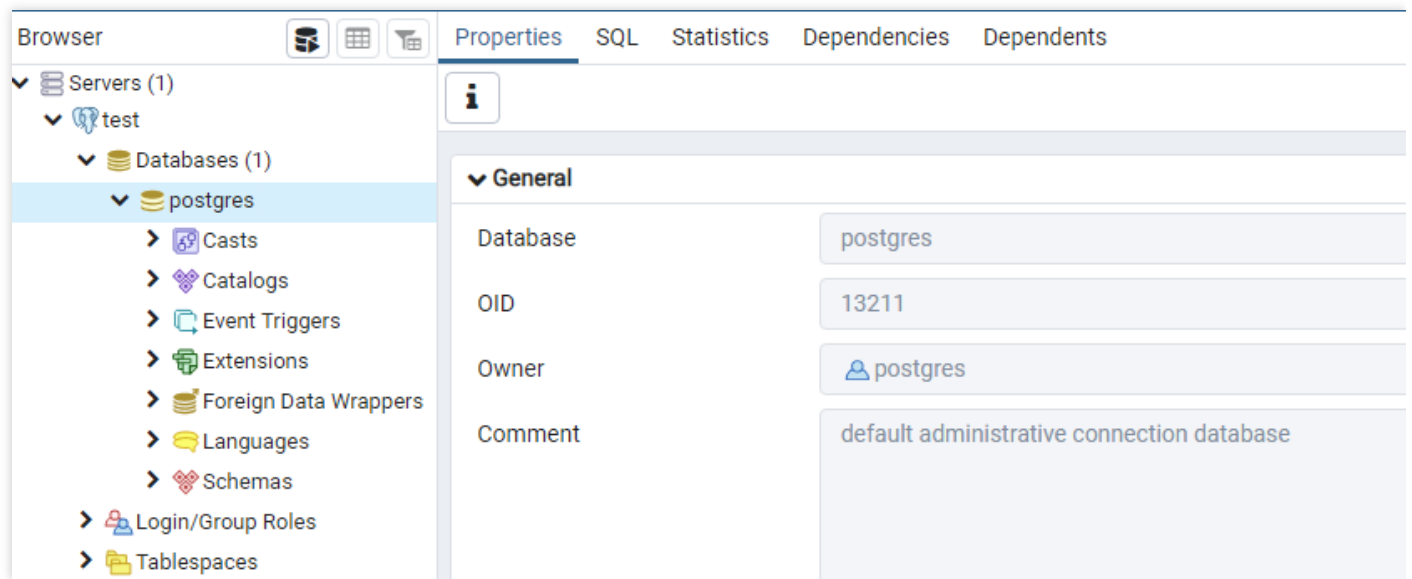
Save password?

Role [Text Input]

Service [Text Input]

[Info] [Help] [Cancel] [Reset] [Save]

4. Then, select **Databases** > **postgres** on the left sidebar to view the connected server (database instance).



Enabling public network access

1. Log in to the [TencentDB for PostgreSQL Console](#). In the instance list, click the instance name or **Manage** in the "Operation" column to enter the instance details page.
2. Find **Public Network Address** in the basic info section on the instance details page and click **Enable**.
3. Click **OK** in the pop-up window and the request to enable public network access will be processed.
4. Once enabled successfully, the public network address can be found in the basic info section.

Managing PostgreSQL Instances

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Instance List Page

You can log in to the [TencentDB for PostgreSQL Console](#) and enter the instance list page to view instance information and manage your instances.

Adjusting instance configurations

On the **Instance List** page, click **Adjust Configurations** in the "Operation" column to upgrade the configuration of a database instance, including its specification and disk capacity.

Restarting an instance

On the **Instance List** page, select the desired instance and click **Restart**. You can also select multiple instances and restart them in batches.

Note :

- During the restart, the instance cannot be accessed, and existing connections to it will be closed. Please back up your data timely.
- Restart will fail if there are a large number of business writes and dirty pages. In this case, the instance will return to the status before the restart and can still be accessed.
- Be sure to restart the instance during off-hours so as to ensure success and reduce potential impact on your business.

Instance Management Page

After a TencentDB for PostgreSQL instance is initialized, click its name in the [instance list](#) or click **Manage** in the "Operation" column to enter the instance management page, where you can view its

details, monitor it, and manage databases.

The screenshot shows the 'Instance Details' page for a PostgreSQL instance named 'test'. The page has a navigation bar with tabs for 'Instance Details', 'System Monitoring', 'Account Management', 'Backup Management', and 'Performance Optimization'. The 'Instance Details' tab is active. Below the navigation bar, there is a 'Basic Info' section with the following details:

Instance Name	test
Instance ID	postgres-a
Instance Status	Running
Region	Southwest China (Chengdu)
Availability Zone	Chengdu Zone 1
Network	
Project	Default Project Switch to another project
Character Set	UTF8
Private IPv4 Address	32
Public IPv4 Address	Enable
Tag	Modify

Instance details

On the **Instance Details** page, you can view and manage the basic information of the databases. The public network address is disabled by default. If you need to use it, please enable it manually.

System monitoring

On the **System Monitoring** page, you can view the monitoring data of various core metrics of the current database, including access, load, cache hit rate, SQL execution latency, and XLOG sync delay.

For more information on instance monitoring and alarming, please see [Monitoring Feature](#) and [Alarm Feature](#).

Account management

On the **Account Management** page, you can manage your account, such as modifying remarks and resetting the password.

Backup management

On the **Backup Management** page, you can view and download backup and xlog files. For more information, please see [Backing up Data](#).

Performance optimization

On the **Performance Optimization** page, you can view and download slow logs and error logs.

Importing Data

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You can restore data backup files into the target TencentDB for PostgreSQL instance by using PostgreSQL logical backup.

1. Prepare a PostgreSQL instance

Purchase a PostgreSQL instance, initialize it, and get its connection address.

Please make sure that the character set for initialization is the same as that of the source instance.

2. Make a logical backup of the source instance data

Connect to the local (source) PostgreSQL database by using PostgreSQL client.

Run the following command to back up data.

```
pg_dump -U username -h hostname -p port databasename -f filename
```

Descriptions of parameters:

- username: username of the local database
- hostname: name of the local database server. You can use `localhost` if you log in from a local database server
- port: port number of the local database
- databasename: name of the local database to be backed up
- filename: name of the backup file to be generated

For example, if a database user named `pgtest` wants to back up a local PostgreSQL database, the user can log in to the PostgreSQL server and run the following command.

```
pg_dump -U pgtest -h localhost -p 4321 pg001 -f pg001.sql
```

3. Migrate data via CVM

You are recommended to upload data to a CVM instance in a secure way (such as encrypted compression) and restore data to the target PostgreSQL database over the private network.

Log in to CVM.

On the PostgreSQL client, run the following command to import data to the target PostgreSQL database.

```
psql -U username -h hostname -d destinationdb -p port -f dumpfilename.sql
```

Descriptions of parameters:

- username: username of the PostgreSQL database on RDS
- hostname: address of the PostgreSQL database on RDS
- port: port number of the PostgreSQL database on RDS
- databasename: name of the PostgreSQL database on RDS
- filename: filename of the local backup data.

Example:

```
psql -U pgtest -h 10.xxx.xxx.xxx -d pg001 -p 4321 -f pg001.sql
```

As the permission configuration of the source database may be different from that of the target database, some permission-related warnings or errors may appear during data import, which, however, can be ignored.

4. Migrate data over the internet

If the data volume is small (e.g., < 10 GB), you can also import it directly over the internet with tools such as pgAdmin.

Precautions

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1. PostgreSQL provides accounts with permissions including creating/modifying databases and accounts. But it does not support super admin accounts.
2. It is recommended that you use a public network address for routine maintenance, rather than connecting business servers.
3. The network to which the instance created belongs cannot be modified.