

Alibaba Cloud

AnalyticDB for PostgreSQL

FAQ

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Document conventions









| Style | Description | Example |
|--|---|---|
|  Danger | A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results. |  Danger: Resetting will result in the loss of user configuration data. |
|  Warning | A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results. |  Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance. |
|  Notice | A caution notice indicates warning information, supplementary instructions, and other content that the user must understand. |  Notice: If the weight is set to 0, the server no longer receives new requests. |
|  Note | A note indicates supplemental instructions, best practices, tips, and other content. |  Note: You can use Ctrl + A to select all files. |
| > | Closing angle brackets are used to indicate a multi-level menu cascade. | Click Settings> Network> Set network type . |
| Bold | Bold formatting is used for buttons, menus, page names, and other UI elements. | Click OK . |
| Courier font | Courier font is used for commands | Run the <code>cd /d C:/window</code> command to enter the Windows system folder. |
| <i>Italic</i> | Italic formatting is used for parameters and variables. | <code>bae log list --instanceid</code> <i>Instance_ID</i> |
| [] or [a b] | This format is used for an optional value, where only one item can be selected. | <code>ipconfig [-all -t]</code> |
| { } or {a b} | This format is used for a required value, where only one item can be selected. | <code>switch {active stand}</code> |

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1. How do I obtain the IP address of my computer and add it to an IP address whitelist of my AnalyticDB for PostgreSQL instance?

Symptom

You cannot find the IP address of your computer or add it to an IP address whitelist of your AnalyticDB for PostgreSQL instance.

Procedure

1. Follow these steps to add `0.0.0.0/0` to an IP address whitelist of your AnalyticDB for PostgreSQL instance:
 - i. Log on to the [AnalyticDB for PostgreSQL console](#).
 - ii. In the top navigation bar, select the region where the target instance resides.
 - iii. Find the target instance and click its ID. The **Basic Information** page appears.
 - iv. In the left-side navigation pane, click **Security Controls**. The **Security Controls** page appears.
 - v. On the **Whitelist Settings** tab, find the IP address whitelist labeled **default** and click **Modify** to its right. The **Modify Group** dialog box appears.
 - vi. In the **White List** field, delete the IP address `127.0.0.1` and enter `0.0.0.0/0`.

 **Note** `0.0.0.0/0` indicates that all entities are allowed to access the instance. However, this is risky, so we recommend that you delete it after you no longer need it.

- vii. Click **OK**.
2. Install the `psql` CLI client. For more information, see [Connect to an AnalyticDB for PostgreSQL instance](#). Then, run the following command to connect your computer to a database on the instance:

```
psql -h yourgpdbaddress.gpdb.rds.aliyuncs.com -p 3432 -d postgres -U gpdbaccount
```

Parameter description:

- `-h`: the host address used to connect to the database.
- `-p`: the port used to connect to the database.
- `-d`: the name of the database. The default database is `postgres`.
- `-U`: the account used to connect to the database.
- You can run the `psql --help` command to view more options. You can also run the `\?` command to view more commands supported by the `psql` CLI client.

3. After you connect to the database, run the following command in the SQL window to query the IP address of your computer:

```
select * from pg_stat_activity;
```

The value of the CLIENT_ADDR field is the IP address of your computer.

```
postgres=> select * from pg_stat_activity;
 datid | datname | procpid | sess_id | usesysid | username |          current_query |          backend_start |          xact_start |
-----+-----+-----+-----+-----+-----+-----+-----+-----+
      |         |         |         |         |         |         |         |         |
      |         |         |         |         |         |         |         |         |
      |         |         |         |         |         |         |         |         |
      |         |         |         |         |         |         |         |         |
      |         |         |         |         |         |         |         |         |
-----+-----+-----+-----+-----+-----+-----+-----+-----+
 10902 | postgres | 45909 | 254025 | 17239 | test123 | select * from pg_stat_activity; | 2019-02-19 14:06:26.170467+08 | 2019-02-19 14:07:00.37242+08 |
(1 row)
```

4. In the AnalyticDB for PostgreSQL console, delete 0.0.0.0 from the default IP address whitelist and enter the IP address of your computer.

2. How to view the data size of a table or a database?

Suppose that the table schema is `<schemaname>` and the table name is `<tablename>` .

- Run the following command to query the total size of a table (unit: MB, including the table index and data):

```
select pg_size_pretty(pg_total_relation_size('<schemaname>.<tablename>'));
```

- Run the following command to query the data size of a table (unit: MB, excluding the index):

```
select pg_size_pretty(pg_relation_size('<schemaname>.<tablename>'));
```

- Run the following command to query the total size of all the partitions in a partition table (unit: MB, including the table index and data):

```
select schemaname,tablename,round(sum(pg_total_relation_size(schemaname || '.' || partitiontablename))/1024/1024) "MB" from pg_partitions where schemaname='<schemaname>' and tablename='<tablename>' group by 1,2;
```

- Run the following command to query the total size of all the tables under a schema (unit: MB, including the index and data):

```
select schemaname ,round(sum(pg_total_relation_size(schemaname||'.'||tablename))/1024/1024) "Size_MB" from pg_tables where schemaname='<schemaname>' group by 1;
```

- Run the following command to query the size of each database (unit: MB):

```
select datname,pg_size_pretty(pg_database_size(datname)) from pg_database;
```

3. How do I obtain technical details about AnalyticDB for PostgreSQL?

1. [Submit a ticket](#).
2. Visit <http://www.greenplum.org> to read the Greenplum Database documentation.
3. Join the AnalyticDB for PostgreSQL technical support group on DingTalk (group No.: 11700737). In this group, you can receive online professional assistance and notifications on new features and promotions.



4. How do I choose an AnalyticDB for PostgreSQL instance type?

For more information, see [Instance types](#).

5. Set the network type

AnalyticDB for PostgreSQL uses the Virtual Private Cloud. If you want to use VPC, ensure that the AnalyticDB for PostgreSQL instance and the VPC are in the same region.

Background

Virtual Private Cloud (VPC): VPC helps you build an isolated network environment on Alibaba Cloud. You can customize the routing table, IP address range and gateway in the VPC. You can also combine your IDC and cloud resources on the Alibaba Cloud VPC into a virtual IDC by using a leased line or VPN to seamlessly migrate applications to the cloud.

Procedure

1. Create a VPC in the same region with the target AnalyticDB for PostgreSQL instance.
2. Log on to the [AnalyticDB for PostgreSQL console](#).
3. Select the region where the target instance is located.
4. Click the ID of the instance to go to the **Basic Information** page of the instance.
5. Click **Database Connection**.
6. Click **Switch to VPC**.
7. Select a VPC and virtual switch, and then click **OK**.

Note

After the network is switched to VPC, the original intranet address changes from a classic network address to a VPC address. ECS on the classic network can no longer access the AnalyticDB for PostgreSQL instance. The original Internet address remains unchanged.

Related API

| API | Description |
|---|---|
| ModifyDBInstanceNetworkType | Switches the network connection type for an instance. |

6. How do I clear data on a locked disk?

Determine whether a disk is full

When the disk space of a compute node or coordinator node reaches its limit, the entire instance is locked.

Check whether an instance is locked

Connect to the instance and run the following command to check whether the instance is locked:

```
show rds_force_trans_ro_non_sup;
```

If the value of `rds_force_trans_ro_non_sup` is `on` in the response, the instance is locked and in the read-only state.

Clear data

When an instance is locked because the disk is full, TRUNCATE, DROP and GRANT operations are still supported on data tables. You can use these operations to clear data until the disk space falls within the threshold. Then, the instance is automatically unlocked within about five minutes.

 **Notice** When the instance is locked, DELETE operations are not supported. When you execute DELETE statements, data is written to pg_xlog, which consumes disk space.

You can also execute the following statement to query the table size:

```
select pg_size_pretty(pg_total_relation_size('test'));
```

7. How do I modify parameters?

At present, AnalyticDB for PostgreSQL does not support global changes of parameters. But you can modify parameters in a connection (see Greenplum's parameter modification restrictions for details).

You can use the command `alter role set = modify the parameters`. This modification only applies to the specified user.

8. How to enable column-store and compression in AnalyticDB for PostgreSQL?

Row-store with no compression is used by default when you create a table in AnalyticDB for PostgreSQL. To enable column-store and compression, you must specify the column-store and compression options when creating the table. For example, you can add the following statement to the tabulation statements to enable the two features.

```
with (APPENDONLY=true, ORIENTATION=column, COMPRESSTYPE=zlib, COMPRESSLEVEL=5, BLOCKSIZE=1048576, OIDS=false)
```

In general, we recommend that you enable column-store and compression, especially when you have a lot of complicated queries to the table, or when you want to reduce the storage cost. See [Define storage models for tables](#).

9. What do I do if an AnalyticDB for PostgreSQL instance fails to be created or remains in the creating state for a long time?

The creation of an AnalyticDB for PostgreSQL instance generally takes 20 minutes or less. If the AnalyticDB for PostgreSQL instance you purchased remains in the creating state for longer than 20 minutes, the zone you selected may not be able to provide sufficient resources. In this situation, you can [submit a ticket](#) to apply for more resources from the backend. Alternatively, you can select another zone and try again.

10. Do I need to execute COPY statements as the superuser user?

Symptom

I executed a `CREATE ROLE` statement to create a standard account named `gpuser01` in AnalyticDB for PostgreSQL. However, when I executed a `COPY` statement to copy a script as the `gpuser01` user, the system displayed " `ERROR: must be superuser to COPY to or from a file .`"

How do I promote a standard account to the superuser user?

Solution

- AnalyticDB for PostgreSQL does not support the superuser user. For more information, see [Features and limits](#).
- You can copy data to a file by executing:

```
psql -c 'copy xx to stdout' > file
```

Or

```
cat file | psql -c 'copy xx from stdin'
```

11. Why am I unable to view the bills for my pay-as-you-go instance? And when can I receive my invoice?


The bill for a pay-as-you-go instance within a month is generated on the second day of the next month. For example, the bill of February is only available since March 2. You can only receive the invoice for a month on the second day of the next month.

12. How do I terminate the abnormal execution of an SQL statement?

To terminate an SQL statement or session to restore the system status, use the `pg_stat_activity` system view to obtain the status of the current query:

```
select current_query,procpid from pg_stat_activity ;

current_query | procpid
-----+-----
select current_query,procpid from pg_stat_activity; | 32584
SELECT xxx | 32238
```

 **Note** `current_query` indicates the ongoing query and `procpid` indicates the ID of the background process.

Terminate the execution of a `SELECT` statement from a query other than the current query by executing:


```
SELECT pg_cancel_backend(pg_stat_activity.procpid)
FROM pg_stat_activity
WHERE procpid <> pg_backend_pid() and current_query like 'SELECT%'; -- Note that SELECT is entered in
all uppercase.

pg_cancel_backend
-----
t
(1 rows)
```

Or

```
SELECT pg_terminate_backend(pg_stat_activity.procpid)
FROM pg_stat_activity
WHERE procpid <> pg_backend_pid() and current_query like 'SELECT%'; -- Note that SELECT is entered i
n all uppercase.

pg_terminate_backend
-----
t
(1 rows)
```

 **Note** The `cancel` and `terminate` operations are only supported for queries initiated by the current user or by a user who has equal or fewer permissions than the current user. If the system displays `"ERROR: must be superuser or rds_superuser to signal other server processes"`, queries initiated by other users are running in the background. This does not interrupt the execution of the `cancel` or `terminate` operations.

13. How do I view the distribution key and partitions of a table?

View the distribution key of a table

- Run the following command on the psql CLI client to view the distribution key of a table:

```
\d tblname
```

- Execute the following SQL statement to view the distribution key of a table:

```
SELECT attname FROM pg_attribute WHERE attrelid='schemaname.tblname'::regclass and attnum in (  
SELECT unnest(attnums) FROM pg_catalog.gp_distribution_policy t WHERE localoid='schemaname.tbl  
lname'::regclass);
```

Note

- The schemaname parameter specifies the schema of the table.
- The tblname parameter specifies the name of the table.

View the partitions of a table

- Run the following command on the psql CLI client to view the partitions of a table:

```
\d+ tblname
```

- Execute the following SQL statement to view the partitions of a table:

```
SELECT pg_get_partition_def('schemaname.tblname'::regclass,true);
```

- The schemaname parameter specifies the schema of the table.
- The tblname parameter specifies the name of the table.

14.How do I join the AnalyticDB for PostgreSQL technical support group on DingTalk?

You can join our DingTalk group by searching for 11700737. This DingTalk group presents online technical support from AnalyticDB for PostgreSQL experts, regularly published promotional offers, and new features to come.



15. Mappings between compute node types and compute group types

On August 23, 2019, the AnalyticDB for PostgreSQL instance type definition was changed. Instances have been changed from being composed of **compute groups** to being composed of **compute nodes**. This topic describes the mappings between **compute nodes** and **compute groups**.

Compute group is replaced with **compute node** in the definition to simplify the selection of MPP cluster types and comply with cluster database naming conventions. Each **compute node** only contains one MPP data partition, which simplifies the selection and use of MPP cluster types. A **compute group** may contain multiple MPP data partitions based on its type.

| Compute group type (no longer used) | Compute node type | Number of MPP data partitions | Total amount of resources | Pay-as-you-go price |
|-------------------------------------|--------------------------|-------------------------------|--|---------------------|
| 1x2C SSD | Two 1-core SSD nodes | 2 | 2-core/16 GB memory/160 GB user storage/320 GB total storage | CNY 1.76/hour |
| 1x16C SSD | Sixteen 1-core SSD nodes | 16 | 16-core/128 GB memory/1,280 GB user storage/2,560 GB total storage | CNY 14.08/hour |
| 4x4C SSD | Four 4-core SSD nodes | 4 | 16-core/128 GB memory/1,280 GB user storage/2,560 GB total storage | CNY 14.08/hour |
| 2x2C HDD | Two 2-core HDD nodes | 2 | 4-core/32 GB memory/2 TB user storage/4 TB total storage | CNY 4.60/hour |
| 4x4C HDD | Four 4-core HDD nodes | 4 | 16-core/96 GB memory/8 TB user storage/16 TB total storage | CNY 18.40/hour |

According to the preceding mappings, **compute nodes** and **compute groups** have the same performance, capacity, and price when they share the same amount of resources and same number of partitions.