

CDB for PostgreSQL

User Manual

Product Introduction



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Limits

Instance Type

Last updated : 2017-07-17 11:57:23

Currently, the cloud database provides the following instance types:

- **Master instance:** This instance can be purchased directly. It has all the features of cloud database.
- **Master instance (dedicated) (currently not supported):** This is the database instance you apply for within the dedicated cluster in Dedicated Database Cluster mode. It has all the features of cloud database.
- **Disaster recovery instance (currently not supported):** This instance is deployed remotely (different availability zones) with real-time (async) synchronized data as the master instance, and is usually used for database disaster recovery. It only has partial cloud database features.
- **Temporary instance (currently not supported):** This is a temporary instance generated by rollback, and is used for verifying data after rollback. You can switch the verified temporary instance into master instance.
- **Read-only instance (currently not supported):** You can only read data from such instance. A read-only instance cannot exist alone, and must belong to a master instance. A read-only instance only acquires data through synchronization with the master instance, and is invisible in the instance list.

Operational Constraints

Last updated : 2018-08-29 17:52:23

To provide secure and consistent instance services, Tencent Cloud imposes the following service limits for CDB for PostgreSQL.

Operation	Permission Description
Database super admin permission	Super user permission is unavailable
Restart instance	Currently unavailable
Modify database parameter settings	Currently unavailable
Data recovery	Only support using psql to recover dump data created by pg_dump
Build database replication model	HA model is automatically built based on PostgreSQL stream replication, eliminating the need to build it manually. PostgreSQL Standby nodes are invisible to users and thus cannot be directly accessed

Monitoring Feature

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Performance Monitoring

PostgreSQL provides various performance monitoring metrics to make it easy for users to view and obtain the operation information of instances. You can check the information in **Instance Management** -> **System Monitoring** in the PostgreSQL console.

pg_stat_statements

You can view detailed performance metrics of pg from the [pg_stat_statements](#) view.

Available Monitoring Metrics

Metric Name	Metric API	Description	Unit
CPU utilization	cpu	CPU utilization of the instance. This may go beyond 100% due to flexible CPU limitation strategies when idle	%
Occupied storage	storage	Disk storage space occupied by the instance	GB
Disk IOPS	iops	IOPS (number of requests per second) of the instance	requests per second
Input traffic	in_flow	Input traffic generated by data read/write operations for the instance	KB per second
Output traffic	out_flow	Output traffic generated by data read/write operations for the instance	KB per second
Number of connections	connections	Historical trend for the number of active connections of the instance	-

Metric Name	Metric API	Description	Unit
Number of requests	read_write_calls	Total number of read/write requests (addition, deletion, modification and query) per minute	requests per minute
Number of read requests	read_calls	Total number of read requests per minute	requests per minute
Number of write requests	write_calls	Total number of write requests per minute	requests per minute
Number of other requests	other_calls	Total number of requests other than read/write requests (such as Drop), accumulated by the minute	requests per minute
Cache hit rate	hit_percent	Data cache hit rate	%
Average execution latency	sql_runtime_avg	The average execution time of all SQL requests (SQLs in transactions not included).	ms
TOP 10 longest execution latencies	sql_runtime_avg	Average execution latency of top 10 longest SQL requests	ms
TOP 10 shortest execution latencies	sql_runtime_min	Average execution latency of top 10 shortest SQL requests	ms
Number of remaining XID	remain_xid	Number of remaining Transaction IDs. There are a maximum of 2^{32} Transaction Ids. It is recommended to execute "vacuum full" manually if the number falls below 1,000,000.	-
Synchronization difference between master/slave XLOG	xlog_diff	(Sample is taken every minute) The synchronization difference between the master XLOG and the slave XLOG. This represents synchronization delay, and lower is better.	byte

Alarm Feature

Last updated : 2018-09-14 12:10:49

Databases now support sending alarms for key performance metrics via SMS, email and internal message. You can configure alarm channels through [Cloud Monitoring](#) -> [Alarm Policy](#) in the Tencent Cloud console.

pgsql,postgresql,pg,Restart Instance

Last updated : 2018-09-14 12:14:42

Restart is indispensable to the maintenance of databases. Restarting a PostgreSQL instance is equivalent to restarting a database (service and process) on a local server.

Restarting an Instance Using the Console

- 1) Go to the **TencentDB for PostgreSQL console**.
- 2) Click **Restart** in the operation column on the instance list to restart a single running PostgreSQL instance.

Notes about Database Restart

- 1) Please exercise great caution when restarting a database, which plays a vital role in the business. Before the restart, it is recommended to disconnect the database from server and **stop writing** data.
- 2) Generally, it takes a dozen seconds to a few minutes to wait until the restart is completed. The instance cannot provide any service during the process.
- 3) **There is a possibility of failure of database restart**, which is **normal**. In case of a failure of restart, you can (manually) click **Restart** to try again.
- 4) Staring an instance does not change any of its physical attributes, so the public IP, private IP, and any data stored on the instance will remain unchanged.
- 5) After the restart, reconnection to the database is needed. Please make sure your business has a reconnection mechanism.

Supported Plugins

Last updated : 2018-09-30 15:13:19

TencentDB for PostgreSQL supports creating custom plugins (create extension pluginName). The following plugins are supported (some plugins are no longer supported in PostgreSQL 10 due to its more powerful features):

- [fdw plugin](#) (not supported in pg 10)
- postgis
- pl/pgsql
- pl/tcl
- pl/perl
- hstore
- postgres_fdw
- pg_stat_statements
- pgrowlocks
- citext
- btree_gin
- ltree
- btree_gist
- pgcrypto
- chkpass
- cube
- pg_trgm
- dict_int
- tablefunc
- fuzzystrmatch
- tsearch2 (no longer supported in pg 10)
- unaccent
- intarray
- isn
- intagg
- earthdistance
- sslinfo
- pg_prewarm
- jsonbx (no longer supported in pg 10)
- pg_hint_plan (no longer supported in pg 10)
- "uuid-osp"

- plcoffee
- plls
- plv8
- zhparser (no longer supported in pg 10)
- pgrouting
- postgis_tiger_geocoder