

[Cloud SQL](https://cloud.google.com/sql/) (<https://cloud.google.com/sql/>)

[Documentation](https://cloud.google.com/sql/docs/) (<https://cloud.google.com/sql/docs/>)

[PostgreSQL](https://cloud.google.com/sql/docs/postgres/) (<https://cloud.google.com/sql/docs/postgres/>) [Guides](#)

Configuring database flags

[MySQL](https://cloud.google.com/sql/docs/mysql/flags) (<https://cloud.google.com/sql/docs/mysql/flags>) | **PostgreSQL** | [SQL Server](https://cloud.google.com/sql/docs/sqlserver/flags) (<https://cloud.google.com/sql/docs/sqlserver/flags>)

This page describes how to configure database flags for Cloud SQL, and lists which flags you can set for your instance. You use database flags to adjust PostgreSQL parameters and options, to configure and tune your instance.

In some cases, setting one flag may require that you set another flag to fully enable the desired functionality.

When you set, remove, or modify a flag for a database instance, the database might be restarted. The flag value is then persisted for the instance until you remove it. If the instance is the source of a replica, the replica will also restart to align with the current configuration of the instance.

Configuring database flags

Setting a database flag

CONSOLE

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1. In the [Google Cloud Console](https://console.cloud.google.com/project/_/sql/instances) (https://console.cloud.google.com/project/_/sql/instances), create a new Cloud Console project, or open an existing project by selecting the project name.

★ **Important:** You should be aware that some resource identifiers (such as project IDs) might be retained beyond the life of your project. For this reason, avoid storing sensitive information in resource identifiers.

[...see naming guidelines](#)

2. Open the instance and click **Edit**.
3. Scroll down to the **Flags** section.

4. To set a flag that has not been set on the instance before, click **Add item**, choose the flag from the drop-down menu, and set its value.
5. Click **Save** to save your changes.
6. Confirm your changes under **Flags** on the Overview page.

Clearing all flags to their default value

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1. In the [Google Cloud Console](https://console.cloud.google.com/project/_/sql/instances) (https://console.cloud.google.com/project/_/sql/instances), create a new Cloud Console project, or open an existing project by selecting the project name.

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[...see naming guidelines](#)

2. Open the instance and click **Edit**.
3. Open the **Database flags** section.
4. Click the **X** next to all of the flags shown.
5. Click **Save** to save your changes.

Viewing current values of database flags

To view all current values of the PostgreSQL settings, log into your instance with the `psql` client and enter the following statement:

```
SELECT name, setting FROM pg_settings;
```



Note that you can change the value only for supported flags (as listed below).

Determining what database flags have been set for an instance

To see what flags have been set for a Cloud SQL instance:

CONSOLE

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1. In the [Google Cloud Console](https://console.cloud.google.com/project/_/sql/instances) (https://console.cloud.google.com/project/_/sql/instances), create a new Cloud Console project, or open an existing project by selecting the project name.

★ **Important:** You should be aware that some resource identifiers (such as project IDs) might be retained beyond the life of your project. For this reason, avoid storing sensitive information in resource identifiers.

[...see naming guidelines](#)

2. Select the instance to open its **Instance Overview** page.

The database flags that have been set are listed under the **Database flags** section.

Supported flags

For a given flag, Cloud SQL might support a different range than the corresponding PostgreSQL parameter or option.

Note: Some flags in the following table are in beta for Cloud SQL. Acceptable ranges for these flags might change. The Cloud SQL [SLA](https://cloud.google.com/sql/sla) (<https://cloud.google.com/sql/sla>) does not cover instances that use non-default settings for these flags.

A (#postgres-a) | C (#postgres-c) | D (#postgres-d) | E (#postgres-e) | E (#postgres-f) | G (#postgres-g) | H (#postgres-h) | I (#postgres-i) | J (#postgres-j) | L (#postgres-l) | M (#postgres-m) | Q (#postgres-o) | P (#postgres-p) | R (#postgres-r) | S (#postgres-s) | T (#postgres-t) | V (#postgres-v) | W (#postgres-w)

Cloud SQL Flag	Type Acceptable Values and Notes
<u>autovacuum</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-AUTOVACUUM)	boolean on off
<u>autovacuum_analyze_scale_factor</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-AUTOVACUUM-ANALYZE-SCALE-FACTOR)	float 0 ... 100

<u>autovacuum_analyze_threshold</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-AUTOVACUUM-ANALYZE-THRESHOLD)	integer 0 ... 2147483647
<u>autovacuum_freeze_max_age</u> (https://www.postgresql.org/docs/9.6/runtime-config-autovacuum.html#GUC-AUTOVACUUM-FREEZE-MAX-AGE)	integer 100000 ... 2000000000
<u>autovacuum_max_workers</u> (https://www.postgresql.org/docs/9.6/runtime-config-autovacuum.html#GUC-AUTOVACUUM-MAX-WORKERS)	integer 1 ... varies (see note)
	<p>★ Note: To determine the maximum value can set for this flag, you must first calculate the number of backend connections that are in use. This calculation is the sum of <code>max_connections</code> (maximum number of client connections), <code>autovacuum_max_workers</code> (maximum number of autovacuum processes), and <code>max_worker_processes</code> (https://www.postgresql.org/docs/9.6/config-resource.html#GUC-MAX-WORKER-PROCESSES). The sum cannot exceed 262142.</p>
<u>autovacuum_multixact_freeze_max_age</u> (https://www.postgresql.org/docs/9.6/runtime-config-autovacuum.html#GUC-AUTOVACUUM-MULTIXACT-FREEZE-MAX-AGE)	integer 10000 ... 2000000000
<u>autovacuum_naptime</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-AUTOVACUUM-NAPTIME)	integer 1 ... 2147483 s
<u>autovacuum_vacuum_cost_delay</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-AUTOVACUUM-VACUUM-COST-DELAY)	integer 0 ... 100 ms, or -1 to use the <code>vacuum_cost_delay</code> value
<u>autovacuum_vacuum_cost_limit</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-AUTOVACUUM-VACUUM-COST-LIMIT)	integer 0 ... 10000, or -1 to use the <code>vacuum_cost_limit</code> value
<u>autovacuum_vacuum_scale_factor</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-AUTOVACUUM-VACUUM-SCALE-FACTOR)	float 0 ... 100

<u>autovacuum_vacuum_threshold</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-AUTOVACUUM-VACUUM-THRESHOLD)	integer 0 ... 2147483647
<u>autovacuum_work_mem</u> (https://www.postgresql.org/docs/9.6/runtime-config-resource.html#GUC-AUTOVACUUM-WORK-MEM)	integer 0 ... 2147483647 KB, or -1 to use <code>maintenance_work_mem</code> value
<u>checkpoint_completion_target</u> (https://www.postgresql.org/docs/9.6/runtime-config-wal.html#GUC-CHECKPOINT-COMPLETION-TARGET)	float 0.0 ... 1.0
<u>checkpoint_timeout</u> (https://www.postgresql.org/docs/9.6/runtime-config-wal.html#GUC-CHECKPOINT-TIMEOUT)	integer 30 ... 86400 s
<u>checkpoint_warning</u> (https://www.postgresql.org/docs/9.6/runtime-config-wal.html#GUC-CHECKPOINT-WARNING)	integer 0 ... 2147483647 s
<u>commit_delay</u> (https://www.postgresql.org/docs/9.6/runtime-config-wal.html#GUC-COMMIT-DELAY)	integer 0 ... 100000
<u>commit_siblings</u> (https://www.postgresql.org/docs/9.6/runtime-config-wal.html#GUC-COMMIT-SIBLINGS)	integer 0 ... 1000
<u>constraint_exclusion</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#GUC-CONSTRAINT-EXCLUSION)	enumeration partition on off
<u>cpu_index_tuple_cost</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-CONSTANTS)	float 0.0 ... inf
<u>cpu_operator_cost</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#GUC-CPU-OPERATOR-COST)	float 0.0 ... inf
<u>cpu_tuple_cost</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#GUC-CPU-TUPLE-COST)	float 0.0 ... inf
<u>cursor_tuple_fraction</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#RUNTIME-CONFIG-QUERY-OTHER)	float 0.0 ... 1.0

<u>deadlock_timeout</u> (https://www.postgresql.org/docs/9.6/runtime-config-locks.html)	integer 1 ... 2147483647 ms
<u>default_statistics_target</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-query.html#GUC-DEFAULT-STATISTICS-TARGET)	integer 1 ... 10000
<u>default_tablespace</u> (https://www.postgresql.org/docs/9.6/runtime-config-client.html#GUC-DEFAULT-TABLESPACE)	string
<u>default_transaction_deferrable</u> (https://www.postgresql.org/docs/9.6/runtime-config-client.html#GUC-DEFAULT-TRANSACTION-DEFERRABLE)	boolean on off
<u>default_transaction_isolation</u> (https://www.postgresql.org/docs/9.6/runtime-config-client.html#GUC-DEFAULT-TRANSACTION-ISOLATION)	enumeration serializable 'repeatable read' 'read committed' 'read uncommitted'
<u>enable_bitmapscan</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_hashagg</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_hashjoin</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_indexonlyscan</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_indexscan</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_material</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_mergejoin</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off

<u>enable_nestloop</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_seqscan</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_sort</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>enable_tidscan</u> (https://www.postgresql.org/docs/9.5/runtime-config-query.html#RUNTIME-CONFIG-QUERY-ENABLE)	boolean on off
<u>force_parallel_mode</u> (https://www.postgresql.org/docs/11/runtime-config-query.html#RUNTIME-CONFIG-QUERY-OTHER)	enumeration off on regress
<u>from_collapse_limit</u> (https://www.postgresql.org/docs/10/runtime-config-query.html#GUC-FROM-COLLAPSE-LIMIT)	integer 1 ... 2147483647
<u>geqo</u> (https://www.postgresql.org/docs/11/runtime-config-query.html#RUNTIME-CONFIG-QUERY-GEQO)	boolean on off
<u>geqo_effort</u> (https://www.postgresql.org/docs/11/runtime-config-query.html#RUNTIME-CONFIG-QUERY-GEQO)	integer 1 ... 10
<u>geqo_generations</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#RUNTIME-CONFIG-QUERY-GEQO)	integer 0 ... 2147483647
<u>geqo_pool_size</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#RUNTIME-CONFIG-QUERY-GEQO)	integer 0 ... 2147483647
<u>geqo_seed</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#RUNTIME-CONFIG-QUERY-GEQO)	float 0.0 ... 1.0
<u>geqo_selection_bias</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#RUNTIME-CONFIG-QUERY-GEQO)	float 1.5 ... 2.0

<u>geqo_threshold</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#RUNTIME-CONFIG-QUERY-GEQO)	integer 2 ... 2147483647
<u>gin_fuzzy_search_limit</u> (https://www.postgresql.org/docs/9.6/runtime-config-client.html#GUC-GIN-FUZZY-SEARCH-LIMIT)	integer 0 ... 2147483647
<u>gin_pending_list_limit</u> (https://www.postgresql.org/docs/9.6/runtime-config-client.html#RUNTIME-CONFIG-CLIENT-STATEMENT)	integer 64 ... 2147483647 KB
<u>hot_standby_feedback</u> (https://www.postgresql.org/docs/9.6/runtime-config-replication.html#RUNTIME-CONFIG-REPLICATION-STANDBY)	boolean on off
<u>idle_in_transaction_session_timeout</u> (https://www.postgresql.org/docs/9.6/runtime-config-client.html#RUNTIME-CONFIG-CLIENT-STATEMENT)	integer 0 ... 2147483647 ms
<u>join_collapse_limit</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#GUC-JOIN-COLLAPSE-LIMIT)	integer 1 ... 2147483647
<u>lock_timeout</u> (https://www.postgresql.org/docs/9.6/runtime-config-client.html#RUNTIME-CONFIG-CLIENT-STATEMENT)	integer 0 ... 2147483647 ms
<u>log_autovacuum_min_duration</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-autovacuum.html#GUC-LOG-AUTOVACUUM-MIN-DURATION)	integer 0 ... 2147483647 ms, or -1 to disable
<u>log_checkpoints</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#RUNTIME-CONFIG-LOGGING-WHAT)	boolean on off
<u>log_connections</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#RUNTIME-CONFIG-LOGGING-WHAT)	boolean on off
<u>log_disconnections</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#RUNTIME-CONFIG-LOGGING-WHAT)	boolean on off
<u>log_duration</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#RUNTIME-CONFIG-LOGGING-WHAT)	boolean on off

<u>log_error_verbosity</u> (https://www.postgresql.org/docs/current/runtime-config-logging.html#RUNTIME-CONFIG-LOGGING-WHAT)	enumeration terse default verbose
<u>log_executor_stats</u> (https://www.postgresql.org/docs/9.6/runtime-config-statistics.html#RUNTIME-CONFIG-STATISTICS-MONITOR)	boolean on off
<u>log_hostname</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#GUC-LOG-HOSTNAME)	boolean on off
<u>log_lock_waits</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#GUC-LOG-LOCK-WAITS)	boolean on off
<u>log_min_duration_statement</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#GUC-LOG-MIN-DURATION-STATEMENT)	integer -1 ... 2147483647 ms
<u>log_min_error_statement</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#RUNTIME-CONFIG-LOGGING-WHEN)	enumeration debug5 debug4 debug3 debug2 debug1 info notice warning error log_min_error_statement_verbosity panic
<u>log_min_messages</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#RUNTIME-CONFIG-LOGGING-WHEN)	enumeration debug5 debug4 debug3 debug2 debug1 info notice warning error log_min_messages_verbosity panic
<u>log_parser_stats</u> (https://www.postgresql.org/docs/9.6/runtime-config-statistics.html#RUNTIME-CONFIG-STATISTICS-MONITOR)	boolean on off
<u>log_planner_stats</u> (https://www.postgresql.org/docs/9.6/runtime-config-statistics.html#RUNTIME-CONFIG-STATISTICS-MONITOR)	boolean on off
<u>log_replication_commands</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#GUC-LOG-REPLICATION-COMMANDS)	boolean on off
<u>log_statement</u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#GUC-LOG-STATEMENT)	enumeration none ddl mod all
<u>log_statement_stats</u>	boolean

<p>(https://www.postgresql.org/docs/9.6/runtime-config-statistics.html#RUNTIME-CONFIG-STATISTICS-MONITOR)</p>	<p>May not be enabled together with <code>log_parser_stats</code>, <code>log_planner_stats</code>, and <code>log_executor_stats</code>.</p>
<p><u><code>log_temp_files</code></u> (https://www.postgresql.org/docs/9.6/runtime-config-logging.html#GUC-LOG-TEMP-FILES)</p>	<p>integer 0 ... 2147483647 KB, or -1 to disable</p>
<p><u><code>maintenance_work_mem</code></u> (https://www.postgresql.org/docs/9.6/runtime-config-resource.html#RUNTIME-CONFIG-RESOURCE-MEMORY)</p>	<p>integer 1024 ... 2147483647 KB</p>
<p><u><code>max_connections</code></u> (https://www.postgresql.org/docs/9.6/runtime-config-connection.html#GUC-MAX-CONNECTIONS)</p>	<p>integer 14 ... varies (see note)</p>
	<p>★ Note: To determine the maximum value you can set for this flag, you must first calculate the number of backend connections that are in use. This calculation is the sum of the values for <code>max_connections</code> (maximum number of client connections), <code>autovacuum_max_workers</code> (maximum number of autovacuum processes), and <code>max_worker_processes</code> (https://www.postgresql.org/docs/9.6/runtime-config-resource.html#GUC-MAX-WORKER-PROCESSES). The sum cannot exceed 262142.</p> <p>The value on replicas must be \geq the value on the primary. Changes on the primary propagate to replicas that have a value that is lower than the new value on the primary, or that have changed from the default value.</p>
<p><u><code>max_locks_per_transaction</code></u> (https://www.postgresql.org/docs/9.6/runtime-config-locks.html#GUC-MAX-LOCKS-PER-TRANSACTION)</p>	<p>integer 10 ... 2147483647</p>
	<p>The value on replicas must be \geq the value on the primary. Changes on the primary propagate to replicas that have a value that is lower than the new value on the primary, or that have changed from the default value.</p>
<p><u><code>max_prepared_transactions</code></u></p>	<p>integer 0 ... 262143</p>

(https://www.postgresql.org/docs/9.6/runtime-config-resource.html#GUC-MAX-PREPARED-TRANSACTIONS)	The value on replicas must be \geq the value on the primary. Changes on the primary propagate to replicas that have a value that is lower than the new value on the primary, or that have changed from the default value.
<u>max_standby_archive_delay</u> (https://www.postgresql.org/docs/current/runtime-config-replication.html#GUC-MAX-STANDBY-ARCHIVE-DELAY)	integer 0 ... 2147483647 ms, or -1 to wait for the next WAL segment
<u>max_standby_streaming_delay</u> (https://www.postgresql.org/docs/current/runtime-config-replication.html#GUC-MAX-STANDBY-STREAMING-DELAY)	integer 0 ... 2147483647 ms, or -1 to wait for the next WAL segment
<u>max_wal_size</u> (https://www.postgresql.org/docs/9.6/runtime-config-wal.html#GUC-MAX-WAL-SIZE)	integer 2 ... 2147483647 Unit is 16 MB for Postgres 9.6; unit is 1 MB for Postgres 11 (default)
<u>min_parallel_relation_size</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#GUC-MIN-PARALLEL-RELATION-SIZE)	integer 0 ... 715827882 Unit is 8 KB
<u>old_snapshot_threshold</u> (https://www.postgresql.org/docs/9.6/runtime-config-resource.html#GUC-OLD-SNAPSHOT-THRESHOLD)	integer 0 ... 86400 min, or -1 to disable
<u>parallel_setup_cost</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#GUC-PARALLEL-SETUP-COST)	float 0.0 ... inf
<u>parallel_tuple_cost</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#GUC-PARALLEL-TUPLE-COST)	float 0.0 ... inf
<u>pg_stat_statements.max</u> (https://www.postgresql.org/docs/current/pgstatstatements.html#id-1117388)	integer 100 ... 2147483647
<u>pg_stat_statements.save</u> (https://www.postgresql.org/docs/current/pgstatstatements.html#id-1117388)	boolean on off
<u>pg_stat_statements.track</u> (https://www.postgresql.org/docs/current/pgstatstatements.html#id-1117388)	enumeration none top all

<u>pg_stat_statements.track_utility</u> (https://www.postgresql.org/docs/current/pgstatstatements.html#id-on off 1.11.7.38.8)	boolean
<u>random_page_cost</u> (https://www.postgresql.org/docs/9.6/runtime-config-query.html#GUC-RANDOM-PAGE-COST)	float 0.0 ... inf
<u>replacement_sort_tuples</u> (https://www.postgresql.org/docs/9.6/runtime-config-resource.html#GUC-REPLACEMENT-SORT-TUPLES)	integer 0 ... 2147483647
<u>standard_conforming_strings</u> (https://www.postgresql.org/docs/9.6/runtime-config-compatible.html#GUC-STANDARD-CONFORMING-STRINGS)	boolean on off
<u>synchronize_seqscans</u> (https://www.postgresql.org/docs/9.6/runtime-config-compatible.html#RUNTIME-CONFIG-COMPATIBLE-VERSION)	boolean on off
<u>temp_buffers</u> (https://www.postgresql.org/docs/9.6/runtime-config-resource.html#RUNTIME-CONFIG-RESOURCE-MEMORY)	integer 100 ... 1073741823 Unit is 8 KB
<u>temp_file_limit</u> (https://www.postgresql.org/docs/9.6/static/runtime-config-resource.html#RUNTIME-CONFIG-RESOURCE-DISK)	integer 1048576 ... 2147483647 KB
<u>trace_notify</u> (https://www.postgresql.org/docs/9.6/runtime-config-developer.html)	boolean on off
<u>trace_recovery_messages</u> (https://www.postgresql.org/docs/10/runtime-config-developer.html)	enumeration debug5 debug4 debug3 debug2 log notice warning error
<u>trace_sort</u> (https://www.postgresql.org/docs/10/runtime-config-developer.html)	boolean on off
<u>track_activities</u> (https://www.postgresql.org/docs/10/runtime-config-statistics.html#RUNTIME-CONFIG-STATISTICS-COLLECTOR)	boolean on off
<u>track_activity_query_size</u> (https://www.postgresql.org/docs/10/runtime-config-statistics.html#RUNTIME-CONFIG-STATISTICS-COLLECTOR)	integer 100 ... 102400
<u>track_commit_timestamp</u>	boolean

(https://www.postgresql.org/docs/current/runtime-config-replication.html#RUNTIME-CONFIG-REPLICATION-SENDER)	on off
<u>track_counts</u> (https://www.postgresql.org/docs/10/runtime-config-statistics.html#GUC-TRACK-COUNTS)	boolean on off
<u>track_functions</u> (https://www.postgresql.org/docs/10/runtime-config-statistics.html#GUC-TRACK-FUNCTIONS)	enumeration none pl all
<u>track_io_timing</u> (https://www.postgresql.org/docs/10/runtime-config-statistics.html#GUC-TRACK-IO-TIMING)	boolean on off
<u>vacuum_cost_delay</u> (https://www.postgresql.org/docs/current/runtime-config-resource.html#RUNTIME-CONFIG-RESOURCE-VACUUM-COST)	integer 0 ... 100 ms
<u>vacuum_cost_limit</u> (https://www.postgresql.org/docs/10/runtime-config-resource.html#GUC-VACUUM-COST-LIMIT)	integer 1 ... 10000
<u>vacuum_freeze_min_age</u> (https://www.postgresql.org/docs/10/runtime-config-client.html#GUC-VACUUM-FREEZE-MIN-AGE)	integer 0 ... 1000000000
<u>vacuum_freeze_table_age</u> (https://www.postgresql.org/docs/10/runtime-config-client.html#GUC-VACUUM-FREEZE-TABLE-AGE)	integer 0 ... 2000000000
<u>vacuum_multixact_freeze_min_age</u> (https://www.postgresql.org/docs/10/runtime-config-client.html#GUC-VACUUM-MULTIXACT-FREEZE-MIN-AGE)	integer 0 ... 1000000000
<u>vacuum_multixact_freeze_table_age</u> (https://www.postgresql.org/docs/10/runtime-config-client.html#GUC-VACUUM-MULTIXACT-FREEZE-TABLE-AGE)	integer 0 ... 2000000000
<u>work_mem</u> (https://www.postgresql.org/docs/10/runtime-config-resource.html#GUC-WORK-MEM)	integer 64 ... 2147483647 KB

What's next

- Learn more about [PostgreSQL server configuration](https://www.postgresql.org/docs/9.6/static/runtime-config.html) (<https://www.postgresql.org/docs/9.6/static/runtime-config.html>).

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