

HOW TO INSPECT POSTGRES SQL QUERIES

Sometimes I want to inspect and verify queries made by recently created application or hunt a bug that involves more complex queries. The essential part of this process requires altering PostgreSQL server configuration to log SQL statements.

You can view currently executed queries using technique described in How to terminate PostgreSQL sessions blog post, but this is not a case here as I want to use log file.

This information applies to *PostgreSQL 9.1* and *Debian Wheezy*.

Log every SQL statement

You need to alter `log_statement` parameter inside PostgreSQL configuration file.

```
$ sudo vi /etc/postgresql/9.1/main/postgresql.conf
[.]
#log_lock_waits = off           # log lock waits >= deadlock_timeout
log_statement = 'all'          # none, ddl, mod, all
#log_temp_files = -1           # log temporary files equal or larger
[.]
```

Possible values are presented in the following list.

- none

Log nothing. This is *default* value.

- ddl

Log data definition statements.

- mod

Log data definition and data modifying statements.

- all

Log every statement.

Beware, only executed queries will be logged. More detailed information can be found in documentation mentioned in the last section.

Reload database server configuration after modifying `log_statement` parameter.

```
$ sudo pg_lsclusters
```

Version	Cluster	Port	Status	Owner	Data directory	Log file
9.1	main	5432	online	postgres	/var/lib/postgresql/9.1/main	/var/log/postgresql/postgresql-9.1-main.log

```
$ sudo pg_ctlcluster 9.1 main reload
```

Inspect log file.

```
$ sudo tail /var/log/postgresql/postgresql-9.1-main.log
```

```
2014-11-24 22:10:28 CET LOG: received SIGHUP, reloading configuration files
```

```
2014-11-24 22:10:28 CET LOG: parameter "log_statement" changed to "all"
```

```
[..]
```

```
2014-11-24 22:17:02 CET LOG: statement: CREATE ROLE milosz with login;
```

```
2014-11-24 22:17:15 CET LOG: statement: CREATE DATABASE bookmarks;
```

```
2014-11-24 22:17:23 CET LOG: statement: SELECT pg_catalog.quote_ident(datname) FROM
pg_catalog.pg_database WHERE substring(pg_catalog.quote_ident(datname),1,3)='boo'
LIMIT 1000
```

```
2014-11-24 22:17:28 CET LOG: statement: ALTER DATABASE bookmarks OWNER TO
milosz;
```

Log SQL statements during current session

You can log SQL statements during active session, but it requires **superuser** privilege.

```
$ psql -U milosz bookmarks
Password for user milosz:
psql (9.1.14)
Type "help" for help.

bookmarks=# set log_statement TO 'all';
SET
bookmarks=# CREATE SCHEMA bookmarks;
CREATE SCHEMA
bookmarks=# SET search_path TO bookmarks, public;
SET
bookmarks=# \q
```

Inspect log file.

```
$ sudo tail /var/log/postgresql/postgresql-9.1-main.log
```

```
2014-11-24 22:34:11 CET LOG: statement: CREATE SCHEMA bookmarks;
```

```
2014-11-24 22:35:08 CET LOG: statement: SET search_path TO bookmarks, public;
```

Ending notes

I **strongly** suggest to read PostgreSQL 9.1 Documentation → Server Configuration

→ Error Reporting and Logging, especially *When To Log* and *What To*

Log sections.

Source: <https://blog.sleeplessbeastie.eu/2015/01/16/how-to-inspect-postgresql-queries/>