

Performance Optimization

From PostgreSQL wiki

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How to Effectively Ask Questions Regarding Performance on Postgres Lists

- [Slow_Query_Questions](#)

General Setup and Optimization

- [Tuning Your PostgreSQL Server](#) by Greg Smith, Robert Treat, and Christopher Browne
- [PostgreSQL Query Profiler in dbForge Studio \(https://www.devart.com/dbforge/postgresql/studio/query-profiler.html\)](https://www.devart.com/dbforge/postgresql/studio/query-profiler.html) by Devart
- [Performance Tuning PostgreSQL \(http://www.revsys.com/writings/postgresql-performance.html\)](http://www.revsys.com/writings/postgresql-performance.html) by Frank Wiles
- [QuickStart Guide to Tuning PostgreSQL \(http://linuxfinances.info/info/quickstart.html\)](http://linuxfinances.info/info/quickstart.html) by Christopher Browne
- [Performance Tuning \(http://www.varlena.com/GeneralBits/Tidbits/perf.html\)](http://www.varlena.com/GeneralBits/Tidbits/perf.html) by Josh Berkus and Shridhar Daithankar
- [Replacing Slow Loops in PostgreSQL \(http://old.zope.org/Members/pupq/pg_in_aggregates/howto_view\)](http://old.zope.org/Members/pupq/pg_in_aggregates/howto_view) by Joel Burton
- [PostgreSQL Hardware Performance Tuning \(http://momjian.us/main/writings/pgsql/hw_performance/\)](http://momjian.us/main/writings/pgsql/hw_performance/) by Bruce Momjian
- [The effects of data fragmentation in a mixed load database \(http://www.targeted.org/articles/databases/fragmentation.html\)](http://www.targeted.org/articles/databases/fragmentation.html) by Dmitry Dvoynikov
- [Understanding Postgres Performance \(http://www.craigkerstiens.com/2012/10/01/understanding-postgres-performance/\)](http://www.craigkerstiens.com/2012/10/01/understanding-postgres-performance/) by Craig Kerstiens
- [More on Postgres Performance \(http://www.craigkerstiens.com/2013/01/10/more-on-postgres-performance/\)](http://www.craigkerstiens.com/2013/01/10/more-on-postgres-performance/) by Craig Kerstiens
- [Faster PostgreSQL counting \(https://www.citusdata.com/blog/2016/10/12/count-performance/\)](https://www.citusdata.com/blog/2016/10/12/count-performance/) by Joe Nelson
- [Row count estimates in Postgres \(https://www.pgmustard.com/blog/2018/12/14/row-count-estimates-in-postgres/\)](https://www.pgmustard.com/blog/2018/12/14/row-count-estimates-in-postgres/) by David Conlin
- [Index-only scans in Postgres \(https://www.pgmustard.com/blog/2019/03/04/index-only-scans-in-postgres/\)](https://www.pgmustard.com/blog/2019/03/04/index-only-scans-in-postgres/) by David Conlin

- Optimize PostgreSQL Server Performance Through Configuration (<https://info.crunchydata.com/blog/optimize-postgresql-server-performance>) by Tom Swartz

Performance courses are available from a number of companies. Check events and trainings (<http://www.postgresql.org/about/eventarchive>) for further details.

Critical maintenance for performance

- Introduction to VACUUM, ANALYZE, EXPLAIN, and COUNT by Jim Nasby.
- VACUUM FULL and why you should avoid it
- Planner Statistics
- Using EXPLAIN
- Logging Difficult Queries
- Logging Checkpoints
- Bulk Loading and Restores
- Performance Analysis Tools by Craig Ringer

Database architecture

- Limiting and prioritizing user/query/database resource usage by Craig Ringer
- Prioritizing databases by separating into multiple clusters by Craig Ringer
- Clustering
- Shared Storage

Database Hardware Selection and Setup

- Database Hardware
- Reliable Writes

Benchmark Workloads

- Category: Benchmarking

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