



PERCONA  
Performance Consulting Experts

# Percona's Enhancements to MySQL and InnoDB

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# About Percona

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- Training, Support, and Services for MySQL and the LAMP Stack
- Authors of High Performance MySQL
  - See <http://tinyurl.com/highperfmysql>
- Broad Performance Expertise
  - See Goal-Driven Performance Optimization Flyer
- Authors of MySQL Performance Blog
  - See <http://www.mysqlperformanceblog.com>
- Independent and Objective

# Agenda

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- Percona's open-source software
- Performance changes we'll see in 2010
- The Percona product roadmap

# Percona's Open-Source Software

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- Percona Server
- Percona XtraDB transactional storage engine
- Percona XtraBackup hot-backup solution
- Bundled together:
  - Percona Server with XtraDB
  - All GPL-licensed and free
  - Carefully QA'ed and benchmarked

# Overall Strategy

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- Observe critical pain points for users
- Find the high-leverage spots in the code
- Carefully change as little as possible
- Focus on Performance, Operations, Transparency

# Percona Server

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- Based on MySQL 5.0 and 5.1

# Percona Server

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- Additional query-level instrumentation

# Percona Server

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- Based on MySQL 5.0 and 5.1
- Additional query-level instrumentation
- Additional object-level instrumentation

# Percona XtraDB

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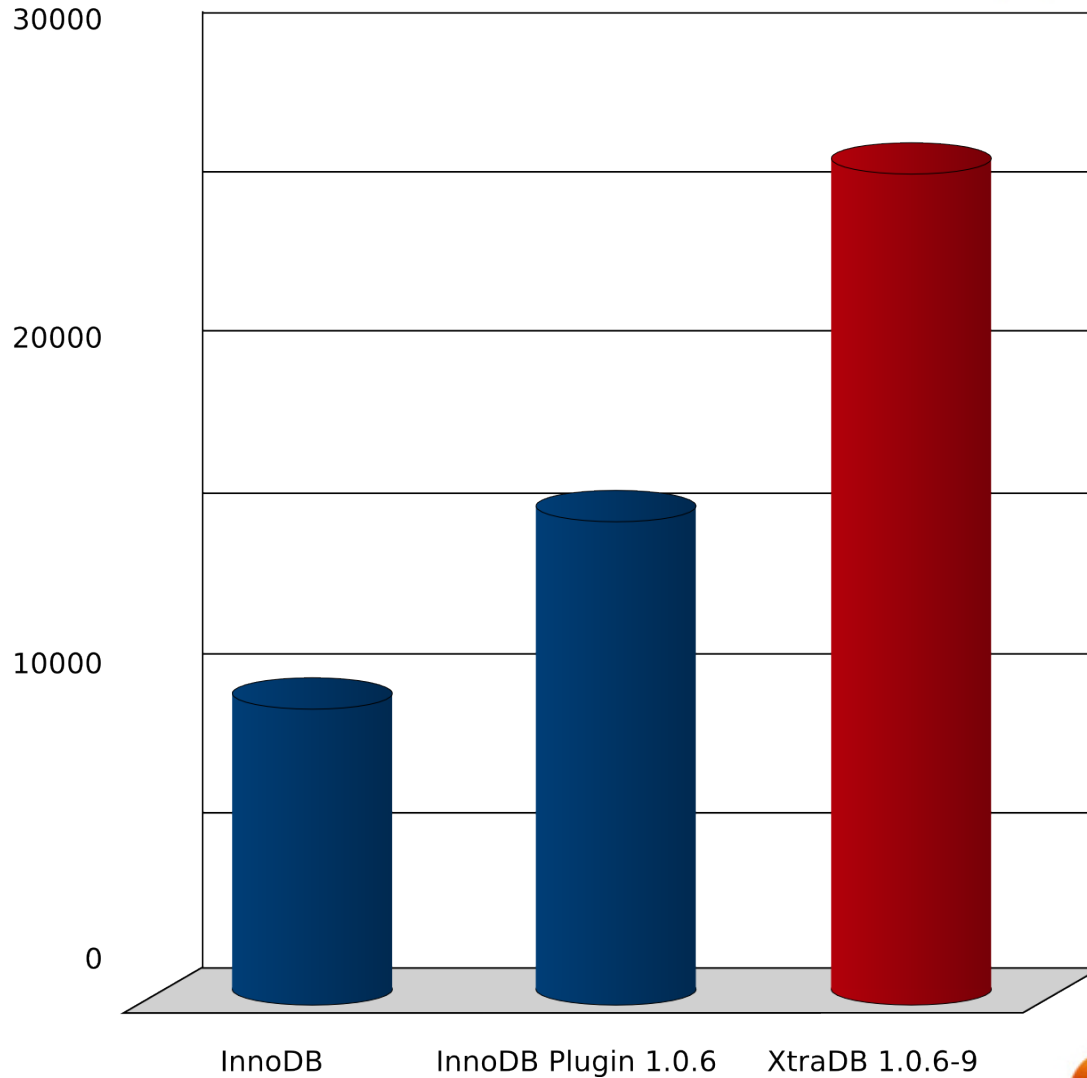
- Transactional storage engine
- Based on the InnoDB Plugin
- Compatible with InnoDB
- Improved performance
- Added features
- Improved diagnostics
- GPL licensed and 100% free

# Percona XtraDB

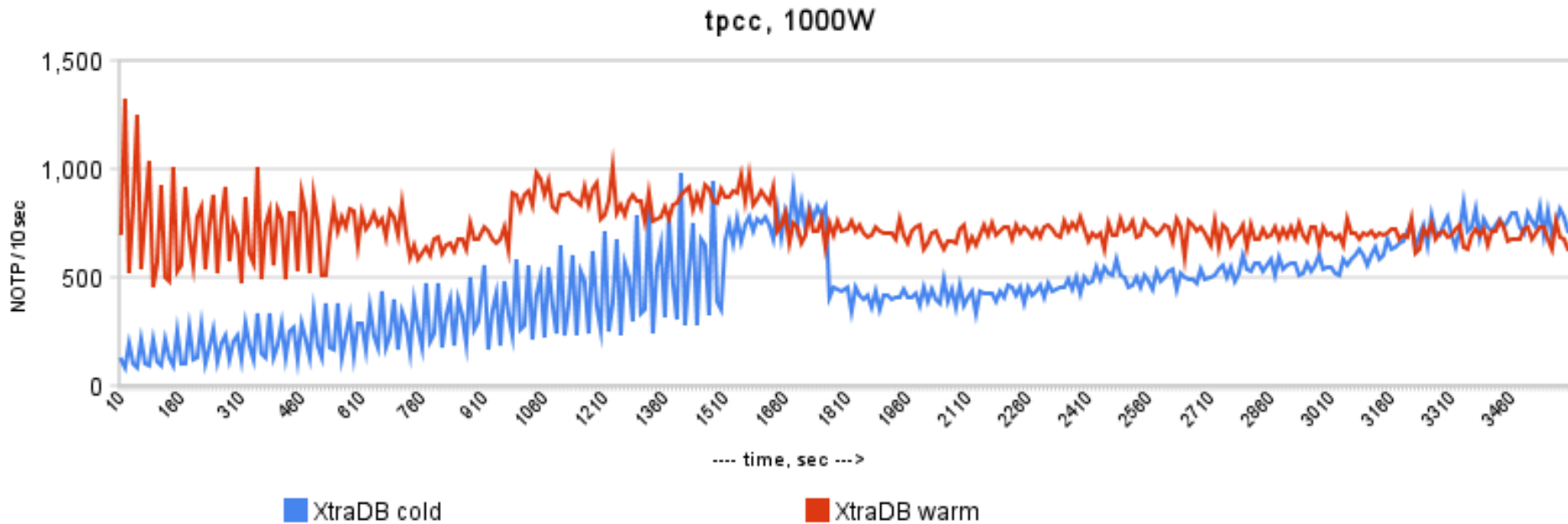
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- Higher performance, more scalable
- More configurable
- More reliable replication
- Supports operational tasks online
- More instrumentation and diagnostics
- Added INFORMATION\_SCHEMA tables

# InnoDB -vs- XtraDB



# XtraDB Fast Warm-Up



<http://tinyurl.com/y8hn5nh>

# Percona XtraBackup

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- A hot-backup solution
- Backs up XtraDB and InnoDB data
- GPL licensed and 100% free

# Percona XtraBackup

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- Truly hot backups, no blocking or downtime!
- Streaming, throttling
- Incremental backups
- Native look-and-feel
- Backs up MyISAM too
- Can manipulate & inspect data files

# Percona Server with XtraDB

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- Combination of Percona Server + XtraDB
- Fully compatible with MySQL
- Improved instrumentation and features
- Available for 5.1 and 5.0
- GPL licensed and 100% free

# Support and Services

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- Consulting
- Support
- Training
- Maintenance Contracts
  - Bug fixes
  - Build services
- 1-888-316-9775 from 8am-5pm Pacific time
  - Or +1-208-473-2904 outside USA

# The New Performance Reality

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- More powerful hardware
- More concurrency

# Running WORSE?

- Yes, MySQL is running worse than before.
- A year ago: “My big query is too slow.”
- Last week: “Spike. Pile-up. Freeze.”
  - *“We have issues where at multiple times of the day (random times) queries will stack to a point of maxing connections. Typical event lasts 10 secs.”*
  - *“We have a problem where on occasion an application will get a bit unstable and will run up to the connection limit of the mysql server.”*

# Performance Solutions?

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- New technologies?
- Cool new architectures?
- Improve existing technologies?

# Percona Server Roadmap

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- More instrumentation
- More configurability

# Percona XtraDB Roadmap

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- Continue performance and configuration improvements
- Research making I/O path much more effective on SSD
- Analysis module
  - more details on query execution
  - tools to analyze query execution

# Engage With Us

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- We need you!
- Talk to us on mailing lists
- Come visit our booth and tell us your needs
- Hire us to make things happen