The MySQL Diaspora

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whoami

- Chief Evangelist, MariaDB

- Formerly of MySQL AB/Sun Microsystems

- Past lives included FESCO (Fedora Project), OpenOffice.org

Agenda

- The MySQL-based servers

- Patches for new features

- MySQL tools

- MySQL Cluster

- Support

MySQL release policy

- Alpha

- Beta

- GA - generally available

- Labs

- Developer Milestone Releases (DMR)

MySQL through the years

MySQL AB	Sun	Oracle
3.23	5.1	5.5
4.0		
4.1		
5.0		

GA

MySQL AB	Sun	Oracle
5.1	~~5.2~~	~~5.4~~
5.2	5.4	~~6.0~~
6.0	6.0	5.6

Plans & Cancellations

Where do you get MySQL from?
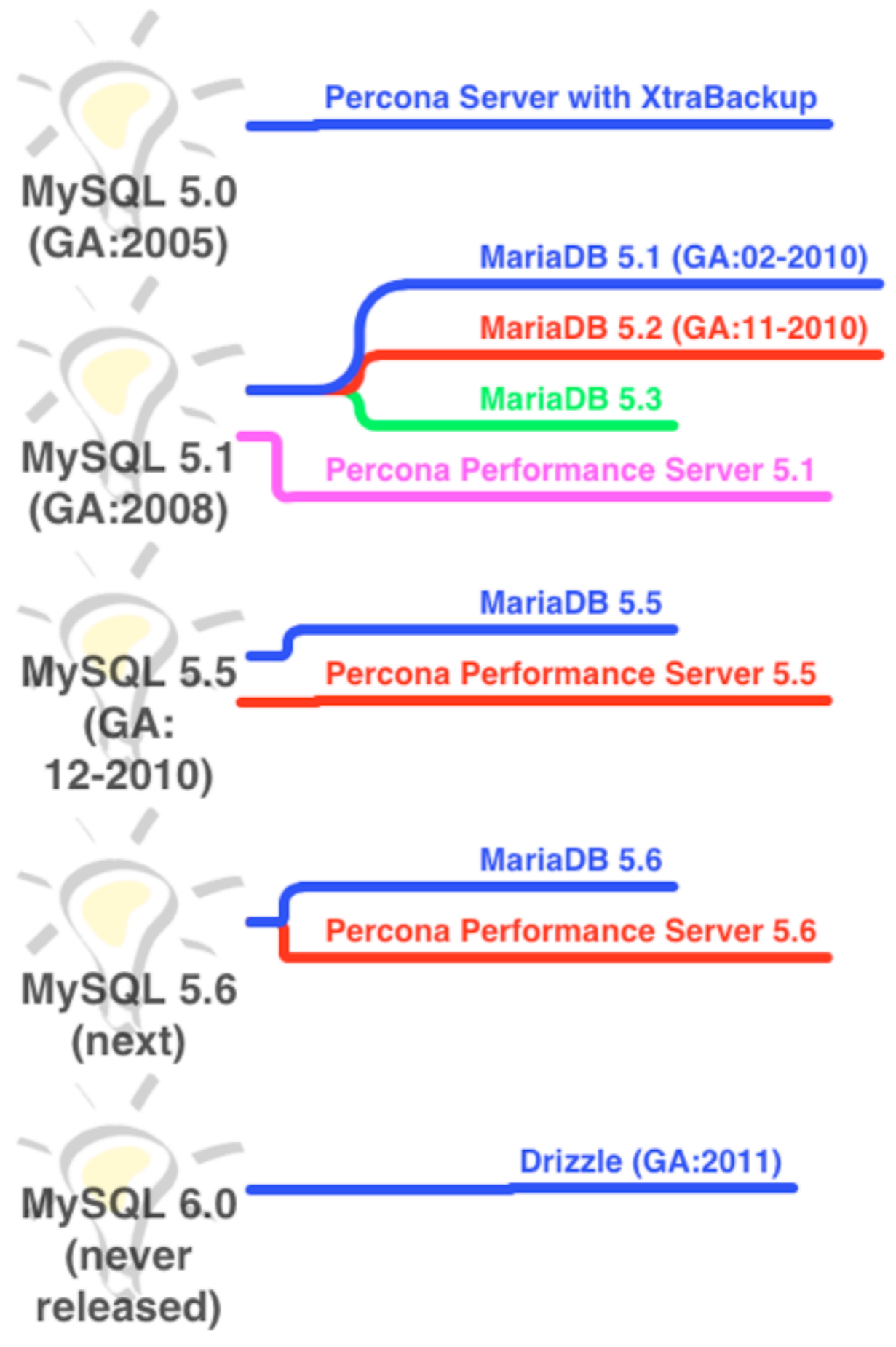
- mysql.com

    - Over 55%-60% of 70,000 daily downloads are Microsoft Windows based

- your distribution of choice

    - Linux, BSD, Mac

    - packaged w/o many engines built-in

The commercial ecosystem

- Storage engines had an API since 5.1... being pluggable, there were also commercial engines available

- InfoBright, TokuDB, ScaleDB, Calpont, Nitro, SolidDB, RitmarkFS, etc.

- Hardware vendors too: Kickfire, Virident, Schooner, etc.

Let's define:

- Fork

- Branch

Percona Server with XtraBackup

MySQL 5.0 (GA:2005)

MariaDB 5.1 (GA:02-2010)

MariaDB 5.2 (GA:11-2010)

MariaDB 5.3

Percona Performance Server 5.1

MySQL 5.1 (GA:2008)

MariaDB 5.5

Percona Performance Server 5.5

MySQL 5.5 (GA: 12-2010)

MariaDB 5.6

Percona Performance Server 5.6

MySQL 5.6 (next)

Drizzle (GA:2011)

MySQL 6.0 (never released)

Drizzle

- 64-bit only, *nix only

- Micro-kernel architecture

- Stripped out MySQL 6.0 to focus on everything as a plugin

- All C++ now

- Focus on the cloud (small plug-in relational DB)

- Replication via Google Protocol Buffers

Percona Performance Server

- or Percona Server with XtraDB

  - MySQL + InnoDB enhancements + minimal server changes

- Extra diagnostic features over MySQL: per-table/index/user/client performance counters, more detailed EXPLAIN, InnoDB data statistics, better SHOW INNODB STATUS, FlashCache support

- Maatkit UDFs

MariaDB

- community developed, feature enhanced, backward compatible

- rebased branch, with a stack of new features: all of Percona Performance Server + storage engines, extended stats for slow query log, microsecond precision, table elimination, pool of threads, pluggable authentication, dynamic columns, NoSQL, group commit, optimiser fixes (most in 10 years), subqueries finally materialise, HeidiSQL shipped in Windows binaries

What's lying around

- Patches from eBay, Tivo, Tokutek, DeNA, Google, Facebook

- MariaDB has quite a huge portion of the above integrated

- OurDelta? MepSQL? XAMPP?

- MySQL?

NoSQL in MySQL

- HandlerSocket

- Dynamic columns

- memcached interface to InnoDB

- memcached interface to NDB

Tools: Enterprise Monitoring

- Oracle's MySQL Enterprise Monitor
  - works for MySQL + Cluster
- SkySQL Enterprise Monitor (MONyog)
- FromDual MySQL Performance Monitor (Zabbiz-based)
- mysql-cacti-templates, Munin, SNMP/OpenNMS, mycheckpoint

Tools: Backup

- MySQL Enterprise Backup (InnoDB Hot Backup)

- xtrabackup (InnoDB/XtraDB, MyISAM)

- SkySQL Backup & Recovery Manager (Zmanda Recovery Manager - ZRM)

- mylvmbackup

Tools: Visual modelling tools

- MySQL Workbench

- SkySQL Visual Editor (SQLyog)

- HeidiSQL

Other useful tools

- Percona Toolkit (maatkit + aspersa)

- openark kit (incl. online schema change which Facebook adopted)

- MHA for MySQL - High Availability Manager + tools

MySQL Cluster

- MySQL (NDB) Cluster (7.1 available; 7.2 is a DMR)

- Percona XtraDB Cluster (Galera, alpha)

- Severalnines ClusterControl for MySQL Cluster, replication & Galera management/deployment/monitoring/auto-scaling tool

Support

MySQL	MariaDB	Percona Server	MySQL Cluster	Drizzle
Oracle, SkySQL, FromDual, Percona, etc.	SkySQL, FromDual, Percona, Open Query	Percona, SkySQL, FromDual	Oracle, SkySQL, Severalnines, Percona	SkySQL, Percona, Blue Gecko

Support II

- Check:

  - versions of MySQL supported

  - distribution supported MySQL?

- Remote-DBA services also exist (Pythian, PalominoDB, Blue Gecko, etc.)

What do people use?

- pap.fr: "increased stability, improved performance, fewer anomalies" MySQL->MariaDB

- MySQL is losing traction due to its owner (FUD?) (+ associated costs)

- Percona Server: popular amongst their consulting clients

MySQL Enterprise-only features

- thread pool closed source, with only an API for community development

- PAM, Active Directory plugins via pluggable authentication API is closed source

- InnoDB Hot Backup has been closed since creation

- Check MariaDB out for opensource variants

InnoDB/XtraDB

- InnoDB in MySQL 5.5 is truly better than XtraDB in 5.1

- XtraDB in 5.5 > InnoDB in 5.5 (more instrumentation)

So what do you use?

- MySQL from mysql.com is probably sufficient for most needs

- Need a little more from MySQL? Percona server, MariaDB

- Need **features** of MariaDB, i.e. MySQL on steroids...

- Connectors are 100% the same

What can you use?

- i.e. what's stable **today**

  - MySQL 5.5

  - Percona Server 5.5

  - MariaDB 5.2

  - Drizzle 7

Pragmatic CIO

- Think about support availability + cost

- Licensing is boring... think clouds?!?

- Subscriptions or fixing your problems (consulting, emergency services)

- Community vs Enterprise

- Continuity of projects/company

Q&A?

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