Drizzle Overview

• What is it?
• Plugins!
• Installing
• Starting
• `drizzle.cc` Boots Shell
What is Drizzle?

A lightweight SQL database for the “cloud” and web
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Plugins are the new black
Pluggable Protocol

- MySQL Protocol (3306)
- Drizzle Protocol (4427)
- Console Plugin
- HTTP/REST?
- Postgres Protocol?
shell$ ./drizzled --datadir=/tmp/foo --console-enable
InnoDB: The InnoDB memory heap is disabled
InnoDB: Mutexes and rw_locks use GCC atomic builtins.
100410 14:08:01  InnoDB: highest supported file format is Barracuda.
100410 14:08:01 InnoDB Plugin 1.0.4 started; log sequence number 44274
Listening on 0.0.0.0:3306
Listening on ::::3306
Listening on 0.0.0.0:4427
Listening on ::::4427
./drizzled: Forcing close of thread 0 user: "
./drizzled: ready for connections.
Version: '2010.03.1336' Source distribution (trunk)
drizzled>
drizzled> use data_dictionary;
OK
drizzled> select * from MODULES where MODULE_NAME='console';
MODULE_NAME  MODULE_VERSION  MODULE_AUTHOR  IS_BUILTIN  MODULE_LIBRARY  MODULE_DESCRIPTION  MODULE_LICENSE
console     0.1 Eric Day    FALSE console     Console Client BSD
drizzled> ./drizzled: Forcing close of thread 1 user: "
./drizzled: Normal shutdown
100410 14:08:08 InnoDB: Starting shutdown...
100410 14:08:09 InnoDB: Shutdown completed; log sequence number 44284
shell$
Drizzle Protocol

- We killed little bobby tables
- Packet header sharding key
- Support HTTP-like redirect
- Concurrent queries
libdrizzle

- Multi-protocol support
- MySQL, Drizzle
- Both Client and Server parts of the protocol
- Have PHP, Python, Perl and Ruby already
- Oh, and it's BSD, so use it anywhere
Pluggable Scheduler

- Multi Threaded
- Pool of Threads
- Single Threaded
- Platform Specific?
Badges? We don't need no stinking badges!
Pluggable Authentication

- None
- PAM
- LDAP
- HTTP
- libdrizzle?

authenticate(user, pass)
Pluggable Authorization

- None
- LDAP
- Hard-coded policy

- restrictSchema()
- restrictTable()
- restrictProcess()
Pluggable Query Cache

- None
- Local memory
- memcached
- NDB?
Pluggable Query Filter

- Rewrite/block queries
- Rewrite queries for tuning
- (Anybody seen MySQL Proxy)

- rewrite(schema, query)
Pluggable Logging

- None
- query_log
- gearman
- Syslog
- user_statistics

- pre(session)
- post(session)
Pluggable Errors

- stderr
- notify
- syslog?

- errmsg(session, priority, format, *args)
Pluggable Function

- md5()
- memcached_*
- gearman_*
- rot13()
Pluggable Replication

- Google Protocol Buffers
  - Java
  - Python
  - C++
- Replicator
- Applier
- Reader
Pluggable Data Dictionary

- INFORMATION_SCHEMA
- Other table functions
Um. So how do I run it?
Install

• From apt:
  - In Debian unstable

• Launchpad PPA
  - sudo apt-get install python-software-properties
  - sudo add-apt-repository ppa:drizzle-developers/ppa
  - sudo apt-get update
  - sudo apt-get install drizzle
Install

• From RPM:
  - http://drizzle.org/wiki/RPMInstallation
Install

• From source:
  – ./configure ; make ; make install
  – No bootstrap step
  – No system tables
Startup

drizzled --datadir=/my/data/path
Plugins

- `apt-get install drizzle-plugin-pbxt`
- Enabled at startup
  
  `--plugin-add=md5,pbxt`
- No need for a sysadmin to run SQL to install a plugin!
Boots Shell

- launchpad.net/boots or lp:boots

- New command line client from Portland State
  - (one of the devs, chromakode, also wrote the cool xkcd April Fool's Day hack)

- Pluggable

- Scriptable

- Lingos – Custom command language
Piped SQL

```
shell$ boots -u root -h 127.0.0.1 -l pipedsq
Boots (v0.2.0)
127.0.0.1:3306 (server v5.1.40)
> SELECT * FROM mysql.user; | csv_out("users.csv")
5 rows in set (0.06s server | +0.00s working)
> Boots quit.
shell$ cat users.csv
localhost,root,,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,
Y,Y,Y,Y,Y,Y,Y,Y,Y,Y,,,,0,0,0,0
```
Get involved!

- http://drizzle.org/
- https://launchpad.net/drizzle
- Contact me at http://oddments.org/
- Stickers!