



Drizzle

Using Drizzle

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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 ClientBSD
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

- Mutli 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



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 pipedsql
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,,,,,0,0,0,0
```



Get involved!

- <http://drizzle.org/>
- <https://launchpad.net/drizzle>
- Contact me at <http://oddmments.org/>
- Stickers!