

# MONGO FOR JPA DEVELOPERS

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# WHO AM I?

- Java Developer since 1996
- Currently Member of Technical Staff @ MongoDB
- Java Driver, Morphia
- Former member of the GlassFish/Grizzly team
- Worked with EE since 1998 *ish*
  - We built our own ORM

# WHAT IS MONGO?

- Name derives from "humongous" which mean big
- It is a scalable, high-performance, open source NoSQL database
- Written in C++
- Document oriented
- Fully indexable
- Replication and HA
- Map Reduce and Aggregation framework
- GridFS

# DOCUMENT ORIENTED

- In JPA, one object is typically mapped across multiple cells in one row of a table
  - sometimes multiple objects with embedded entities
- Documents stored in json-style documents
  - actually BSON (<http://bsonspec.org>)
  - BSON adds some "extra" information to documents, like length prefixes, that make traversal efficient.

# WHAT DOES A DOCUMENT LOOK LIKE?

`db.users.find().pretty()`

```
{
  "_id" : ObjectId("50fdb55a18c650918ee414be"),
  "className" : "com.antwerkz.mongo.model.User",
  "firstName" : "Jules",
  "lastName" : "Winnfield",
  "email" : "jules@hotmail.com",
  "addresses" : [
    {
      "street" : "1858 N Vermont Ave",
      "city" : "Los Angeles",
      "state" : "CA",
      "zip" : "90027"
    }
  ]
}
```

# REPLICATION AND HA

- eventually consistent
- replica sets
- sharding

# TO THE SHELL!

# QUERIES

- `db.product_orders.find({ fulfilled : true }).limit(2).pretty()`
- `db.product_orders.find({ fulfilled : true, size : 3 }).limit(2).pretty()`
- `db.product_orders.find({ "products.name" : { $in : [ "Quadtech", "Biolux" ] } }).limit(2).pretty()`
- `db.product_orders.find({ "products.name" : "Quadtech" }).limit(2).pretty()`
- `db.product_orders.find({ $or : [ { size : 3 }, { fulfilled : false } ] }).limit(2).pretty()`



# UPDATES

- `db.product_orders.find({ size : 3 }).pretty()`
- `db.product_orders.update({ size : 3 }, { $set : { "total" : 400 } } ) ; db.product_orders.find({ size : 3 }).pretty()`
- `db.product_orders.update({ size : 3 }, { $push : { "baubles" : { color : "red" } } } )`
- `db.product_orders.find({ size : 3 }).pretty()`

# TO THE CODE!

# LINKS

- <https://github.com/evanchooly/mongo4jpadevs>
- <http://www.mongodb.org/> Mongo Homepage
- <https://github.com/mongodb/morphia> Homepage
- <http://jongo.org> Jongo
- Disclaimer: My Stuff
  - <https://github.com/evanchooly/critter> critter

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