

# **JBoss Community**

# (No|New|NotOnly)SQL

- Relational Database / SQL has served well for decades.
- A handful of apps are exceeding the limits of SQL, developing alternatives.
- The number with needs will grow over time, the number with capability won't.
- We need pre-packaged solutions.

# SQL

- Storage is data oriented
  - Schema sharable between apps
- Development effort is query oriented
  - Performance tuning too
- Relational model, SQL embedded in the education system

# NoSQL

- Gain High availability, data scale, query performance
- At what cost
  - CAP, CRUD
- Most solutions created by those with needs, solely to fulfill those needs.
- Need generic mass market solutions

# Ease of use

- Make it look like an RDBMS
  - Hibernate OGM
  - Can't mask the issues fully
- User education
  - Data modeling
  - Consistency rationing
  - Idempotent. Commutative.

# New Tooling

- DBA effort moves from query performance to consistency of de-normalized data
- How to identify, track, reconcile data across multiple, schema free systems

# Think Big

- Some problems only manifest at large scale
- Data volume, update volume, query volume
- Need lots of hardware for this
- Cloud = rental, not purchase. Different way of thinking about project spending.



# Focus Areas

- Fundamental algorithms
  - Paxos, vector clocks, 2PC, ...
- Standards, interoperability
  - Extended transaction protocol for relaxed consistency environments.
  - Data modeling and query language
- Industry verticals (healthcare?)



## Focus areas

- User education is as important as technology development
- Practical experience is a valuable as theoretical know how
- Solutions for the mass market
- Run on the JVM, ideally in Java