JUDCon

JBoss Users & Developers Conference

2012:Boston

noSQL

for the rest of us

a JBoss perspective over those hot tools and how you can use them in your day by day

no:sql(br)

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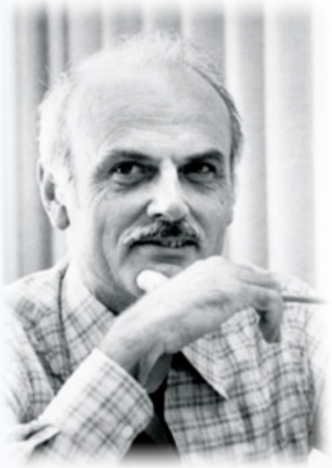
drools & jbpm

all day drop in centre

friday - room 105

once upon a time...

- Hierarchical (IMS): late 1960's and 1970's
- Directed graph (CODASYL): 1970's
- **Relational: 1970's and early 1980's**
- Entity-Relationship: 1970's
- Extended Relational: 1980's
- Semantic: late 1970's and 1980's
- Object-oriented: late 1980's and early 1990's
- **Object-relational: late 1980's and early 1990's**
- Semi-structured (XML): late 1990's to late 2000's
- The next big thing: ???



ted codd

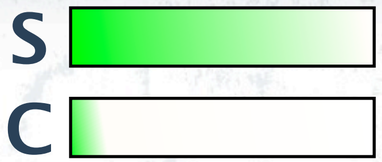
noSQL

not only SQL

new school thought

data model

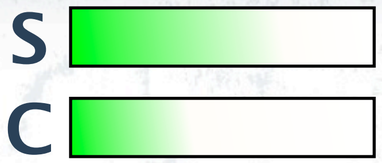
denormalization



key value

Map<String, ?>

- put(key, value)
- get(key)
- ~~find(value)~~



columnbased

Map<String, Map<String, ?>>

"A Bigtable is a sparse, distributed, persistent multi-dimensional sorted map. The map is indexed by a row key, column key, and a timestamp; each value in the map is an uninterpreted array of bytes."

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documentbased

```
{
    "firstName": "John",
    "lastName" : "Smith",
    "age"      : 25,
    "address"  :
    {
        "streetAddress": "21 2nd Street",
        "city"         : "New York",
        "state"        : "NY",
        "postalCode"   : "10021"
    },
    "phoneNumber":
    [
        {
          "number": "212 555-1234"
        },
        {
          "number": "646 555-4567"
        }
    ]
}
```

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graph

Node & Relations

- graph.createNode
- graph.createRelationship

flexibility

vs

scheme first

architecture

virtualization

private cloud

public cloud

<?> as service

base

vs

acid

db/app roles

ram for durability

data distributed

fault

tolerant

tools

data model + architecture

Infinispan

key-value

distributed

ram+persistent

Cassandra

column

distributed

disk+built-in cache

mongoDB

document

distributed

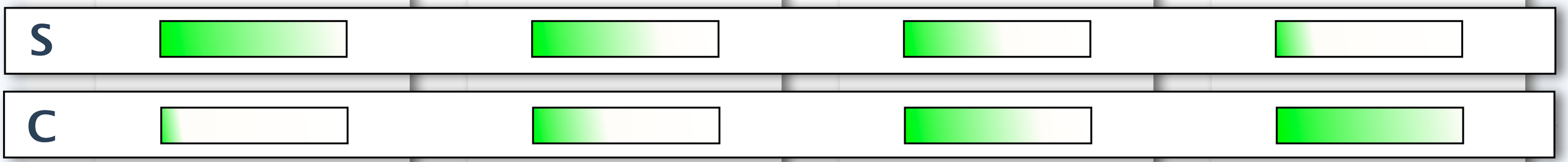
disk+tunnable ram

Neo4j
the graph database

graph

replicated

acid



no standards at all

DEMOS

be polyglot

questions?

thanks!

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