

# JUDCon

JBoss Users & Developers Conference

## London:2011



# Introducing





ogm-kitchensink  
<http://goo.gl/V6iSo>



# About Hardy

- Hibernate team member w/ focus on Validator and Search
- [in.relation.to/Bloggers/hardy](http://in.relation.to/Bloggers/hardy)
- [hardy@hibernate.org](mailto:hardy@hibernate.org)







OMG

Oh  
My  
God





# OGM

## Object Grid Mapper



# What are we going to talk about?

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- What is OGM?



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- How to convert an existing JPA app to OGM?
- What is OpenShift?
- How can we use OpenShift and OGM?



# What is Hibernate OGM!?

JPA for NoSQL



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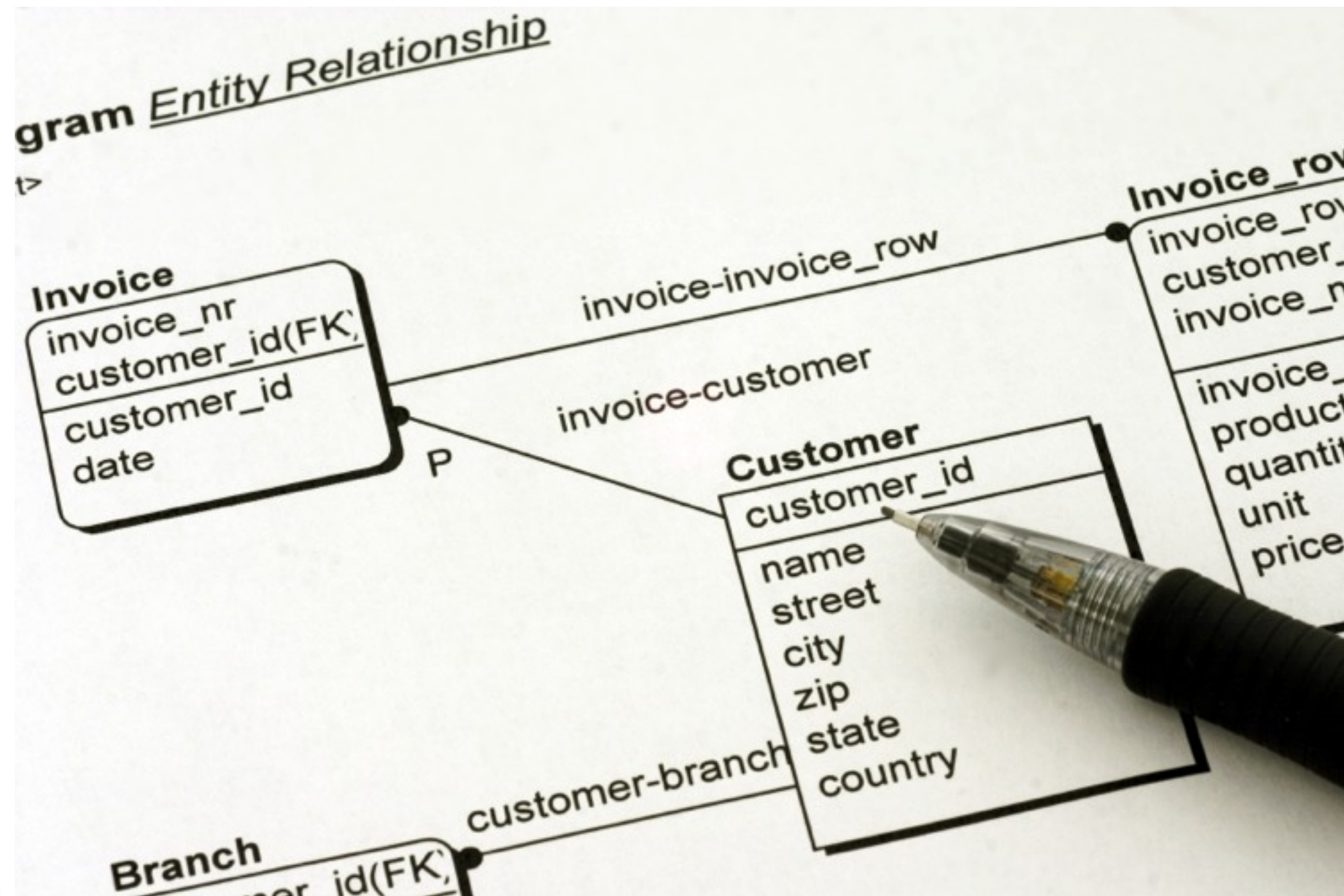




- Encourage new data usage patterns
  - provide familiar environment
  - ease of use
  - easy to jump in (and out!)
- Allow NoSQL exploration



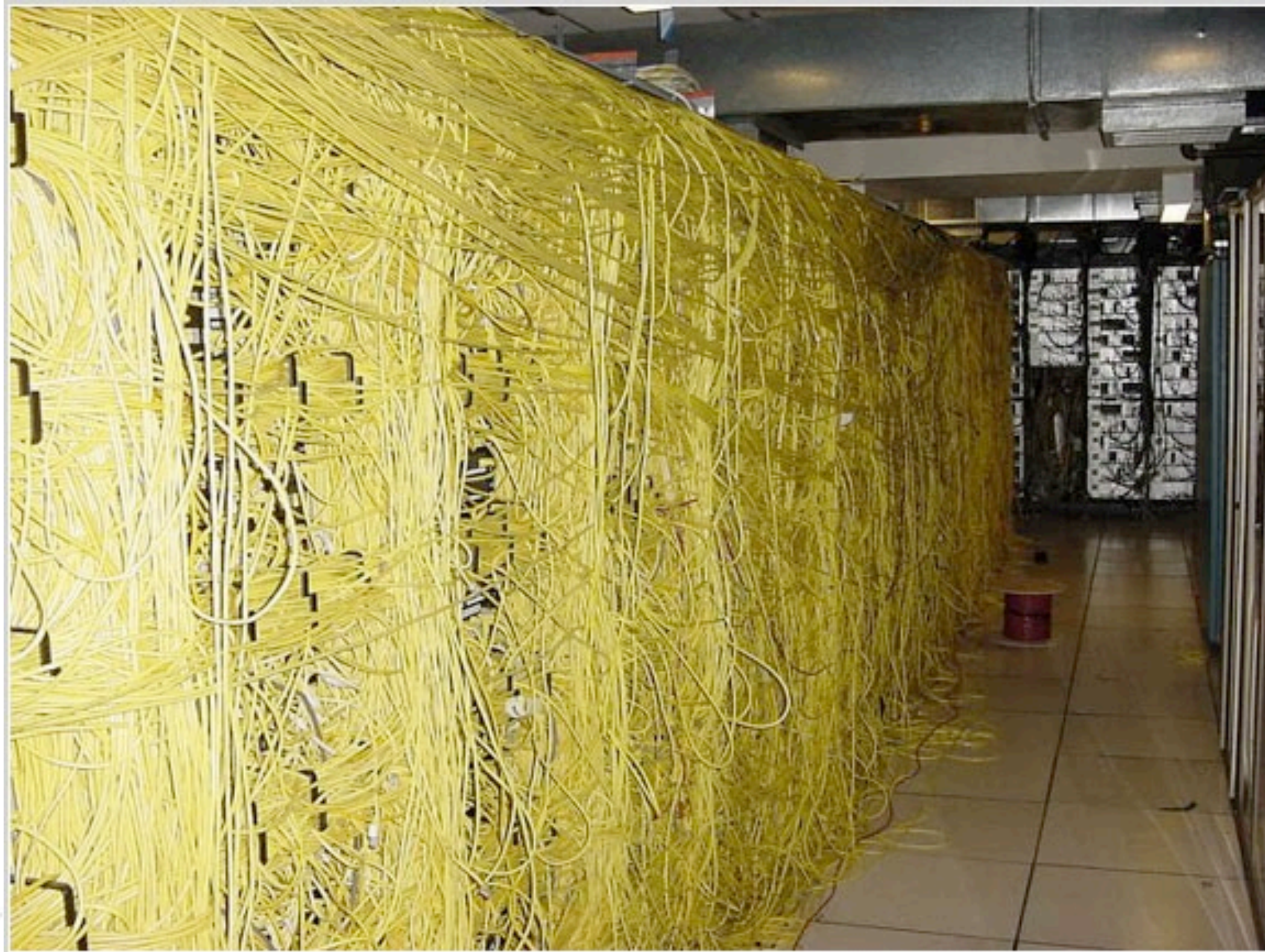
# Relational Databases



- Transaction
- Referential integrity
- Types
- Well understood
  - tuning, backup, resilience



# Relational Databases



But scaling is hard!

- Replication
- Multiple instances w/ shared disk
- Sharding



# NotOnlySQL

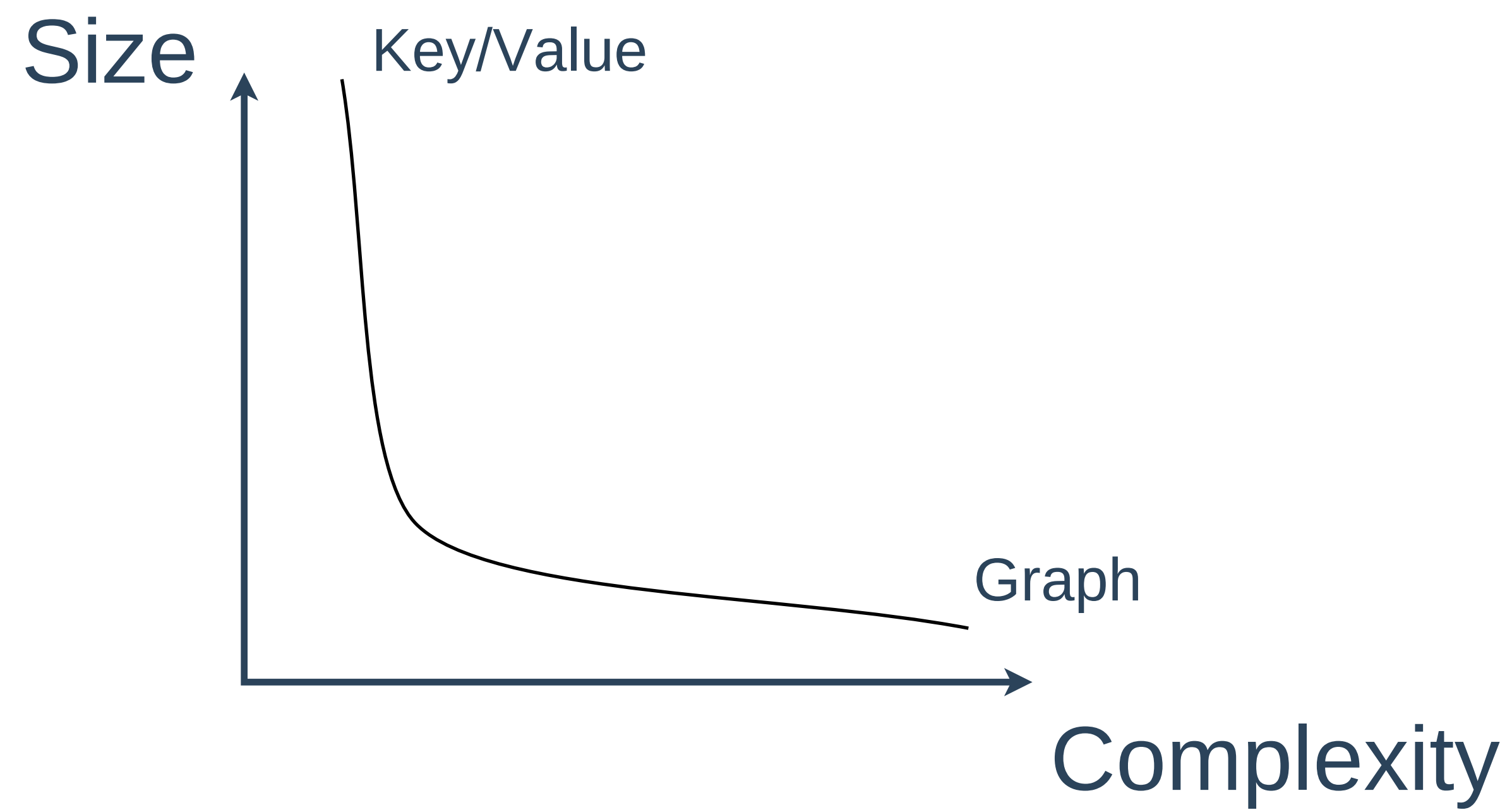
- Data size
- Connectedness
- Architecture / Problem type



# NotOnlySQL

- Document based stores
- Column based
- Graph oriented databases
- Key / value stores









Relational Persistence for Java & .NET



Infinispan

open source data grids

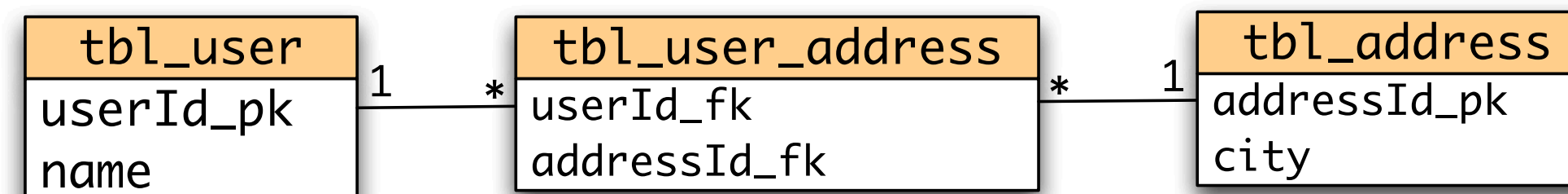
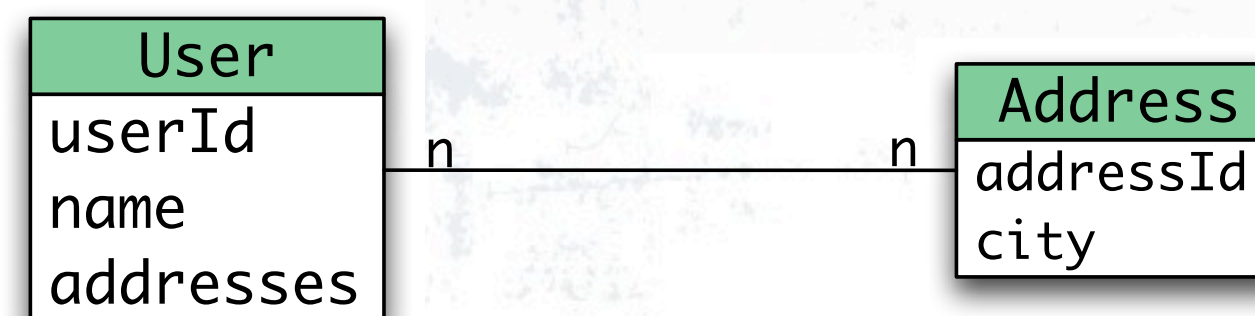
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# How does it work?

- Entities are stored as tuple (Map<String,Object>)
- The key is composed of
  - table name
  - entity id
- Collections are represented as a list of tuple
- The key is composed of:
  - table name
  - column names representing the FK
  - column values representing the FK





key	value
tbl_user,userId_pk,1	{userId_pk=1,name="Emmanuel"}
tbl_user,userId_pk,2	{userId_pk=2,name="Caroline"}
tbl_address,addressId_pk,3	{addressId_pk=3,city="Paris"}
tbl_address,addressId_pk,5	{addressId_pk=5,city="Atlanta"}
tbl_user_address,userId_fk,1	{ {userId_fk=1, addressId_fk=3}, {userId_fk=1, addressId_fk=5} }
tbl_user_address,userId_fk,2	{ {userId_fk=2, addressId_fk=3} }
tbl_user_address,addressId_fk,5	{ {userId_fk=1, addressId_fk=5} }
tbl_user_address,addressId_fk,3	{ {userId_fk=1, addressId_fk=3}, {userId_fk=2, addressId_fk=3} }



# Demo



# What have we just done?



# What have we just done?

- Used a JBoss AS 7 module for Hibernate 3 and OGM



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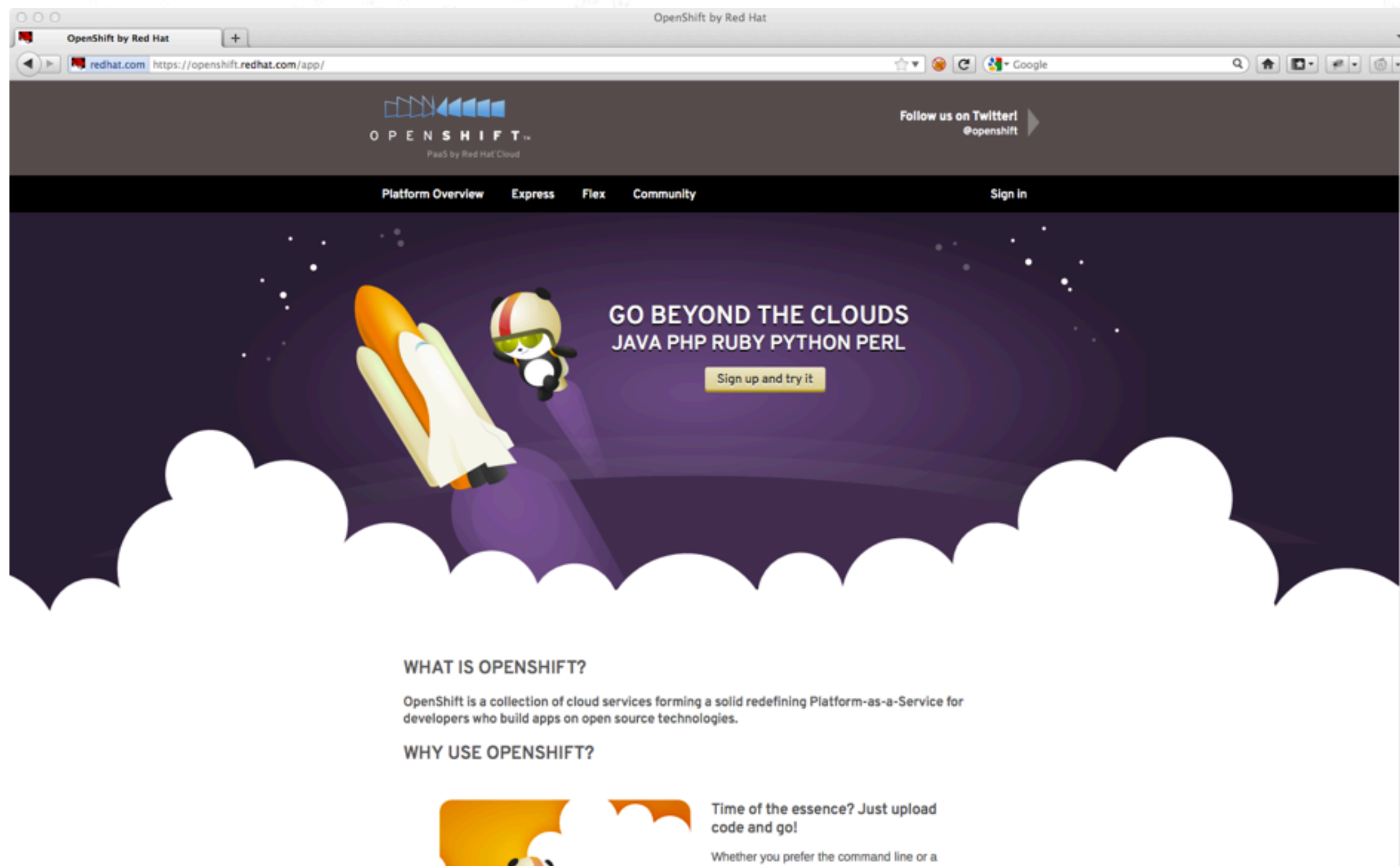


# What have we just done?

- Used a JBoss AS 7 module for Hibernate 3 and OGM
  - <http://in.relation.to/21601.lace>
- Changed persistence provider: *OGMPersistenceProvider*
- Switched to UUID for entity ids
- Replaced JPACriteria w/ Hibernate Search



# Let's launch!



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# What is OpenShift!?

- Free, cloud-based application platform
- Supports Java, Perl, PHP, Python and Ruby
- Comes in the flavors Express and Flex
- Controlled via ruby scripts
- Deployment is as easy as: `git push`



```
$ gem install rhc
```

```
$ rhc- <TAB>
```

```
rhc-chk rhc-create-app rhc-create-domain
```

```
rhc-ctl-app rhc-snapshot rhc-tail-files rhc-user-info
```

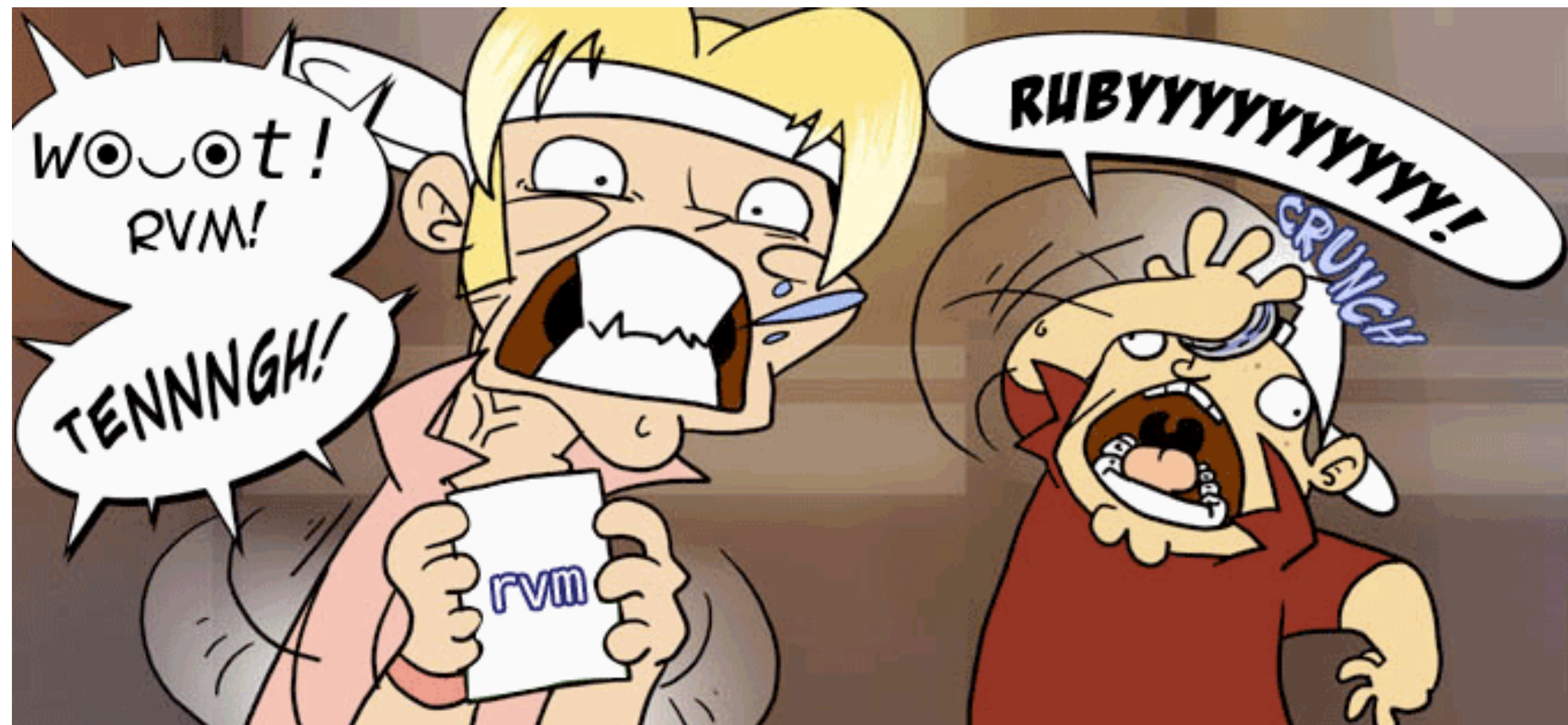


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```





# Signup at <https://openshift.redhat.com/app/>

```
$ rhc-create-domain -n <domain>
```

```
$ rhc-create-app -a <app> -t jbossas-7.0
```



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```

<http://<app>-<domain>.rhcloud.com>



# Demo



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- Created OpenShift domain and app



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- Enabled OpenShift maven profile



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# What have we just done!?

- Created OpenShift domain and app
- Enabled OpenShift maven profile
- Added AS module
- Pushed to build and deploy
- Watched and marveled



# What's hot?



- Works with Hibernate Core 4
- Improved performance
  - also in Hibernate Core
- Next release? Stay tuned!



# Summary

- JPA for NoSQL
  - Reusing mature projects
  - Keep the good of the relational model
  - Query via Hibernate Search
- 
- JP-QL support on its way
  - Still early in the project



# <http://www.hibernate.org/subprojects/ogm.html>





Q + A