

NoSql EU

in a few slides

What happened?

- Overall explanation of the different types of Nosql Databases:
 - Key-Value
 - Document
 - Column Oriented
 - Graph
- Real world architectures that use Nosql.
- Real world experiences using Nosql.
- A bit of big enterprise wish list.

Use the right tool for the right job.

Key Value Stores

What do they do ?



How do they do it ?

- Fast
- Sometimes distributed.

Key Value Stores

Players:

- Redis
- Tokyo Tyrant and family.
- Riak
- Voldemort.

Key Value Stores

Players:

- Redis

- Fast (for smaller values < 500 k)
- Simple to setup, use.
- Data structure store: lists, queues, etc.
- Fully in memory, but fully persistent.

- Tokyo Tyrant and family.

- Fast (for bigger values > 500 k).
- even if the official documentation is in Japanese.
- A collection of tools for building custom systems.
- Written by an eccentric who likes street fighter.

- Riak

- Voldemort.

Document Oriented Databases.

What do they do ?

```
books {  
  id : 'uuid-uuid-uuid-uuid-bla' {  
    book_name : 'The anarchist cookbook'  
    author : 'William Powell'  
    audience: ['anarchists', 'terrorists']  
  }  
  id : 'uuid-uuid-uuid-uuid-ble' {  
    book_name : 'Twilight' {  
    author : 'Stephen Meyer'  
    audience : ['teenage girls', 'pedophiles']  
    price : 10.00  
    synopsis : 'Something about fake vampires that pretend  
               to be teenagers'  
    }  
  }  
}
```

Document Oriented Databases.

How do they it ?

- Simple
 - `db.get('key')`
 - `db.set('key')`
 - `db.remove('key')`
- Index on any field.
 - `deb.get(author:'Marquis de Sade')`
- Replication is easy and durable in couch, not quite so easy in mongo.
- Sharding is up to you. Have fun.

Document Oriented Databases.

Players:

- **MongoDB**
- **CouchDB**

Document Oriented Databases.

Players:

- **MongoDB**

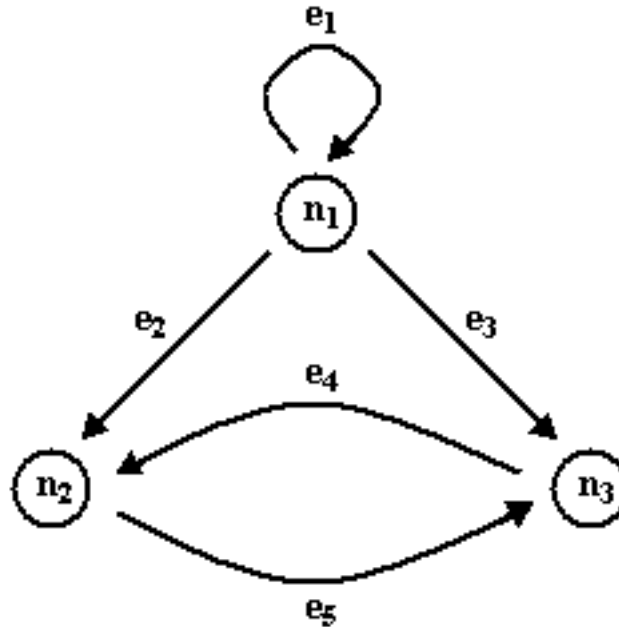
- Simpler.
- Easy to setup and use.

- **CouchDB**

- More focused in lots of data.
- - Javascript views.
- + replication.
- Happily hammered at the BBC and The Guardian.

Graph databases.

What do they do ?



Graph databases.

Players:

- Neo4j
- FlockDB

Graph databases.

Players:

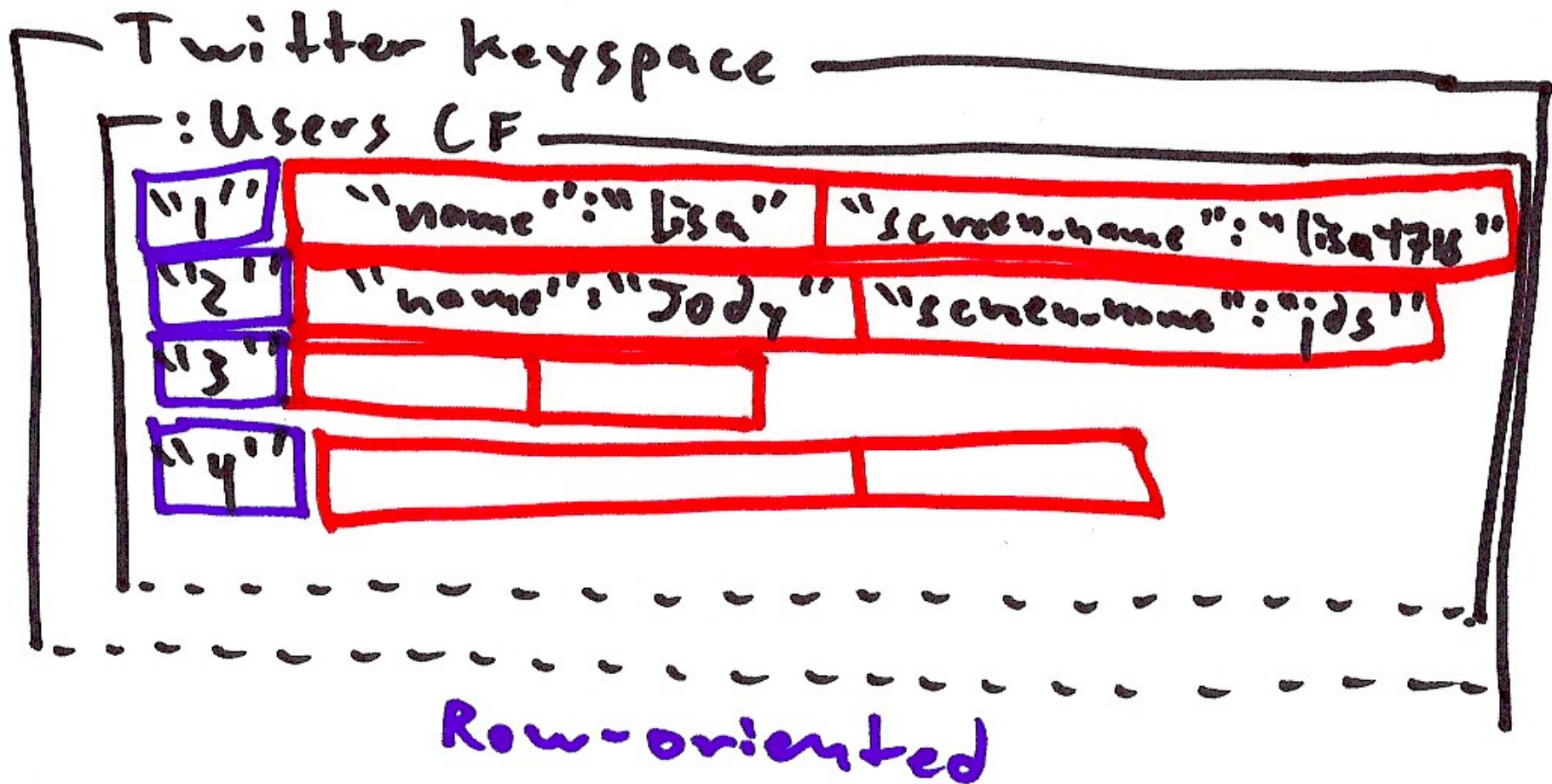
- **Neo4j**

- Easy to use.
- Fast in relations.
- Models deep and complex relations.

- **FlockDB**

- Twitter.
- Really new.
- Less powerful, but designed for low latency and high throughput.
- MySQL backend.

Column Oriented databases.



Column oriented databases.

Players:

- Cassandra
- HBase

Column oriented databases.

Players:

- **Cassandra**

- Growing FAST
- Big community.
- Twitter, Facebook, Digg...
- New company supporting it.
- Aimed to be fast (serve data)
- Hadoop support, but still in early stages.

- **HBase**

- Batch operations + hadoop
- Backend analytics
- Microsoft, Adobe, Twitter...

Enterprise Wish List.

- Cross data centre durability
- Works with a 9am-5pm staff
- No experts required
- Paid for on call support
- ORM integration
- Anything else that sounds boring...