



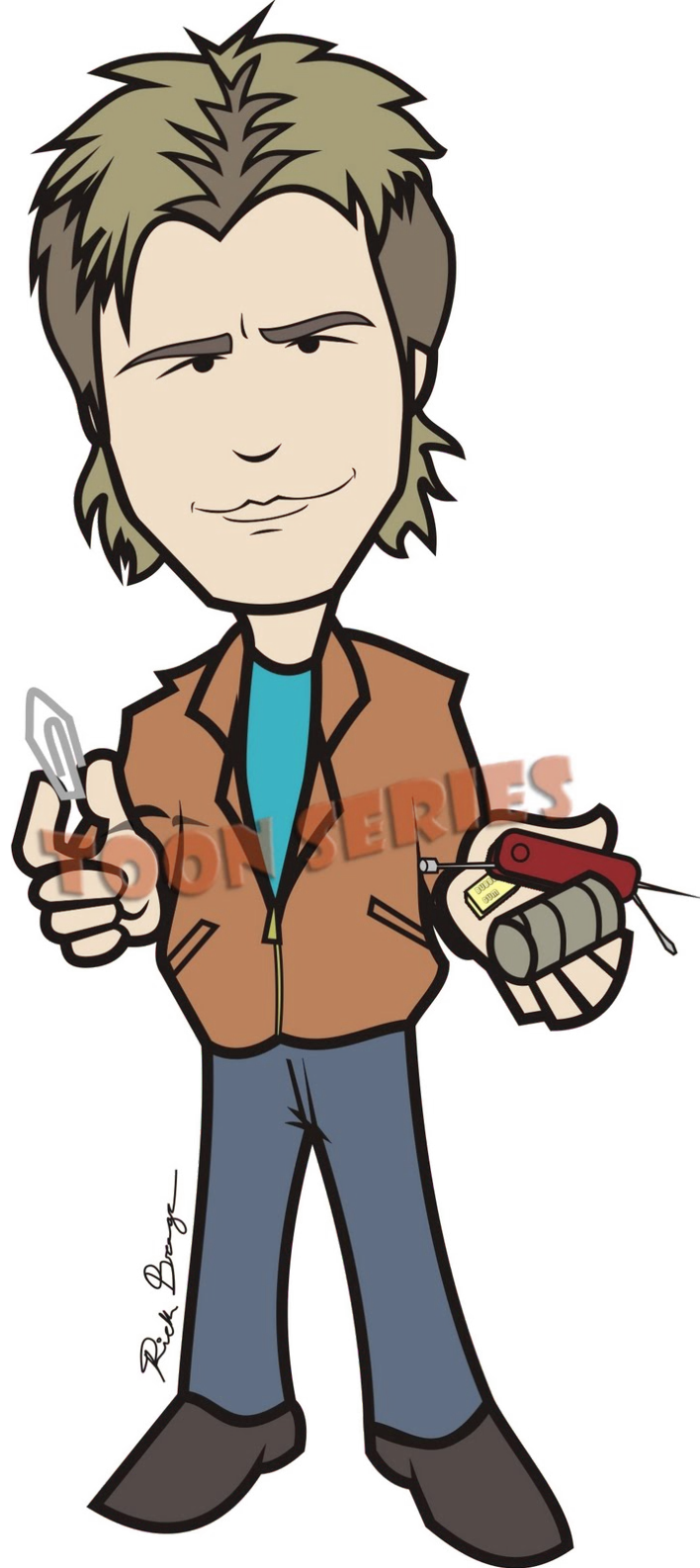
Marcio Albuquerque

@mlalbuquerque

nosql:ba

Conferência Baiana de NoSQL







NoSQL

Not
Only SQL

Chave e Valor

Documento

Colunas

Grafos

Objetos

Chave e Valor

Documento

Colunas



redis

Grafos



riak

Objetos

Chave e Valor

Documento

Colunas



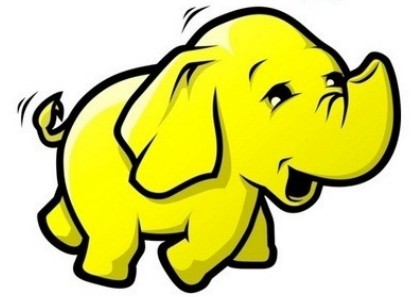
Grafos



Objetos

Chave e Valor

hadoop



Documento

Colunas



Cassandra

Grafos

Objetos

Chave e Valor

Documento



Colunas

Grafos

Objetos

Chave e Valor

Documento

Colunas

Grafos

db4objects
BY VERSANT

Objetos



CouchDB
relax



CouchDB
relax



CouchDB
relax



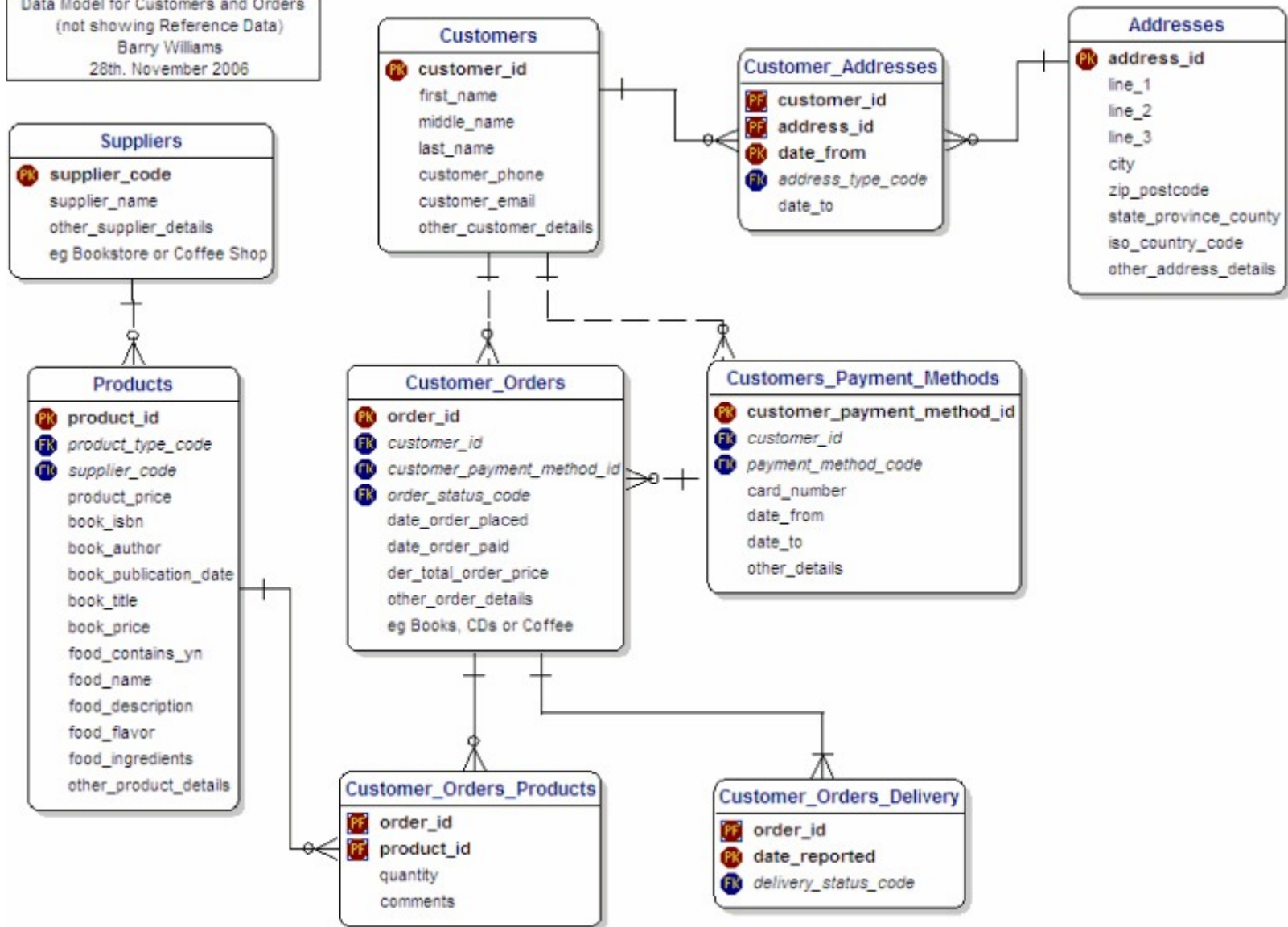
HTTP

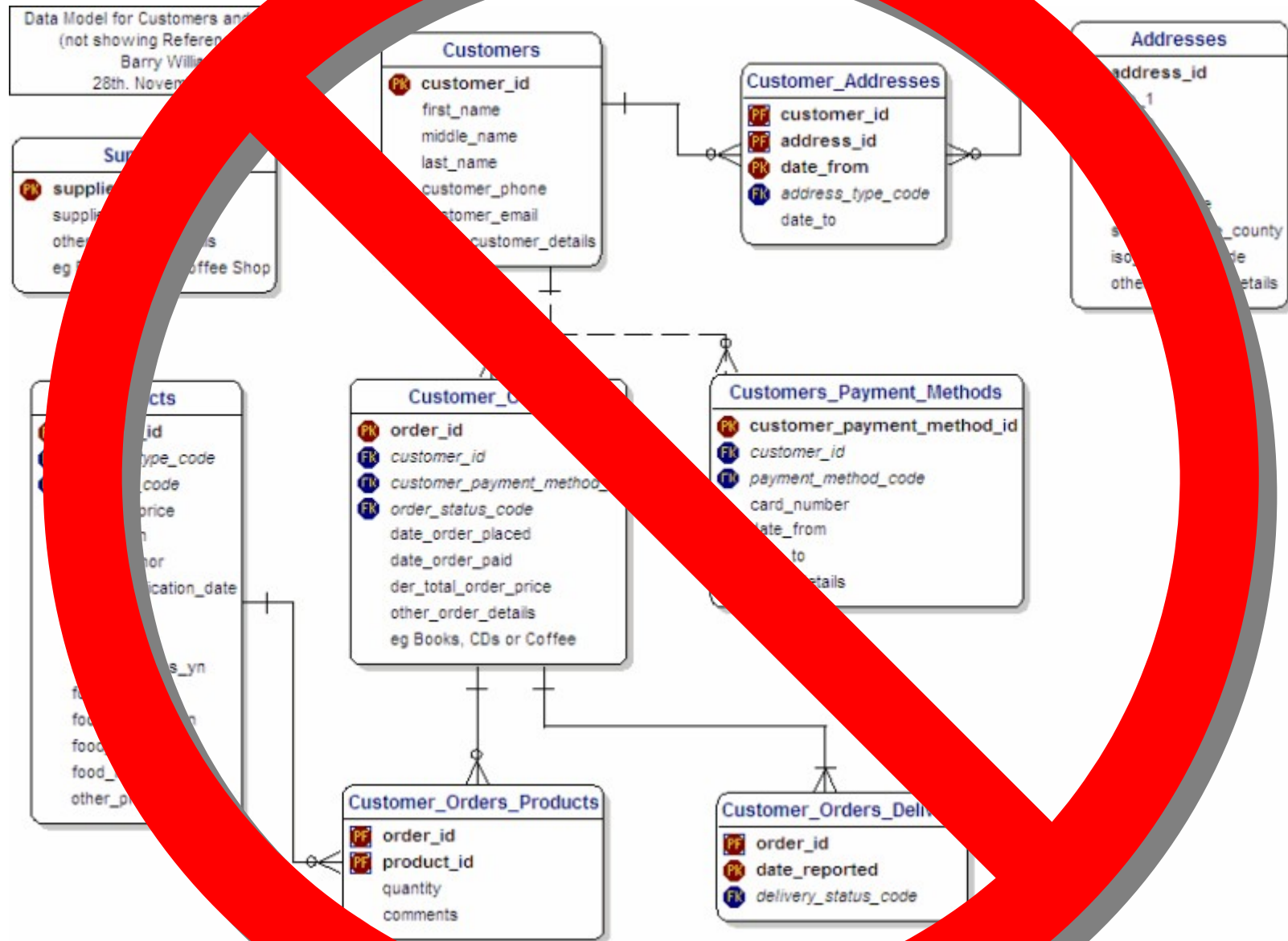


HTTP

REST

Data Model for Customers and Orders
(not showing Reference Data)
Barry Williams
28th. November 2006






```
{  
  "_id": "id_do_meu_documento",  
  "_rev": "4-572ad8bef98776aa5aaf7e0c",  
  "tipo": "palestra",  
  "nome": "CouchDB + PHP",  
  "duracao": "30min"  
}
```

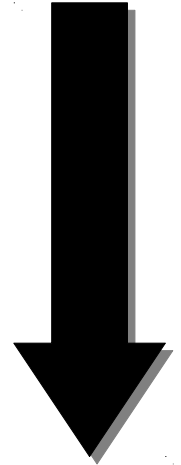
```
{  
  "_id": "id_do_meu_documento",  
  "_rev": "4-572ad8bef98776aa5aaf7e0c",  
  "tipo": "palestra",  
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JSON
JavaScript Object Notation

```
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  "duracao": "30min"  
}
```



JSON
JavaScript Object Notation

MVCC

Documentos

**Inconsistência
Temporária**

**Alta
Disponibilidade**

**Sem integridade
referencial**

REST

Distribuído

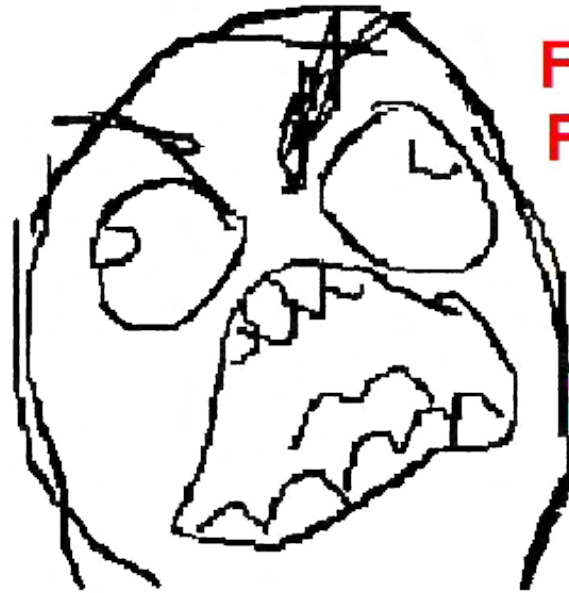


Consistência

Disponibilidade

Particionamento

Consistência



FFFFFFF
FFFFFFF
FFFFFFF
FFFUU
UUUUU
UUUUU
UUUU-

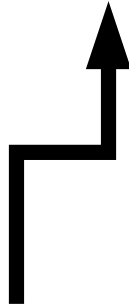
Disponibilidade

Particionamento

Consistência



SGBD



Disponibilidade

Particionamento

Consistência



Paxos



Disponibilidade

Particionamento

Consistência

CouchDB



Disponibilidade

Particionamento

Consistência

CouchDB



Disponibilidade

Particionamento

Consistência Eventual

REST

Recurso

```
graph BT; A[Recurso] <-- B[ ]; B --- C[Recuperam info]; B --- D[Transformam];
```

Recuperam info

Transformam

REST

GET /recurso HTTP/1.1

Host: [URL]

[INFO HTTP]

[JSON BODY]



HTTP/1.1 200 OK

[INFO HTTP]

[JSON BODY]



REST

GET /recurso HTTP/1.1

Host: [URL]

[INFO HTTP]

[JSON BODY]



HTTP/1.1 **200** **OK**

[INFO HTTP]

[JSON BODY]



GET → **Recuperar**

DELETE → **Apagar**

POST → **Criar**

PUT → **Criar /
Atualizar**

200 → **OK**

404 → **Recurso não encontrado**

201 → **Recurso criado**

409 → **Conflito**



Futon

Overview

[+ Create Database ...](#)

Name	Size	Number of Documents	Update Seq
_users	8.1 KB	2	2
abc	79 bytes	0	0
meubanco	48.1 KB	6	12
cv	44.1 KB	6	9

Showing 1-4 of 4 databases

[← Previous Page](#) | Rows per page: | [Next Page →](#)



Tools

- [Overview](#)
- [Configuration](#)
- [Replicator](#)
- [Status](#)
- [Test Suite](#)

Recent Databases

[Signup or Login](#)

Futon on Apache CouchDB 1.0.1

Futon

Overview

+ Create Database ...

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Showing 1-4 of 4 databases

← Previous Page | Rows per page: 10 | Next Page →

Vamos ver isso funcionando...



Tools

- Overview
- Configuration
- Replicator
- Status
- Test Suite

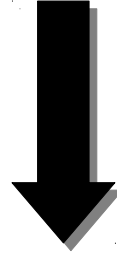
Recent Databases

[Signup or Login](#)

Futon on Apache CouchDB 1.0.1

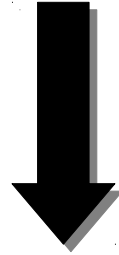
Views

Views



MapReduce

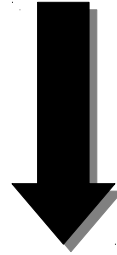
Views



MapReduce

```
{  
  "_id": "_design/xyz",  
  "views": {  
    "abc": {  
      "map": "function (d) {...}",  
      "reduce": "function (k, v, r) {...}"  
    }  
  }  
}
```

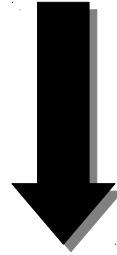
Views



MapReduce

```
{  
  "_id": "_design/XYZ",  
  "views": {  
    "abc": {  
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      "reduce": "function (k, v, r) {...}"  
    }  
  }  
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```

Views



MapReduce

```
{
  "_id": "_design/xyz",
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```

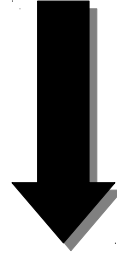
Documento

Chave ← *Valor*

"Rerreduce"

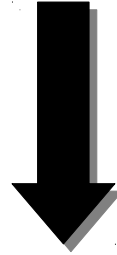
Shows

Shows



**Funções de
Visualização**

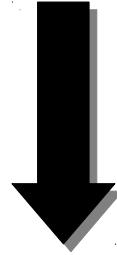
Shows



Funções de Visualização

```
{  
  "_id": "_design/XYZ",  
  "shows": {  
    "abc": "function (d, r) {...}"  
  }  
}
```

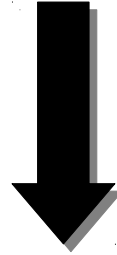
Shows



Funções de Visualização

```
{  
  "_id": "_design/XYZ",  
  "shows": {  
    "abc": "function (d, r) {...}"  
  }  
}
```

Shows



Funções de Visualização

```
{  
  "_id": "_design/XYZ",  
  "shows": {  
    "abc": "function (d, r) {...}"  
  }  
}
```

Documento

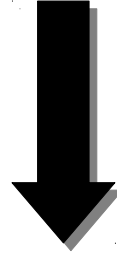
Request

URL/bd/_design/XYZ/_views/abc

URL/bd/_design/XYZ/_show/abc/[ID]

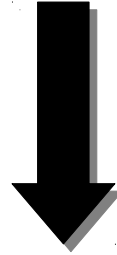
Validações

Validações



Funções de Validação

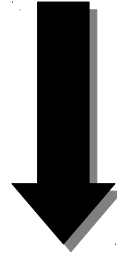
Validações



Funções de Validação

```
{  
  "_id": "_design/XYZ",  
  "validate_doc_update":  
    "function (n, v, u, s) {...}"  
}  
}
```

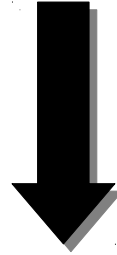
Validações



Funções de Validação

```
{  
  "_id": "_design/XYZ",  
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    "function (n, v, u, s) {...}"  
}  
}
```


Validações



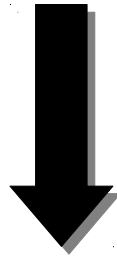
Funções de Validação

```
{  
  "_id": "_design/XYZ",  
  "validate_doc_update":  
    "function (n, v, u, s) {...}"  
}
```

Segurança →

Novo Doc ← *Velho Doc* ← *Usuario*

Anexos



CouchApp





PHPillow

phpillowDocument

phpillowView

Obrigado!!



marcio.lima.albuquerque@gmail.com



@mlalbuquerque