

Node.js + MongoDB

10/12/2012 :: Voxer, SF :: @aaronheckmann

Hello

Pre-requisites

- ⦿ Node.js 0.8.11
 - ⦿ nodejs.org/download
 - ⦿ [github.com/visionmedia/n](https://github.com/visionmedia/node-pre-gyp)
- ⦿ MongoDB 2.2 (preferred)
 - ⦿ www.mongodb.org/downloads
 - ⦿ [github.com/aheckmann/m](https://github.com/aheckmann/mongodb-native)

Node.js

Node.js

- JavaScript

Node.js

- ⦿ JavaScript
- ⦿ Evented I/O

Node.js

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- ⦿ v8 (Google Chrome)

Node.js

- ⦿ JavaScript
- ⦿ Evented I/O
- ⦿ v8 (Google Chrome)
- ⦿ Asynchronous

Node.js

```
<?php  
$data = file_get_contents($file)  
// do stuff with data  
?>
```

Node.js

```
<?php  
$data = file_get_contents($file)  
// do stuff with data  
?>
```

```
var fs = require('fs')  
fs.readFile(file, function (err, data) {  
    // later, do stuff with data  
})  
// continues on here!
```

Node.js

- anarchic dictatorship

Node.js

- ⦿ anarchic dictatorship
- ⦿ NPM

MongoDB

- Document oriented

MongoDB

- Document oriented vs Relational

MongoDB

- Relational

Product		
_id	name	created_at

MongoDB

• Relational



MongoDB

- Relational

- assembly required



MongoDB

- Relational
 - assembly required
 - app model != storage model

MongoDB

- ➊ Data Model
 - ➋ Document oriented

MongoDB

- Data Model
 - Document oriented
 - JSON-like

MongoDB

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 - BSON

MongoDB

- ➊ Data Model
 - ➋ Document oriented
 - ➋ JSON-like
 - ➋ BSON
 - ➋ basically typed JSON

MongoDB

- ➊ Data Model
 - ➋ Document oriented
 - ➋ JSON-like
 - ➋ BSON
 - ➌ basically typed JSON
 - ➌ number, string, binary, array, etc

MongoDB

- Document oriented

```
{  
    _id:          ObjectId(..)  
    , name:       "Voxer T-shirt"  
    , created_at: ISODate("2012-10-12T16:16:13.964Z")  
}
```

MongoDB

- Document oriented

```
{  
    _id:          ObjectId(..)  
    , name:       "Voxer T-shirt"  
    , created_at: ISODate("2012-10-12T16:16:13.964Z")  
    , props:      [{ key: anything }]  
}
```

MongoDB

- Document oriented
- Ad-hoc query support

MongoDB

- ⦿ Document oriented
- ⦿ Ad-hoc query support
 - ⦿ rich operators
 - ⦿ \$lt, \$gt, \$in, \$ne, etc

MongoDB

- Document oriented
- Ad-hoc query support
 - rich operators
 - \$lt, \$gt, \$in, \$ne, etc
 - db.products.find({ name: "Voxer T-shirt" })
 - RegExp, numbers, strings, types, etc

MongoDB

- Document oriented
- Ad-hoc query support
- Secondary indexing

MongoDB

- Document oriented
- Ad-hoc query support
- Secondary indexing
- Dynamic schemas

MongoDB

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- Data modeled directly to application

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- *No JOINs

MongoDB

- Document oriented
- Ad-hoc query support
- Secondary indexing
- Dynamic schemas
- Data modeled directly to application
- *No JOINs
- *No TRANSACTIONS

MongoDB

- Document oriented
- Ad-hoc query support
- Secondary indexing
- Dynamic schemas
- Data modeled directly to application
- *No JOINs
- *No TRANSACTIONS (but rich \$atomic update operators)

MongoDB

- ⦿ Continued...
 - ⦿ Replica-sets
 - ⦿ Sharding

References

- ⦿ nodejs.org
- ⦿ www.mongodb.org
- ⦿ npmjs.org
- ⦿ expressjs.com
- ⦿ mongodb.github.com/node-mongodb-native/
- ⦿ mongoosejs.com
- ⦿ education.10gen.com
- ⦿ github.com/visionmedia/n
- ⦿ github.com/aheckmann/m

Thanks!

- Voxer <3
- SendGrid <3

More Node + Mongo

- MongoLab
 - support@mongolab.com #NodeTutorial2012-LargeShared
- NodeStack :: Oct 17th
 - <http://nodestack.org/>
- JS.everywhere() :: Oct 26,27
 - <http://www.jseverywhere.org/>
 - <http://jse2012.eventbrite.com/?discount=aaronheckmann>
- Mongo T-shirt requests:
 - info@10gen.com
- Learn about MongoDB:
 - education.10gen.com