

MongoSV 2011

Java Driver Introduction

Getting Started

- `mongod`
- `git clone https://github.com/deftlabs/mongodb-examples`
- `cd mongodb-examples/mongo-java-driver-intro`
- `ant run`

Overview

Topics Covered

- JavaScript to Java
- Data Types
- Connections
- Insert
- Query
- Update
- Upsert
- Cursor
- Remove
- WriteConcern
- Morphia (if time permits)

Data Types

- ObjectId
- Regexp
- Date/Time
- Binary
- Timestamp
- Embedded doc
- Array

See: [Java Types](#)

Hands on: Insert one of each of the data types into a single document

JavaScript To Java

Most examples on www.mongodb.org are executable via the shell. This is a quick overview of how to read and translate those examples to Java.

- `{ }` == a document/object (`new BasicDBObject()`)
- `[]` == a list/array (`new ArrayList<BasicDBObject>()`)

JavaScript/Shell: `db.things.find({ j : 3 })`

Java: `col.find(BasicDBObjectBuilder.start().add("j", 3).get());`

For more info, see the [JSON](#) site.

Connection

The basic connection syntax:

```
Mongo mongo  
= new Mongo(new ServerAddress("127.0.0.1", 27017);
```

The Mongo object represents a pool of connections to a server.

You can access multiple databases/collections through the same Mongo connection (that are on the same server).

Hands on: Open a connection to a Mongo server (database "test", collection "javaDriverIntro")

Insert

- Save/Insert
- Nested documents
- WriteConcern

Hands on: Insert the following object:

```
{ _id : 10, counters : { 0 : 10 } }
```

Query

- Single Object
- DBCursor
- Nested fields
- Sort
- Pagination (skip/limit on DBCursor)

See: [Advanced Queries](#)

Hands on:

Right a query to find counters.0 = 10

Update

- Update entire document
- \$set operation
- \$inc operation

See: [Updating](#)

Hands on: Increment the counters.0 by one.

```
{ _id : 10, counters : { 0 : 10 } }
```

Upsert

- Update arguments
- \$set operation
- \$inc operation
- Query and inserts

Hands on: Using an upsert, create this document

```
{ _id : "thisisatest", name : "MongoSV" }
```

Using the same upsert code, change the "name" field to "bar"

Cursor

- hasNext
- next
- close
- batchSize
- addOption
- sort

Hands on: Insert the following document 10 times into "test.cursors" replacing N with 0-9

```
{ _id : N : name : "test" }
```

Load the cursor and sum the `_id` fields

Remove

- findAndModify
- remove single
- remove multiple

Hands on: Insert a document, query to confirm it is in the collection and then remove.

WriteConcern

- fsync
- journal
- normal (fire and forget)
- replica safe
- safe

See: [Javadoc](#)

Hands on: Insert a document using SAFE that will fail and throw an exception.