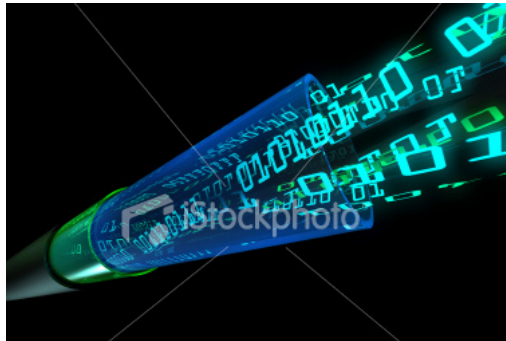




# Spring Data MongoDB : Save binary file, GridFS example

By mkyong (<http://www.mkyong.com/author/mkyong/>) | April 9, 2013 | Viewed : 46,639 times +87 pv/w



In MongoDB, you can use GridFS to store binary files. In this tutorial, we show you how to use Spring Data's `GridFsTemplate` to store / read image in / from MongoDB.

## 1. GridFS – Save example (Spring config in Annotation)

Get an image file and save it into MongoDB.

### SpringMongoConfig.java

```
package com.mkyong.config;

import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Configuration;
import org.springframework.data.mongodb.config.AbstractMongoConfiguration;
import org.springframework.data.mongodb.gridfs.GridFsTemplate;

import com.mongodb.Mongo;
import com.mongodb.MongoClient;

/**
 * Spring MongoDB configuration file
 */
@Configuration
public class SpringMongoConfig extends AbstractMongoConfiguration{

    @Bean
    public GridFsTemplate gridFsTemplate() throws Exception {
        return new GridFsTemplate(mongoDbFactory(), mappingMongoConverter());
    }

    @Override
    protected String getDatabaseName() {
        return "yourdb";
    }

    @Override
    @Bean
    public Mongo mongo() throws Exception {
        return new MongoClient("127.0.0.1");
    }
}
```

## GridFsAppStore.java

```
package com.mkyong.core;

import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.io.InputStream;

import org.springframework.context.ApplicationContext;
import org.springframework.context.annotation.AnnotationConfigApplicationContext;
import org.springframework.data.mongodb.gridfs.GridFsOperations;

import com.mkyong.config.SpringMongoConfig;
import com.mongodb.BasicDBObject;
import com.mongodb.DBObject;

/**
 * GridFs example
 *
 * @author mkyong
 *
 */
public class GridFsAppStore {

    public static void main(String[] args) {

        ApplicationContext ctx =
            new AnnotationConfigApplicationContext(SpringMongoConfig.class);
        GridFsOperations gridOperations =
            (GridFsOperations) ctx.getBean("gridFsTemplate");

        DBObject metaData = new BasicDBObject();
        metaData.put("extra1", "anything 1");
        metaData.put("extra2", "anything 2");

        InputStream inputStream = null;
        try {
            inputStream = new FileInputStream("/Users/mkyong/Downloads/testing.png");
            gridOperations.store(inputStream, "testing.png", "image/png", metaData);

        } catch (FileNotFoundException e) {
            e.printStackTrace();
        } finally {
            if (inputStream != null) {
                try {
                    inputStream.close();
                } catch (IOException e) {
                    e.printStackTrace();
                }
            }
        }

        System.out.println("Done");
    }
}
```

Review the MongoDB console, see what is saved.

```
> show dbs
yourdb  0.203125GB

> use yourdb
switched to db yourdb

> show collections
fs.chunks
fs.files
system.indexes

> db.fs.files.find()
{ "_id" : ObjectId("51641c5630045c9b3db35afc"), "chunkSize" : NumberLong(262144),
  "length" : NumberLong(4238), "md5" : "9969527cd95a5a573f15e953f0036800", "filename" : "testing.png",
  "contentType" : "image/png", "uploadDate" : ISODate("2013-04-09T13:49:10.104Z"),
  "aliases" : null, "metadata" : { "extra1" : "anything 1", "extra2" : "anything 2" } }
>

> db.fs.chunks.find()
{ "_id" : ObjectId("51641c5630045c9b3db35afd"),
  "files_id" : ObjectId("51641c5630045c9b3db35afc"), "n" : 0,
  "data" : BinData(0,"/9j/4AAQSkZJRgABAgAAZ.....EQH/9k=") }
```

The image's information is saved in `fs.files`, and the image's file (converted in binary) is stored in `fs.chunks`, and link via `_id` and `files_id`.



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## 2. GridFS – Read example (Spring config in XML file)

Read above image file from MongoDB and save it as another image.

SpringConfig.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:mongo="http://www.springframework.org/schema/data/mongo"
  xsi:schemaLocation="http://www.springframework.org/schema/data/mongo
    http://www.springframework.org/schema/data/mongo/spring-mongo.xsd
    http://www.springframework.org/schema/beans
    http://www.springframework.org/schema/beans/spring-beans.xsd">

  <mongo:db-factory id="mongoDbFactory" dbname="yourdb" />
  <mongo:mapping-converter id="converter" />

  <bean name="gridFsTemplate"
    class="org.springframework.data.mongodb.gridfs.GridFsTemplate">
    <constructor-arg ref="mongoDbFactory" />
    <constructor-arg ref="converter" />
  </bean>

</beans>
```

GridFsAppStore.java

```

package com.mkyong.core;

import java.io.IOException;
import java.util.List;

import org.springframework.context.ApplicationContext;
import org.springframework.context.support.GenericXmlApplicationContext;
import org.springframework.data.mongodb.core.query.Criteria;
import org.springframework.data.mongodb.core.query.Query;
import org.springframework.data.mongodb.gridfs.GridFsOperations;

import com.mongodb.BasicDBObject;
import com.mongodb.DBObject;
import com.mongodb.gridfs.GridFSDBFile;

/**
 * GridFs example
 *
 * @author mkyong
 */

public class GridFsAppRead {

    public static void main(String[] args) {

        ApplicationContext ctx =
            new GenericXmlApplicationContext("SpringConfig.xml");
        GridFsOperations gridOperations =
            (GridFsOperations) ctx.getBean("gridFsTemplate");

        List<GridFSDBFile> result = gridOperations.find(
            new Query().addCriteria(Criteria.where("filename").is("testing.png")));

        for (GridFSDBFile file : result) {
            try {
                System.out.println(file.getFilename());
                System.out.println(file.getContentType());

                //save as another image
                file.writeTo("/Users/mkyong/Downloads/new-testing.png");
            } catch (IOException e) {
                e.printStackTrace();
            }
        }

        System.out.println("Done");
    }
}

```

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## Download Source Code

Download it – SpringMongoDB-GridFs-Example.zip (<http://www.mkyong.com/wp-content/uploads/2013/04/SpringMongoDB-GridFs-Example.zip>) (24 KB)

## References

1. AbstractMongoConfiguration JavaDoc (<http://static.springsource.org/spring-data/data-document/docs/current/api/org/springframework/data/mongodb/config/AbstractMongoConfiguration.html>)
2. Spring Data MongoDB GridFS support (<http://static.springsource.org/spring-data/mongodb/docs/current/reference/html/mongo.core.html#gridfs>)
3. Spring Data MongoDB Hello World Example (<http://www.mkyong.com/mongodb/spring-data-mongodb-hello-world-example/>)

4. Java MongoDB : Save Image Example (<http://www.mkyong.com/mongodb/java-mongodb-save-image-example/>)

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**mkyong**

Founder of Mkyong.com (<http://mkyong.com>), love Java and open source stuff. Follow him on Twitter (<https://twitter.com/mkyong>), or befriend him on Facebook (<http://www.facebook.com/java.tutorial>) or Google Plus (<https://plus.google.com/110948163568945735692?rel=author>). If you like my tutorials, consider make a donation to these charities (<http://www.mkyong.com/blog/donate-to-charity/>).

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selvakumar

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Can you give better approach for this?



1 year 5 months ago



Aegidius

Where is the definition of "mappingMongoConverter()";

Guest



2 years 9 days ago



???? (http://globibot.herokuapp.com/)

How to retrieve two and more image binary files at once?

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2 years 6 months ago



Roma

Very good ! Thanks for your work!))))

Guest



3 years 9 months ago



Java MongoDB Tutorial

(http://www.mkyong.com/tutorials/java-mongodb-tutorials/)

[...] Spring Data MongoDB : Save binary file, GridFS example Use GridFS in Spring Data MongoDB, to save the binary file in MongoDB. [...]



4 years 8 months ago




jay patel

Really good post mkyong...have a quick question..As MongoDB suggests to use GridFS for files larger than 16 MB, what if I want to use BSON to store small size files like in 10 KB size? I tried to look for similar example which uses "MongoDB Java Driver + Spring" to achieve this but no luck? Do you have any working example of the same or can help point one?

Guest



3 years 8 months ago



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