# GridFS in Spring Data MongoDB

## **1. Overview**

This tutorial will explore one of the **core features of Spring Data MongoDB: interacting with *GridFS***.

The GridFS storage spec is mainly used for working with files that exceed the BSON-document size limit of 16MB. And Spring Data provides a GridFsOperations interface and its implementation – GridFsTemplate – to easily interact with this filesystem.

## **2. Configuration**

### **2.1. XML Configuration**

Let’s start with the simple XML configuration for the GridFsTemplate:

|  |  |
| --- | --- |
| 1  2  3  4 | <bean id="gridFsTemplate" class="org.springframework.data.mongodb.gridfs.GridFsTemplate">      <constructor-arg ref="mongoDbFactory" />      <constructor-arg ref="mongoConverter" />  </bean> |

The constructor arguments to the GridFsTemplate include bean references to mongoDbFactory, which creates a Mongo database, and mongoConverter, which converts between Java and MongoDB types. Their bean definitions are below.

|  |  |
| --- | --- |
| 1  2  3  4  5 | <mongo:db-factory id="mongoDbFactory" dbname="test" mongo-ref="mongo" />    <mongo:mapping-converter id="mongoConverter" base-package="org.baeldung.converter">      <mongo:custom-converters base-package="org.baeldung.converter"/>  </mongo:mapping-converter> |

### **2.2. Java Configuration**

Let’s create a similar configuration, only with Java:

|  |  |
| --- | --- |
| 1  2  3  4 | @Bean  public GridFsTemplate gridFsTemplate() throws Exception {      return new GridFsTemplate(mongoDbFactory(), mappingMongoConverter());  } |

For this configuration we used mongoDbFactory and mappingMongoConverter from org.springframework.data.mongodb.config.AbstractMongoConfiguration.

## **3.** GridFsTemplate**Core Methods**

### **3.1.** store

The store method saves a file into MongoDB.

Suppose we have an empty database and wish to store a file in it:

|  |  |
| --- | --- |
| 1  2  3 | InputStream inputStream = new FileInputStream("src/main/resources/test.png");  String id =    gridFsTemplate.store(inputStream, "test.png", "image/png", metaData).getId().toString(); |

Note that we can save additional metadata along with the file by passing a DBObject to the store method. For our example, the *DBObject* might look something like this:

|  |  |
| --- | --- |
| 1  2 | DBObject metaData = new BasicDBObject();  metaData.put("user", "alex"); |

GridFS uses two collections to store the file metadata and its content. The file’s metadata is stored in the files collection, and the file’s content is stored in the chunks collection. Both collections are prefixed with *fs*.