

3. Text mode connection

In order to connect in textual mode (terminal or Command Line Interface) we can type this command while in a Unix system:

```
mongo mongodb-rdlab.lsi.upc.edu
```

This way a connection with the server will be established, but it is still necessary to authenticate against the database:

```
use <database>  
db.auth( "<username>" , "<password>" )
```

With "show collections;" we can check if we can list the contents of our database:

```
show collections
```

4. Php connection example

Prior to establishing the connection , it is necessary to prepare the system and install the MongoDB PHP library.

1. Install the system manager modules PHP (PEAR), the PHP development libraries and library libpcre3-dev.

```
sudo apt-get install php-pear php5-dev libpcre3-dev
```

This step is necessary to install later MongoDB libraries for PHP. You may apt-get install additional libraries. This is not a problem.

2. Install MongoDB for PHP with PEAR package manager:

```
sudo pecl install mongodb
```

If the process is completed, it will indicate the next step:

```
You should add "extension=mongodb.so" to php.ini
```

3. Open the php.ini file and edit it. By default usually one for the command line (CLI) and one for Apache in the following PATH

```
/etc/php5/apache2/php.ini  
/etc/php5/cli/php.ini
```

If we want to establish connection from a PHP environment, we can do it by using the next code snippet:

```
$host = "mongodb-rdlab.lsi.upc.edu";  
$username = "<username>";  
$password = "<password>";  
$database = "<database>";  
  
$manager =  
new MongoDB\Driver\Manager("mongodb://$username:$password@$host:27017/$database");  
  
$query = new MongoDB\Driver\Query(array(), array());  
$rows = $manager->executeQuery("$database.system.users", $query);  
  
foreach($rows as $r){  
    print_r($r);  
}
```

If it works, running the script will produce the following output:

```
stdClass Object  
(  
    [_id] => MongoDB\BSON\ObjectID Object  
    (  
        [oid] => orh9qufhskfakfiasfhkjff  
    )  
    [user] => <username>  
    [readOnly] =>  
    [pwd] => 9847ifhif9238rf923ry9fisdhf938yr  
)
```

5. Java connection example

To establish connection from a java project, it is necessary to download the driver mongo-java-driver-2.10.1.jar, add it to the CLASSPATH and import it with the commands:

```
import com.mongodb.MongoClient;
import com.mongodb.MongoException;
import com.mongodb.WriteConcern;
import com.mongodb.DB;
import com.mongodb.DBCollection;
import com.mongodb.BasicDBObject;
import com.mongodb.DBObject;
import com.mongodb.DBCursor;
import com.mongodb.ServerAddress;
```

Then, execute this snippet to connect:

```
String server = "mongodb-rdlab.lsi.upc.edu";
String username = "<username>";
String password = "<password>";
String database = "<database>";

MongoClient mongoClient = new MongoClient(server);
DB db = mongoClient.getDB(database);
boolean auth = db.authenticate(username,
password.toCharArray());
```

In order to know if it has worked correctly, we can try to list our collections:

```
Set<String> colls = db.getCollectionNames();

for (String s : colls) {
    System.out.println(s);
}
```

6. Links

1. mongoDB manual:
<http://docs.mongodb.org/manual/>
2. mongoDB connection from PHP:
<https://secure.php.net/manual/es/set.mongodb.php>

3. mongoDB connection from Java:

<http://docs.mongodb.org/ecosystem/drivers/java/>