

*** Basic Provisioning of a MongoDB Database ***

1. Install [Mongo Shell] and [MongoDB Database Tools] for your operating system

<https://docs.mongodb.com/database-tools/installation/installation/>

- Make sure that you add the folder to the PATH environment variable!!

2. Create a MongoDB Atlas account on the free tier

<https://www.mongodb.com/cloud/atlas>

- Click "Connect" and choose to connect with the mongo shell

1,2 Rezolvate, instalate conform documentatiei si de asemenea setat the PATH in enviornment variable.

3. Open Windows Terminal and type

> mongosh "mongodb+srv://cluster0.dusbo.mongodb.net/abdtest" --username abdroot

User is: abdroot | Password is: Test123 | DB name: abdtest

- Feel free to use this particular database instance or replace credentials with your own

3. Try a few commands to familiarize yourself with the MongoDB system

Show the current database

> db

Use a specific database

> use abdtest

Get a list of all collections

> show collections

```
PS C:\Users\razva> mongosh "mongodb+srv://cluster0.dusbo.mongodb.net/abdtest" --username abdroot
Enter password: *****
Current Mongosh Log ID: 6648cd220b2a5751cdf50315
Connecting to:      mongodb+srv://<credentials>@cluster0.dusbo.mongodb.net/abdtest?appName=mongosh+2.0.0
Using MongoDB:      7.0.8
Using Mongosh:      2.0.0
mongosh 2.2.6 is available for download: https://www.mongodb.com/try/download/shell

For mongosh info see: https://docs.mongodb.com/mongosh-shell/

Atlas atlas-rw6l72-shard-0 [primary] abdtest> db
abdtest
Atlas atlas-rw6l72-shard-0 [primary] abdtest> use abdtest
already on db abdtest
Atlas atlas-rw6l72-shard-0 [primary] abdtest> show collections
products
```

Insert a document into collection

> db.products.insertOne(

{ item: "canvas", qty: 100, tags: ["cotton"], size: { h: 28, w: 35.5, uom: "cm" } }

)

```
Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.insertOne(
... { item: "canvas", qty: 100, tags: ["cotton"], size: { h: 28, w: 35.5, uom: "cm" } }
... )
{
  acknowledged: true,
  insertedId: ObjectId("6648f3900b2a5751cdf50316")
}
```

Find all documents

> db.products.find();

```
Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.find();
[
  {
    _id: ObjectId("6626aa8c9f166ea74cbc7757"),
    item: 'canvas',
    qty: 100,
    tags: [ 'cotton' ],
    size: { h: 28, w: 35.5, uom: 'cm' }
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc775a"),
    item: 'mousepad',
    qty: 5,
    tags: [ 'gel', 'blue' ],
    size: { h: 19, w: 22.85, uom: 'cm' },
    lastModified: ISODate("2024-04-22T18:30:44.107Z")
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc7758"),
    item: 'journal',
    qty: 25,
    tags: [ 'blank', 'red' ],
    size: { h: 14, w: 21, uom: 'cm' }
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc7759"),
    item: 'mat',
    qty: 85,
    tags: [ 'gray' ],
    size: { h: 27.9, w: 35.5, uom: 'cm' }
  },
  {
    _id: ObjectId("6648f3900b2a5751cdf50316"),
    item: 'canvas',
    qty: 100,
    tags: [ 'cotton' ],
    size: { h: 28, w: 35.5, uom: 'cm' }
  }
]
Atlas atlas-rw6l72-shard-0 [primary] abdtest>
```

> db.products.find({});

```

Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.find({});
[
  {
    _id: ObjectId("6626aa8c9f166ea74cbc7757"),
    item: 'canvas',
    qty: 100,
    tags: [ 'cotton' ],
    size: { h: 28, w: 35.5, uom: 'cm' }
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc775a"),
    item: 'mousepad',
    qty: 5,
    tags: [ 'gel', 'blue' ],
    size: { h: 19, w: 22.85, uom: 'cm' },
    lastModified: ISODate("2024-04-22T18:30:44.107Z")
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc7758"),
    item: 'journal',
    qty: 25,
    tags: [ 'blank', 'red' ],
    size: { h: 14, w: 21, uom: 'cm' }
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc7759"),
    item: 'mat',
    qty: 85,
    tags: [ 'gray' ],
    size: { h: 27.9, w: 35.5, uom: 'cm' }
  },
  {
    _id: ObjectId("6648f3900b2a5751cdf50316"),
    item: 'canvas',
    qty: 100,
    tags: [ 'cotton' ],
    size: { h: 28, w: 35.5, uom: 'cm' }
  }
]
Atlas atlas-rw6l72-shard-0 [primary] abdtest>

```

```
> db.products.find().pretty();
```

```

Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.find().pretty()
[
  {
    _id: ObjectId("6626aa8c9f166ea74cbc7757"),
    item: 'canvas',
    qty: 100,
    tags: [ 'cotton' ],
    size: { h: 28, w: 35.5, uom: 'cm' }
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc775a"),
    item: 'mousepad',
    qty: 5,
    tags: [ 'gel', 'blue' ],
    size: { h: 19, w: 22.85, uom: 'cm' },
    lastModified: ISODate("2024-04-22T18:30:44.107Z")
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc7758"),
    item: 'journal',
    qty: 25,
    tags: [ 'blank', 'red' ],
    size: { h: 14, w: 21, uom: 'cm' }
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc7759"),
    item: 'mat',
    qty: 85,
    tags: [ 'gray' ],
    size: { h: 27.9, w: 35.5, uom: 'cm' }
  },
  {
    _id: ObjectId("6648f3900b2a5751cdf50316"),
    item: 'canvas',
    qty: 100,
    tags: [ 'cotton' ],
    size: { h: 28, w: 35.5, uom: 'cm' }
  }
]
Atlas atlas-rw6l72-shard-0 [primary] abdtest>

```

Insert multiple documents

```

> db.products.insertMany([
  { item: "journal", qty: 25, tags: ["blank", "red"], size: { h: 14, w: 21, uom: "cm" } },
  { item: "mat", qty: 85, tags: ["gray"], size: { h: 27.9, w: 35.5, uom: "cm" } },
  { item: "mousepad", qty: 55, tags: ["gel", "blue"], size: { h: 19, w: 22.85, uom: "cm" } }
])

```

```

Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.insertMany([
... { item: "journal", qty: 25, tags: ["blank", "red"], size: { h: 14, w: 21, uom: "cm" } }
,
... { item: "mat", qty: 85, tags: ["gray"], size: { h: 27.9, w: 35.5, uom: "cm" } },
... { item: "mousepad", qty: 55, tags: ["gel", "blue"], size: { h: 19, w: 22.85, uom: "cm"
} }
... ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("6648f5050b2a5751cdf50317"),
    '1': ObjectId("6648f5050b2a5751cdf50318"),
    '2': ObjectId("6648f5050b2a5751cdf50319")
  }
}
Atlas atlas-rw6l72-shard-0 [primary] abdtest>

```

Find a specific document

> db.products.find({ item: "mousepad" })

```

Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.find( { item: "mousepad" } )
[
  {
    _id: ObjectId("6626aaea9f166ea74cbc775a"),
    item: 'mousepad',
    qty: 5,
    tags: [ 'gel', 'blue' ],
    size: { h: 19, w: 22.85, uom: 'cm' },
    lastModified: ISODate("2024-04-22T18:30:44.107Z")
  },
  {
    _id: ObjectId("6648f5050b2a5751cdf50319"),
    item: 'mousepad',
    qty: 55,
    tags: [ 'gel', 'blue' ],
    size: { h: 19, w: 22.85, uom: 'cm' }
  }
]
Atlas atlas-rw6l72-shard-0 [primary] abdtest>

```

> db.products.find({ qty: { \$lt: 30 } })

```

Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.find( { qty: { $lt: 30 } } )
[
  {
    _id: ObjectId("6626aaea9f166ea74cbc775a"),
    item: 'mousepad',
    qty: 5,
    tags: [ 'gel', 'blue' ],
    size: { h: 19, w: 22.85, uom: 'cm' },
    lastModified: ISODate("2024-04-22T18:30:44.107Z")
  },
  {
    _id: ObjectId("6626aaea9f166ea74cbc7758"),
    item: 'journal',
    qty: 25,
    tags: [ 'blank', 'red' ],
    size: { h: 14, w: 21, uom: 'cm' }
  },
  {
    _id: ObjectId("6648f5050b2a5751cdf50317"),
    item: 'journal',
    qty: 25,
    tags: [ 'blank', 'red' ],
    size: { h: 14, w: 21, uom: 'cm' }
  }
]
Atlas atlas-rw6l72-shard-0 [primary] abdtest>

```

Count the number of documents

```
> db.products.countDocuments()
```

```
Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.countDocuments()
8
```

Update a specific document

```
> db.products.updateOne(
  { item: "mousepad" },
  {
    $set: { qty: 5 },
    $currentDate: { lastModified: true }
  }
)
```

```
Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.updateOne(
... { item: "mousepad" },
... {
... $set: { qty: 5 },
... $currentDate: { lastModified: true }
... }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-rw6l72-shard-0 [primary] abdtest>
```

Delete a document

```
> db.products.deleteOne( { item: "mousepad" } )
```

```
Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.deleteOne( { item: "mousepad" } )
{ acknowledged: true, deletedCount: 1 }
Atlas atlas-rw6l72-shard-0 [primary] abdtest>
```

Drop collection

```
> db.products.drop()
```

```
Atlas atlas-rw6l72-shard-0 [primary] abdtest> db.products.drop()
true
Atlas atlas-rw6l72-shard-0 [primary] abdtest> |
```

NEXT:

We will run an instance of the MongoDB on our local machine. Familiarize yourself with Docker (what it is, how you can run it, etc.)