Course name: A level   **SUBJECT: DATABASE TECHNOLOGIES**

Topic: MongoDB   **DATE: 04/06/2020**

Backup and Restore

MongoDB is one of the most popular NoSQL database engines. It is famous for being scalable, powerful, reliable and easy to use.

The backup and restore operations create or use MongoDB-specific binary data, which preserves not only the consistency and integrity of your data but also its specific MongoDB attributes. Backup is also required to meet any unforeseen circumstances apart from migration of database. For these tasks, backup and restore methods are useful as long as the source and target systems are compatible.

Creating Backup of Data

mongodump command can be used to create database in MongoDB. This command will dump the entire data of your server into the dump directory. The dump directory is automatically created under the current directory i.e. bin. You may carry the .bson files to new system, copy the same and use them further.
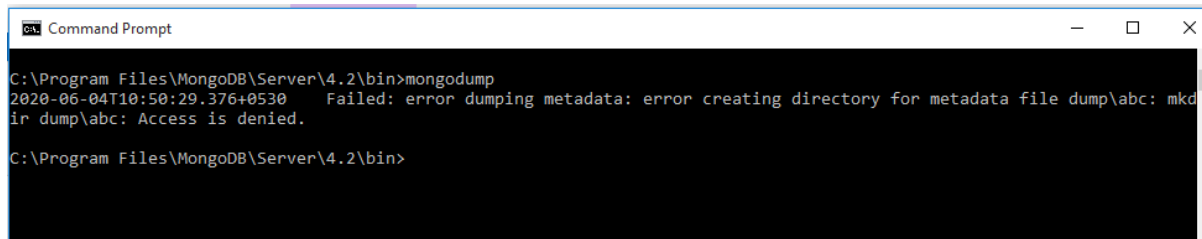
Syntax

> **>mongodump**

Steps to run the command

1. Start mongod server.
2. Open Windows command Prompt
3. Go the bin directory of MongoDB Server. Where it has been installed. (for example c:\program files\mongodb\server\4.2\bin)
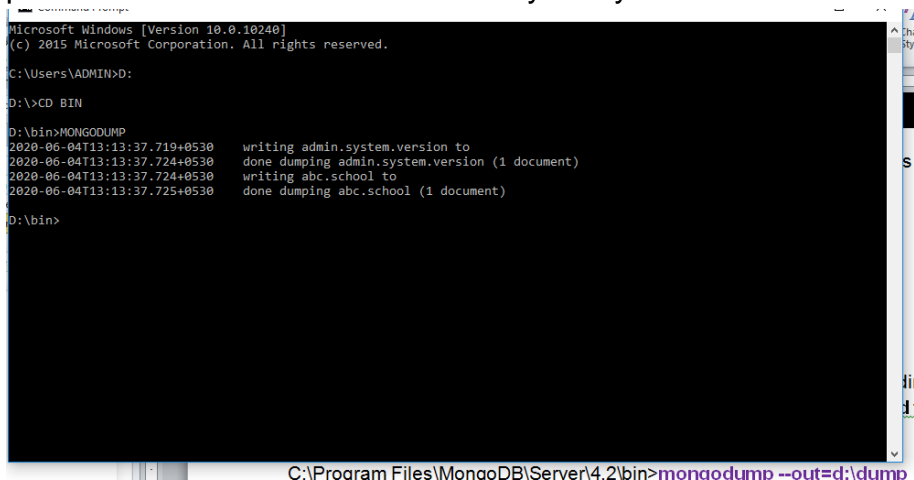4. Now, type the command **mongodump**

> **>mongodump**

By default, this command will connect to the server running at port **27017** (the default port) on local host and back all data of the server to directory **/bin/dump/. This command will work only if the directory has full access permission otherwise it will give you an error**. If successful, it will create separate folders for each database and these folders will further have dump files for each collections.

On my system, it is giving error due to lack of permissions. Solution to this is to grant full permission to the files and folders of your system.

> ➤ **Alternatively just give an output path with mongodump command**:

Syntax
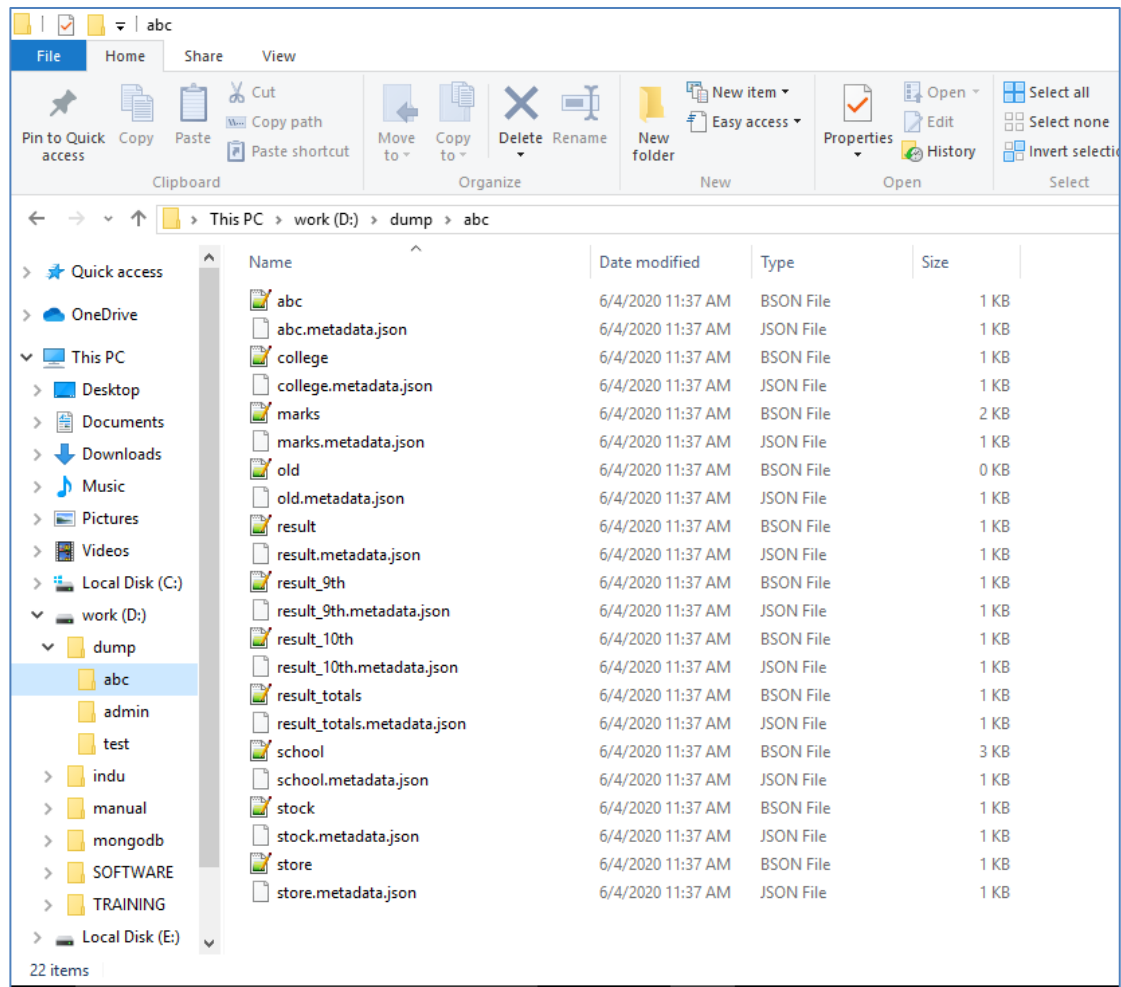
1. **Mongodump --out=BACKUP_DIRECTORY**

Now run the command with –out parameter and give output path (dump directory as c:\dump). This will take full backup of all the databases. All the **command** to be run from bin folder only.

C:\Program Files\MongoDB\Server\4.2\bin>**mongodump --out=d:\dump**

```
Command Prompt

C:\Program Files\MongoDB\Server\4.2\bin>mongodump --out=d:\dump
2020-06-04T11:37:33.431+0530    writing admin.system.version to
2020-06-04T11:37:33.436+0530    done dumping admin.system.version (1 document)
2020-06-04T11:37:33.437+0530    writing abc.marks to
2020-06-04T11:37:33.442+0530    done dumping abc.marks (12 documents)
2020-06-04T11:37:33.443+0530    writing abc.store to
2020-06-04T11:37:33.446+0530    done dumping abc.store (3 documents)
2020-06-04T11:37:33.447+0530    writing abc.college to
2020-06-04T11:37:33.450+0530    done dumping abc.college (2 documents)
2020-06-04T11:37:33.451+0530    writing abc.result_10th to
2020-06-04T11:37:33.454+0530    done dumping abc.result_10th (2 documents)
2020-06-04T11:37:33.455+0530    writing abc.result_9th to
2020-06-04T11:37:33.459+0530    done dumping abc.result_9th (2 documents)
2020-06-04T11:37:33.460+0530    writing abc.result_totals to
2020-06-04T11:37:33.463+0530    done dumping abc.result_totals (2 documents)
2020-06-04T11:37:33.463+0530    writing abc.stock to
2020-06-04T11:37:33.467+0530    done dumping abc.stock (2 documents)
2020-06-04T11:37:33.468+0530    writing abc.abc to
2020-06-04T11:37:33.471+0530    done dumping abc.abc (2 documents)
2020-06-04T11:37:33.472+0530    writing abc.old to
2020-06-04T11:37:33.474+0530    done dumping abc.old (0 documents)
2020-06-04T11:37:33.746+0530    writing abc.result to
2020-06-04T11:37:33.752+0530    writing test.inventory to
2020-06-04T11:37:33.754+0530    done dumping abc.result (4 documents)
2020-06-04T11:37:33.760+0530    writing abc.school to
2020-06-04T11:37:33.761+0530    done dumping test.inventory (10 documents)
2020-06-04T11:37:33.766+0530    done dumping abc.school (36 documents)

C:\Program Files\MongoDB\Server\4.2\bin>
```

The command is successful, it will create separate create folders for each database and these folders will further have dump files for each collections.

Here, we can see that database folders abc, admin and test has been created in dump directory and abc(database folder) has the collections created under abc database.

> mongoDB provide various options to take customized backup.

2. **mongodump –host="HOST_NAME:PORT_NUMBER" --out=BACKUP_DIRECTORY**

This command is used to take backup of any particular Mongod Instance all databases of specified mongod instance. In case of replicaset, it shall be replica set name followed by the port number. --out is optional.

Example

mongodump --host="127.0.0.1:27017" --out=d:\dump1

3. mongodump --db=DB_name --out=BACKUP_DIRECTORY

We may take backup of specific database instead of all the databases, by specifying the database name with --db option. For example only abc database.

Example

mongodump --db="test" --out=d:\dump2

4. mongodump --collection= "COLLECTION_name" --db DB_NAME --out=BACKUP_DIRECTORY

This command can be used if we want to take the backup of specific collection of a particular database.

Example

mongodump --collection="marks" --db="abc" --out=d:\dump2

In all the cases, if out path is not specified, it will take backup to dump folder if permitted. It is advisable to take backup on a separate drive / folder.

Assignment

1. What is Backup and Restore?

2. How Backup is performed in MongoDB using various options?