Course name: A level Topic: MongoDB

# SUBJECT: DATABASE TECHNOLOGIES

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.

### <u>Syntax</u>

>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 3 1

# 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

:\Program Files\MongoDB\Serve	r\4.2\bin≻mongodumpout=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	<pre>done dumping abc.result_totals (2 documents)</pre>
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)

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

File Home Shar	e View							
🖈 🖻 📋 🔏 Cut 📃 🛄 🗙 🖃		X 🛋			🗸 📑 Open 🔻	Select all		
in to Quick Copy Paste	w Copy path	Move Copy	Delete Rename	New Easy	access *	Properties _ Edit	Belect none	
access	🖲 Paste shortcut	to v to v	•	folder		👻 🍖 History	📙 Invert select	
Clipboar	d	Org	anize	New		Open	Select	
← → ∽ ↑ <mark> </mark> → 1	This PC > work (D:)	> dump > abo	:					
A Quick access	Name	^	D	ate modified	Туре	Size		
OneDrive	📓 abc		6,	4/2020 11:37 AM	BSON Fi	le 1	KB	
	abc.metada	ta.json	6,	4/2020 11:37 AM	JSON Fil	e 1	KB	
🖳 This PC	📔 college		6,	4/2020 11:37 AM	BSON Fi	le 1	KB	
> 📃 Desktop	📄 college.met	adata.json	6,	4/2020 11:37 AM	JSON Fil	e 1	KB	
> 🔮 Documents	📔 marks		6,	4/2020 11:37 AM	BSON Fi	le 2	KB	
> 🕹 Downloads	marks.meta	data.json	б,	4/2020 11:37 AM	JSON Fil	e 1	KB	
> b Music	<ul> <li>☑ old</li> <li>☑ old.metadata.json</li> <li>☑ result</li> </ul>			4/2020 11:37 AM	BSON Fi	le 0	0 KB 1 KB 1 KB	
•				4/2020 11:37 AM	JSON Fil	e 1		
> E Pictures				4/2020 11:37 AM	BSON Fi	le 1		
> 📑 Videos	result.metad	lata.json	6,	4/2020 11:37 AM	JSON Fil		KB	
> 🏪 Local Disk (C:)	🧾 result_9th		6/	4/2020 11:37 AM	BSON Fi	le 1	KB	
🛩 🔜 work (D:)		etadata.json	6/	4/2020 11:37 AM	JSON Fil		KB	
🗸 🔄 dump	📓 result_10th			4/2020 11:37 AM	BSON Fi		KB	
abc		metadata.json		4/2020 11:37 AM	JSON Fil		KB	
admin	<pre>result_totals</pre>			4/2020 11:37 AM	BSON Fi		KB	
test		.metadata.json		4/2020 11:37 AM	JSON Fil		KB	
	School			4/2020 11:37 AM	BSON Fi		KB	
> indu	school.meta	data.json		4/2020 11:37 AM	JSON Fil		KB	
> nanual	Stock			4/2020 11:37 AM	BSON Fi		KB	
> 📙 mongodb	stock.metad	lata.json		4/2020 11:37 AM	JSON Fil		KB	
> SOFTWARE	🗾 store			4/2020 11:37 AM	BSON Fi		KB	
> RAINING	store.metad	ata.json	6,	4/2020 11:37 AM	JSON Fil	e 1	KB	
> Local Disk (E:)								
22 items								

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

C:\Program Files\MongoDB\Server\4.2\bin>mongodump --db="test" --out=d:\dump2 2020-06-04T11:56:10.858+0530 writing test.inventory to 2020-06-04T11:56:10.898+0530 done dumping test.inventory (10 documents) C:\Program Files\MongoDB\Server\4.2\bin>\_

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

```
© Command Prompt
C:\Program Files\MongoDB\Server\4.2\bin>mongodump --collection="marks" --db="abc" --out=d:\dump2
2020-06-04T11:59:19.736+0530 writing abc.marks to
2020-06-04T11:59:19.742+0530 done dumping abc.marks (12 documents)
```

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?