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

Command Prompt				
C:\Program Files\MongoDB\Server	\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)			
C:\Program Files\MongoDB\Server\4.2\bin>				
er (riogi alli riffes (nongood (ser ver				

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

📕   🖓 📕 🔻   abc						
File Home Share View						
Image: Second system       Image: Second system <t< th=""><th>name New folder</th><th>item • access • Properties</th><th>Edit</th><th>Select all Select none Invert selectio</th></t<>	name New folder	item • access • Properties	Edit	Select all Select none Invert selectio		
$4 \rightarrow x \wedge [-3]$ This DC $\rightarrow wark(D) \rightarrow dwnn \rightarrow abc$						
Y T SPC > Work (D:) > dump > abc						
> 📌 Quick access	Date modified	Туре	Size			
abc	6/4/2020 11:37 AM	BSON File	1 KB			
abc.metadata.json	6/4/2020 11:37 AM	JSON File	1 KB			
🗸 💻 This PC 🛛 📓 college	6/4/2020 11:37 AM	BSON File	1 KB			
> 🔜 Desktop 📄 college.metadata.json	6/4/2020 11:37 AM	JSON File	1 KB			
> 🔮 Documents 🛛 🔐 marks	6/4/2020 11:37 AM	BSON File	2 KB			
> 🚽 Downloads 🦳 marks.metadata.json	6/4/2020 11:37 AM	JSON File	1 KB			
Music Old	6/4/2020 11:37 AM	BSON File	0 KB 1 KB			
old.metadata.json	6/4/2020 11:37 AM	JSON File				
result	6/4/2020 11:37 AM	BSON File	1 KB	1 KB		
Videos 📄 result.metadata.json	6/4/2020 11:37 AM	.0 11:37 AM JSON File		1 KB		
> Local Disk (C:)	6/4/2020 11:37 AM	5/4/2020 11:37 AM BSON File		1 KB		
v work (D:)	6/4/2020 11:37 AM	6/4/2020 11:37 AM JSON File		1 KB		
✓ dump	6/4/2020 11:37 AM	6/4/2020 11:37 AM BSON File		I KB		
abc	6/4/2020 11:37 AM	JSON File	I KB			
admin	6/4/2020 11:37 AM	BSON File	I KB			
test	6/4/2020 11:37 AM	BSON File	3 KB			
> indu	6/4/2020 11:37 AM	ISON File	1 KB			
> manual Stock	6/4/2020 11:37 AM	BSON File	1 KB			
mangadh Stock.metadata.ison	6/4/2020 11:37 AM	JSON File	1 KB			
store	6/4/2020 11:37 AM	BSON File	1 KB			
store.metadata.json	6/4/2020 11:37 AM	JSON File	1 KB			
TRAINING						
> 🔜 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?