

NoSQL Assignment

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Q1. Import `beer-sample` bucket.

Go to settings->sample buckets

Then simply just check beer-sample and load sample data.

name	items	resident	ops/sec	RAM used/quota	disk used	
beer-sample	7,303	100%	0	40.7MB / 100MB	3.43MB	Documents Statistics
travel-sample	31,595	26.2%	0	39.1MB / 100MB	38.5MB	Documents Statistics

beer-sample

Type: Couchbase
Bucket RAM Quota: 100MB
Cluster RAM Quota: 1.37GB
Replicas: 1
Server Nodes: 1
Ejection Method: Value-Only
Conflict Resolution: Sequence Number
Compaction: Not active

Memory

cluster quota (1.37 GB)

- other buckets (100 MB)
- this bucket (100 MB)
- remaining (1.17 GB)

Disk

total cluster storage (100 GB)

- other buckets (38.5 MB)
- this bucket (3.43 MB)
- remaining (32.1 GB)

[Delete](#) [Compact](#) [Edit](#)

Q2. Write a join query to fetch the Top 10 brewery(type="beer") and their country(type="brewery") which produces more varieties of beers.

```
SELECT a.brewery_id,
```

```
       b.country
```

```
FROM `beer-sample` AS a
```

```
    JOIN `beer-sample` AS b ON KEYS a.brewery_id
```

```
WHERE a.type="beer"
```

```
    AND b.type="brewery"
```

LIMIT 10;

The screenshot shows the Clustor0 Query interface. The top navigation bar includes 'Cluster0 > Query', 'Query Workbench', and 'Query Monitor'. The left sidebar contains a navigation menu with 'Dashboard', 'Servers', 'Buckets', 'XDCR', 'Security', 'Settings', 'Logs', 'Documents', 'Query', 'Indexes', 'Search', 'Analytics', 'Eventing', and 'Views'. The main area is divided into three sections: 'Query Editor', 'Query Results', and 'Data Insights'.

Query Editor: The SQL query is as follows:

```
1 SELECT a.brewery_id,
2        b.country
3 FROM `beer-sample` AS a
4 JOIN `beer-sample` AS b ON KEYS a.brewery_id
5 WHERE a.type="beer"
6      AND b.type="brewery"
7 LIMIT 10;
```

The query status is 'success' with a message 'just now | elapsed: 3.2s | execution: 3.2s | docs: 10 | size: 950 bytes'. There are buttons for 'Execute', 'Explain', and 'Advise'. A 'format' link is also present.

Query Results: The results are displayed in a table with two columns: 'brewery_id' and 'country'. The table contains 10 rows, all of which are 'United States'.

brewery_id	country
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States
21st_amendment_brewery_cafe	United States

Data Insights: This section provides additional information about the data. It includes 'Queryable Buckets' for 'beer-sample' (sampled 1000 of 7303) and 'Beer' (sampled 343 of 1412). It also shows 'Queryable By Doc ID Only' for 'Beer' and 'Brewery'.

The bottom of the interface shows a Windows taskbar with various application icons and a system clock indicating 8:19 PM on 19-Feb-21.

Q3. Write a mapreduce to get the number of breweries based on country.

Please attach the mapreduce code and json output screenshot.

← → ↺ 🏠 localhost:8091/ui/index.html#/views/_design~2Fdev_reduce1?scenarioBucket=Beer&scenarioZoom=minute&bucket=beer-sample&type=development&vie... 🔍 ☆ ⚙️ 👤

📱 Apps 🌐 www.du.ac.in/du/u... 🎵 Scooby Doo All Mo... 📖 A Comprehensive G... 🔗 Linked List Data Str... 🔗 Unrolled Linked List... 🖱️ Web Resizer - Maki... 📄 CH-24.pdf » 📁 Other bookmarks

activity help Administrator

Cluster0 > Views > Views Editing

Dashboard
Servers
Buckets
XDCR
Security
Settings
Logs
Documents
Query
Indexes
Search
Analytics
Eventing
Views

▼ Sample Document: brouwerij_abdij_sixtus-trappist_westvleteren_8

Load Another Document
Edit Document

```

1 {
2   "abv": 8.0,
3   "brewery_id": "brouwerij_abdij_sixtus",
4   "category": "Belgian and French Ale",
5   "description": "",
6   "ibu": 0.0,
7   "name": "Trappist Westvleteren 8",
8   "srm": 0.0,
9   "style": "Belgian-Style Dubbel",
10  "type": "beer",
11  "upc": 0,
12  "updated": "2010-07-22 20:00:20"
13 }

```

```

1 {
2   "id": "brouwerij_abdij_sixtus-trappist_westvleteren_8",
3   "rev": "1-1663fac353d400000000000000000000",
4   "expiration": 0,
5   "flags": 33554432
6 }

```

View Index Code

Make Copy Save Changes

Map

```

1 function (doc, meta) {
2   if(doc.type=="brewery") emit(doc.country , doc.name);
3 }

```

Reduce (built in: _count, _sum, _stats)

```

1 _count

```

```

{"total_rows":7302,"rows":[
{"id":"21st_amendment_brewery_cafe","key":"21st_amendment_brewery_cafe","value":null},
{"id":"21st_amendment_brewery_cafe-21a_ipa","key":"21st_amendment_brewery_cafe-21a_ipa","value":null},
{"id":"21st_amendment_brewery_cafe-563_stout","key":"21st_amendment_brewery_cafe-563_stout","value":null},
{"id":"21st_amendment_brewery_cafe-amendment_pale_ale","key":"21st_amendment_brewery_cafe-amendment_pale_ale","value":null},
{"id":"21st_amendment_brewery_cafe-bitter_american","key":"21st_amendment_brewery_cafe-bitter_american","value":null},
{"id":"21st_amendment_brewery_cafe-double_trouble_ipa","key":"21st_amendment_brewery_cafe-double_trouble_ipa","value":null}
]}

```

Json output

Q4. XDCR:

a) Add a new bucket "Brewery".

Cluster0 > Buckets

ADD BUCKET

Dashboard
Servers
Buckets
XDCR
Security
Settings
Logs
Documents
Query
Indexes
Search
Analytics
Eventing
Views

filter buckets...

name	items	resident	ops/sec	RAM used/quota	disk used	
beer-sample	7,303	100%	0	37.2MB / 100MB	27.7MB	Documents Statistics
Brewery	0	100%	0	30.7MB / 1.17GB	858KB	Documents Statistics
<div> <div>Type: Couchbase</div> <div> <div>Bucket RAM Quota: 1.17GB</div> <div>Cluster RAM Quota: 1.37GB</div> <div>Replicas: 1</div> <div>Server Nodes: 1</div> <div>Ejection Method: Value-Only</div> <div>Conflict Resolution: Sequence Number</div> <div>Compaction: Not active</div> </div> </div> <div> <div>Memory</div> <div> <div>cluster quota (1.37 GB)</div> <div>other buckets (200 MB)</div> <div>this bucket (1.17 GB)</div> <div>remaining (0 B)</div> </div> </div> <div> <div>Disk</div> <div> <div>total cluster storage (100 GB)</div> <div>other buckets (66.3 MB)</div> <div>this bucket (858 KB)</div> <div>remaining (32.1 GB)</div> </div> </div> <div> Delete Compact Edit </div>						
travel-sample	31,595	26.4%	0	39.1MB / 100MB	38.6MB	Documents Statistics

11:17 PM

15-Feb-21

b) Create a XDCR with a filter(type='brewery') to replicate only the brewery entity from `beer-sample` bucket.

Outgoing Replications

source bucket	destination bucket	remote cluster	status
beer-sample filter	Brewery	AU session	replicating ...

Cluster0 > Buckets

ADD BUCKET

Dashboard
Servers
Buckets
XDCR
Security
Settings
Logs
Documents
Query
Indexes
Search
Analytics
Eventing
Views

filter buckets...

name	items	resident	ops/sec	RAM used/quota	disk used	
beer-sample	7,303	100%	0	39.1MB / 100MB	35.9MB	Documents Statistics
Brewery	1,412	100%	0	30.9MB / 1.17GB	7.06MB	Documents Statistics
<div> <div>Type: Couchbase</div> <div> <div>Bucket RAM Quota: 1.17GB</div> <div>Cluster RAM Quota: 1.37GB</div> <div>Replicas: 1</div> <div>Server Nodes: 1</div> <div>Ejection Method: Value-Only</div> <div>Conflict Resolution: Sequence Number</div> <div>Compaction: Not active</div> </div> </div> <div> <div>Memory</div> <div> <div>cluster quota (1.37 GB)</div> <div>other buckets (200 MB)</div> <div>this bucket (1.17 GB)</div> <div>remaining (0 B)</div> </div> </div> <div> <div>Disk</div> <div> <div>total cluster storage (100 GB)</div> <div>other buckets (74.5 MB)</div> <div>this bucket (7.06 MB)</div> <div>remaining (32.1 GB)</div> </div> </div> <div> Delete Compact Edit </div>						
travel-sample	31,595	26.4%	0	39.1MB / 100MB	38.6MB	Documents Statistics

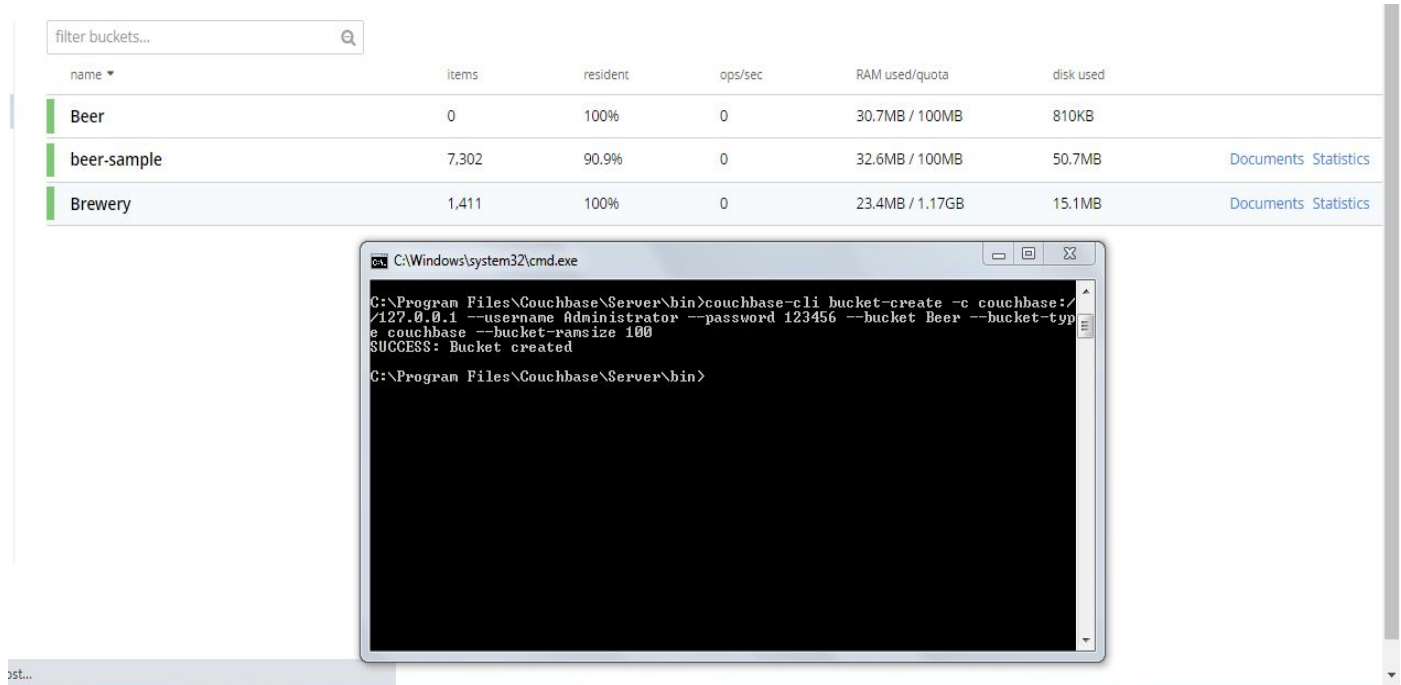
11:17 PM

15-Feb-21

Replicated brewery with only type="brewery"

Q5. CLI:

a) Add a new bucket "Beer".



The screenshot shows the Couchbase CLI interface with a table of buckets. The table has columns: name, items, resident, ops/sec, RAM used/quota, and disk used. The buckets listed are Beer, beer-sample, and Brewery. The Beer bucket has 0 items, 100% resident, 0 ops/sec, 30.7MB / 100MB RAM used, and 810KB disk used. The beer-sample bucket has 7,302 items, 90.9% resident, 0 ops/sec, 32.6MB / 100MB RAM used, and 50.7MB disk used. The Brewery bucket has 1,411 items, 100% resident, 0 ops/sec, 23.4MB / 1.17GB RAM used, and 15.1MB disk used. A command prompt window is overlaid on the table, showing the command to create the Beer bucket and the successful output.

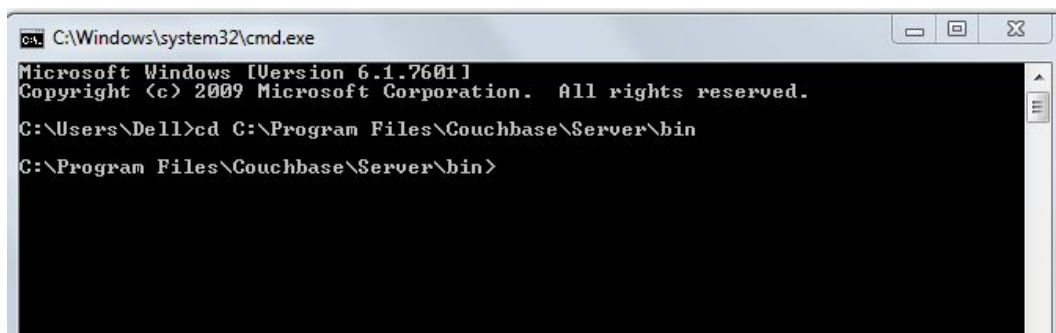
name	items	resident	ops/sec	RAM used/quota	disk used
Beer	0	100%	0	30.7MB / 100MB	810KB
beer-sample	7,302	90.9%	0	32.6MB / 100MB	50.7MB
Brewery	1,411	100%	0	23.4MB / 1.17GB	15.1MB

```
C:\Program Files\Couchbase\Server\bin>couchbase-cli bucket-create -c couchbase://127.0.0.1 --username Administrator --password 123456 --bucket Beer --bucket-type couchbase --bucket-ramsize 100
SUCCESS: Bucket created

C:\Program Files\Couchbase\Server\bin>
```

b) Using CLI - do a cbexport of the entire `beer-sample`

- Go to Couchbase Bin folder - C:\Program Files\Couchbase\Server\bin
- Open Command Prompt from the bin folder



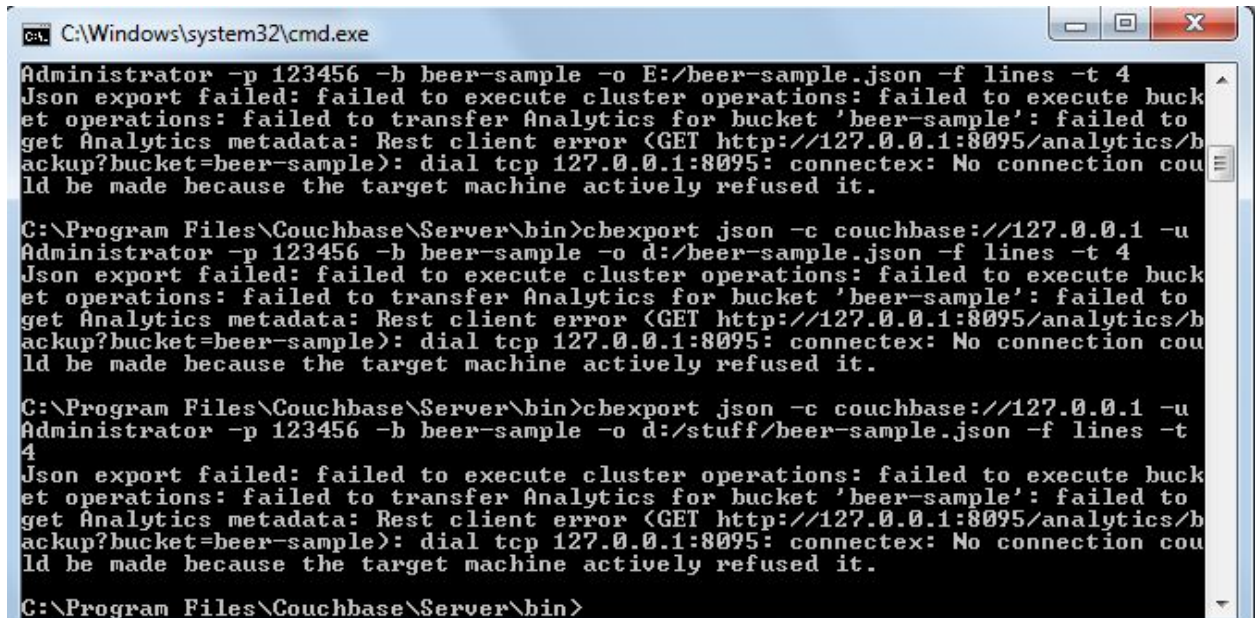
```
C:\Windows\system32\cmd.exe

Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Dell>cd C:\Program Files\Couchbase\Server\bin
C:\Program Files\Couchbase\Server\bin>
```

- Run the below command to export the data from beer-sample bucket:

```
cbexport json -c couchbase://127.0.0.1 -u <USER NAME> -p <password> -b
beer-sample -o D:/beer-sample.json -f lines -t 4
```



```
C:\Windows\system32\cmd.exe
Administrator -p 123456 -b beer-sample -o E:/beer-sample.json -f lines -t 4
Json export failed: failed to execute cluster operations: failed to execute buck
et operations: failed to transfer Analytics for bucket 'beer-sample': failed to
get Analytics metadata: Rest client error (GET http://127.0.0.1:8095/analytics/b
ackup?bucket=beer-sample): dial tcp 127.0.0.1:8095: connectex: No connection cou
ld be made because the target machine actively refused it.

C:\Program Files\Couchbase\Server\bin>cbexport json -c couchbase://127.0.0.1 -u
Administrator -p 123456 -b beer-sample -o d:/beer-sample.json -f lines -t 4
Json export failed: failed to execute cluster operations: failed to execute buck
et operations: failed to transfer Analytics for bucket 'beer-sample': failed to
get Analytics metadata: Rest client error (GET http://127.0.0.1:8095/analytics/b
ackup?bucket=beer-sample): dial tcp 127.0.0.1:8095: connectex: No connection cou
ld be made because the target machine actively refused it.

C:\Program Files\Couchbase\Server\bin>cbexport json -c couchbase://127.0.0.1 -u
Administrator -p 123456 -b beer-sample -o d:/stuff/beer-sample.json -f lines -t
4
Json export failed: failed to execute cluster operations: failed to execute buck
et operations: failed to transfer Analytics for bucket 'beer-sample': failed to
get Analytics metadata: Rest client error (GET http://127.0.0.1:8095/analytics/b
ackup?bucket=beer-sample): dial tcp 127.0.0.1:8095: connectex: No connection cou
ld be made because the target machine actively refused it.

C:\Program Files\Couchbase\Server\bin>
```

Getting this error again and again when trying to export beer-sample bucket.

- Run the below command to import the data to Beer.

```
cbimport json -c couchbase://127.0.0.1 -u <User Name> -p <password> -b Beer
-f lines -d file://D:/beer-sample -t 4 -g %id%
```

Note:

-u --> UserId which you've created

-p --> password

-b --> bucket name


```
C:\Windows\system32\cmd.exe

nts
    -l,--log-file          that failed to have a key generated for them
    -v,--verbose          Specifies a file to log debugging information
                          Print debugging information <Has no effect if a lo
g                          file is specified>
    --ignore-fields       Specify a comma separated list of field names to i
gnore                       <ie. --ignore-fields docID>
    -h,--help            Prints the help message

C:\Program Files\Couchbase\Server\bin>cbimport json -c couchbase://127.0.0.1 -u
Administrator -p 123456 -b Beer -f lines -d file://D:/beer-sample.json -t 4 -g %
brewery_id%
JSON 'file://D:/beer-sample.json' imported to 'http://127.0.0.1:8091' successfu
ly
Documents imported: 0 Documents failed: 0

C:\Program Files\Couchbase\Server\bin>
```

Export was failed therefore 0 documents imported.

c) And do a cbimport with “brewery_id” as primary key. As a result, in the new bucket - only “beer” documents will be imported with their respective brewery name as meta().id.

filter buckets...						
name	items	resident	ops/sec	RAM used/quota	disk used	
Beer	0	100%	0	30.5MB / 100MB	4.07MB	Documents Statistics
<div><div>Type: Couchbase</div><div>Bucket RAM Quota: 100MB</div><div>Cluster RAM Quota: 1.37GB</div><div>Replicas: 1</div><div>Server Nodes: 1</div><div>Ejection Method: Value-Only</div><div>Conflict Resolution: Sequence Number</div><div>Compaction: Not active</div></div> <div><div>Memory</div><div>cluster quota (1.37 GB)</div><div>other buckets (1.27 GB)</div><div>this bucket (100 MB)</div><div>remaining (0 B)</div></div> <div><div>Disk</div><div>total cluster storage (100 GB)</div><div>other buckets (65.8 MB)</div><div>this bucket (4.07 MB)</div><div>remaining (18 GB)</div></div>						
				Delete	Compact	Edit
beer-sample	7,302	0%	0	30.4MB / 100MB	50.7MB	Documents Statistics
Brewery	1,411	100%	0	23.4MB / 1.17GB	15.1MB	Documents Statistics