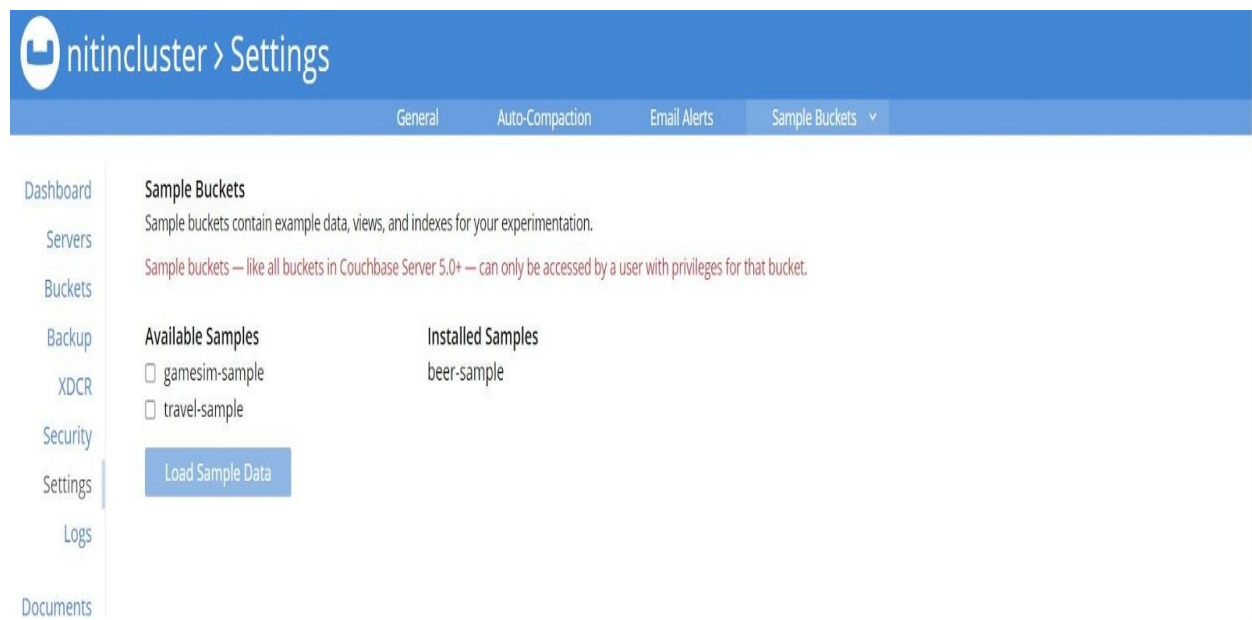


Spring Au 2021 - February(Batch -2) NoSQL Basics & Fundamentals - Morning

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Github - <https://github.com/nitinkaushik10/SAU-Feb-Batch-2/>

1.Import `beer-sample` bucket



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

```

SELECT c.country ,
       b.brewery_id
FROM `beer-sample` b
JOIN `beer-sample` c ON KEYS b.brewery_id
WHERE c.type="brewery"
AND b.type="beer"
LIMIT 10;

```

The screenshot shows the Nitincluster Query Editor interface. The top navigation bar includes 'nitincluster > Query', 'Workbench', and 'Monitor'. A left sidebar contains navigation links: Dashboard, Servers, Buckets, Backup, XDCR, Security, Settings, Logs, Documents, Query, Indexes, Search, Analytics, Eventing, and Views. The main area is divided into a 'Query Editor' and 'Query Results'.

Query Editor: Contains the following SQL query:

```

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

```

Below the query editor are buttons for 'Execute', 'Explain', and 'Advise'. A status bar indicates 'success just now | elapsed: 33.9ms | execution: 33.9ms | docs: 10 | size: 950 bytes'. There are also 'format' and 'copy' icons.

Query Results: The results are displayed in a table with columns 'brewery_id' and 'country'. The 'Table' view is selected, with other options being JSON, Tree, Plan, Plan Text, and Advice.

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

3. Write a mapreduce to get the number of breweries based on country.
Please attach the mapreduce code and json output screenshot.

Map reduce code

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

View Index Code

Map

```
1 function (doc, meta) {  
2   if(doc.type == "brewery")  
3   {  
4     emit(doc.country,doc.name);  
5   }  
6 }
```

Make Copy

Reduce (built in: `_count`, `_sum`, `_stats`)

```
1 _count
```

```
{ "rows": [  
  { "key": "", "value": 1 },  
  { "key": "Argentina", "value": 2 },  
  { "key": "Aruba", "value": 1 },  
  { "key": "Australia", "value": 14 },  
  { "key": "Austria", "value": 10 },  
  { "key": "Belgium", "value": 99 }  
]
```

4. XDCR:

a) Add a new bucket “Brewery”.

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

The screenshot shows the 'nitincluster > Buckets' interface. A table lists two buckets: 'beer-sample' and 'brewery'. The 'brewery' bucket is selected, showing its configuration details.

name	items	resident	ops/sec	RAM used/quota	disk used	Documents	Scopes & Collections
beer-sample	7,303	100%	0	37.2MB / 200MB	34.3MB		
brewery	1,412	100%	0	28MB / 6GB	7.06MB		

Configuration for 'brewery' bucket:

- Type: Couchbase
- Bucket RAM Quota: 6GB
- Cluster RAM Quota: 6.2GB
- Replicas: 1
- Server Nodes: 1
- Ejection Method: Value-Only
- Conflict Resolution: Sequence Number
- Compaction: Not active
- Compression: Passive
- Storage Backend: CouchStore

Memory Usage:

- Cluster quota (6.2 GB)
- other buckets (200 MB)
- this bucket (6 GB)
- remaining (0 B)

Disk Usage:

- total cluster storage (508 GB)
- other buckets (34.3 MB)
- this bucket (7.06 MB)
- remaining (188 GB)

Buttons: Drop, Compact, Edit

The screenshot shows the 'nitincluster > XDCR Replications' interface. It displays a table of outgoing replications.

source bucket	destination bucket	remote cluster	status
beer-sample filter	brewery	nitincluster	replicating .

Remote Clusters:

name	IP/hostname
nitincluster	127.0.0.1:8091

nitincluster > XDCR Add Replication

Dashboard

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Buckets

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XDCR

Security

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Analytics

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Views

Replicate From Bucket

beer-sample

>

Remote Cluster

nitincluster

Remote Bucket

brewery

The bucket *beer-sample* will be replicated to *nitincluster*. Missing targets on the remote will be ignored and that data will not be replicated.

☐ Specify scopes, collections, and mapping

☐ Migrate collections ⓘ

☒ Filter replication

Filter Expression ⓘ

REGEXP_CONTAINS(type,"brewery")

id of document to test...

Test Filter

Deletion Filters

☐ Do not replicate document expirations ⓘ

☐ Do not replicate DELETE operations ⓘ

5. CLI:

a) Add a new bucket “Beer”.

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

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

a) Add a new bucket “Beer”.

couchbase-cli bucket-create -c couchbase://127.0.0.1 --username Administrator --password nitincluster --bucket Beer --bucket-type couchbase --bucket-ramsize 200

```
C:\Program Files\Couchbase\Server\bin>couchbase-cli bucket-create -c couchbase://127.0.0.1 --username Administrator --password nitincluster --bucket Beer --bucket-type couchbase --bucket-ramsize 200
SUCCESS: Bucket created

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

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

cbexport json -c couchbase://127.0.0.1 -u Administrator -p nitincluster -b beer-sample -o G:/beer-sample.json -f lines -t 4

```
C:\Program Files\Couchbase\Server\bin>cbexport json -c couchbase://127.0.0.1 -u Administrator -p nitincluster -b beer-sample -o G:/beer-sample.json -f lines -t 4
JSON exported to 'G:/beer-sample.json' successfully
Documents exported: 7303 Documents skipped: 0

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

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

cbimport json -c couchbase://127.0.0.1 -u Administrator -p nitincluster -b beer -f lines -d file://G:/beer-sample.json -t 4 -g %brewery_id%

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.18363.1256]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Program Files\Couchbase\Server\bin>cbimport json -c couchbase://127.0.0.1 -u Administrator -p nitincluster -b Beer -f lines -d file://G:/beer-sample.json -t 4 -g %brewery_id%
```



Dashboard

Servers

Buckets

Backup

XDCR

Security

Settings

Logs

Documents

Query

Indexes

filter buckets...

name	items	resident	ops/sec	RAM used/quota	disk used	
Beer	1,329	100%	0	28.8MB / 200MB	11MB	Documents Scopes & Collections

Type: Couchbase

Bucket RAM Quota: 200MB

Cluster RAM Quota: 6.2GB

Replicas: 1

Server Nodes: 1

Ejection Method: Value-Only

Conflict Resolution: Sequence Number

Compaction: Not active

Compression: Passive

Storage Backend: CouchStore

Memory



Disk

