

NoSQL-Assignment

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1. Import `travel-sample` bucket:

The image shows two screenshots of the Accolitecluster web interface. The top screenshot is the 'Settings' page, specifically the 'Sample Buckets' tab. It displays a sidebar with navigation links (Dashboard, Servers, Buckets, XDCR, Security, Settings, Logs, Documents, Query, Indexes, Search, Views) and a main content area. The 'Sample Buckets' section includes a description, a note about access privileges, a list of 'Available Samples' (gamesim-sample), a list of 'Installed Samples' (beer-sample, travel-sample), and a 'Load Sample Data' button. The bottom screenshot is the 'Buckets' page, showing a table of buckets. The table has columns for name, items, resident status, ops/sec, RAM used/quota, and disk used. Two buckets are listed: 'beer-sample' and 'travel-sample'. The 'travel-sample' bucket has 63,182 items and is 100% resident. The interface also includes a search bar and links for 'Documents' and 'Scopes & Collections' for each bucket.

Settings - Sample Buckets

Sample Buckets contain example data, views, and indexes for your experimentation.

Sample buckets — like all buckets in Couchbase Server 5.0+ — can only be accessed by a user with privileges for that bucket.

Available Samples

- ☐ gamesim-sample

Installed Samples

- beer-sample
- travel-sample

[Load Sample Data](#)

Buckets

name	items	resident	ops/sec	RAM used/quota	disk used	
beer-sample	0	100%	0	23.5MB / 200MB	8.12MB	Documents Scopes & Collections
travel-sample	63,182	100%	311	107MB / 200MB	61.7MB	Documents Scopes & Collections

2. Write a query to get the sum of all distances where type="route" for each airline id

localhost:8091/ui/index.html#/query/workbench?scenarioBucket=beer-sample&scenarioZoom=minute

BETA - PREVIEW MODE - UNSUPPORTED - NOT FOR USE IN PRODUCTION

Accolitecluster > Query

Workbench

Query Editor

```

1 SELECT airlineid,
2     SUM(distance) AS DistanceSum
3     FROM `travel-sample`
4     WHERE type="route"
5     GROUP BY airlineid;

```

Execute Explain External Query Advisor success just now | elapsed: 4.1s | execution: 4.1s | docs: 214 | size: 18217 bytes

Query Results

DistanceSum	airlineid
347965.52063718165	airline_324
157871.12169602897	airline_4319
65046.67324511321	airline_4940
11293.378451859882	airline_1478
595.2753756507055	airline_16262
1005425.3948668552	airline_3029
884.3925517451845	airline_8809
12550.262050761774	airline_2117

Data Insights

- beer-sample 1 collection
 - _default scope 0 docs
- travel-sample 6 collections
 - _default scope 31591 docs
 - inventory scope 187 docs
 - 'type' = "airline" 100.0%
 - airport 1968 docs
 - 'type' = "airport" 100.0%
 - hotel 11031196 docs

Refresh

3. Write queries to join(LEFT,RIGHT,INNER) type="route"&"airline" and fetch the data whose sourceairport="SFO":

localhost:8091/ui/index.html#/query/workbench?scenarioBucket=NewBucket&scenarioZoom=minute

Dummy > Query

Query Workbench

Query Editor

```

1 SELECT *
2 FROM `travel-sample` r
3 JOIN `travel-sample` a ON r.airlineid = META(a).id

```

Execute Explain External Query Advisor success just now | elapsed: 64ms | execution: 64ms | docs: 183 | size: 668123 bytes

Query Results

1	2	3	4	5	6	7	8	9	10	11	12
{											
"a": {											
"callsign": "JETBLUE",											
"country": "United States",											
"iata": "B6",											
"icao": "J80",											
"id": 3029,											
"name": "JetBlue Airways",											
"type": "airline"											
},											
"r": {											

Data Insights

Queryable Buckets

- beer-sample sampled 1000 of 7303
 - 'srn' = 0, 'type' = "beer" 81.0%
 - 'type' = "brewery" 19.0%
 - Indexes
- dummy1 sampled 2 of 2
 - 'name' = "new hotel", 'type2' = "o"
 - Indexes
- travel-sample sampled 1000 of 31591
 - 'stops' = 0, 'type' = "route" 81.3%
 - 'type' = "landmark" 10.7%
 - 'type' = "hotel" 3.1%
 - 'callsign' = "LONGHORN", 'country' = "US" 4.8%
 - Indexes

Queryable By Doc ID Only

NewBucket Refresh

LEFT JOIN:

The screenshot displays the Dummy Query Workbench interface. The top navigation bar includes a logo, the text "Dummy > Query", and buttons for "IMPORT" and "EXPORT". Below this is a "Query Workbench" dropdown menu. The left sidebar contains a navigation menu with items: Dashboard, Servers, Buckets, XDCR, Security, Settings, Logs, Documents, Query (selected), Indexes, Search, and Views. The main area is divided into three sections:

- Query Editor:** Contains a SQL query:

```
1 SELECT *
2 FROM `travel-sample` r LEFT
3 JOIN `travel-sample` a ON r.airlineid = META(a).id
4 WHERE r.sourceairport = "SFO"
```

Below the query are buttons for "Execute" and "Explain". To the right of these buttons, status information reads: "External Query Advisor success just now | elapsed: 73ms | execution: 73ms | docs: 249 | size: 887372 bytes". A "format" icon is also present.
- Query Results:** Shows the results in JSON format. The first result is:

```
{
  "r": {
    "airline": "AI",
    "airlineid": "airline_218",
    "destinationairport": "HKG",
    "distance": 11128.182035009515,
    "equipment": "77W",
    "id": 10624,
    "schedule": [

```
- Data Insights:** Displays "Queryable Buckets" with statistics for three buckets:
 - beer-sample:** sampled 1000 of 7303
 - `'srm' = 0, 'type' = "beer"`: 81.0%
 - `'type' = "brewery"`: 19.0%
 - Indexes
 - dummy1:** sampled 2 of 2
 - `'name' = "new hotel", 'type2' = "o"`
 - Indexes
 - travel-sample:** sampled 1000 of 31591
 - `'stops' = 0, 'type' = "route"`: 81.3%
 - `'type' = "landmark"`: 10.7%
 - `'type' = "hotel"`: 3.1%
 - `'callsign' = "LONGHORN", 'country'`
 - `'type' = "airport"`: 4.8%
 - IndexesAt the bottom of this section, it says "Queryable By Doc ID Only" and "NewBucket Refresh" with a refresh icon and the number 79.

RIGHT JOIN:

The screenshot shows the Dummy Query Workbench interface. The top navigation bar includes 'Dashboard', 'Servers', 'Buckets', 'XDCR', 'Security', 'Settings', and 'Logs'. The main area is divided into three sections: 'Query Editor', 'Query Results', and 'Data Insights'.

Query Editor: Contains a SQL query:


```
1 SELECT *
2 FROM `travel-sample` r RIGHT
3 JOIN `travel-sample` a ON r.airlineid = META(a).id
4 WHERE r.sourceairport = "SFO"
```

 Below the query are buttons for 'Execute' and 'Explain'. The 'Explain' button is highlighted, and the status bar shows 'External Query Advisor success just now | elapsed: 9.3s | execution: 9.3s | docs: 183 | size: 668123 bytes'.

Query Results: Displays the results in JSON format. The first result is:


```
{
  "a": {
    "callsign": "CITRUS",
    "country": "United States",
    "iata": "FL",
    "icao": "TRS",
    "id": 1316,
    "name": "Airfran Airways",
    "type": "airline"
  }
}
```

 The interface also shows 'Table', 'JSON', 'Tree', 'Plan', and 'Plan Text' tabs.

Data Insights: Provides a summary of data across different buckets:

- beer-sample:** sampled 1000 of 7303. Insights include: 'srm' = 0, 'type' = "beer" (81.0%), 'type' = "brewery" (19.0%).
- dummy1:** sampled 2 of 2. Insights include: 'name' = "new hotel", 'type2' = "o".
- travel-sample:** sampled 1000 of 31591. Insights include: 'stops' = 0, 'type' = "route" (81.3%), 'type' = "landmark" (10.7%), 'type' = "hotel" (3.1%), 'callsign' = "LONGHORN", 'country' = "airport" (4.8%).

4. Write a mapreduce to get the number of all documents based on entities(type):

The screenshot shows the Dummy Query Workbench interface with a MapReduce job configuration. The top navigation bar includes 'Documents', 'Query', 'Indexes', 'Search', and 'Views'. The main area is divided into three sections: 'View Index Code', 'Map', and 'Reduce'.

View Index Code: Displays a snippet of JSON data:


```
10 "flight": "LS224",
11 "utc": "13:06:00"
12 }, {
13 "day": 1,
14 "flight": "LS119",
```

Map: Contains a JavaScript function:

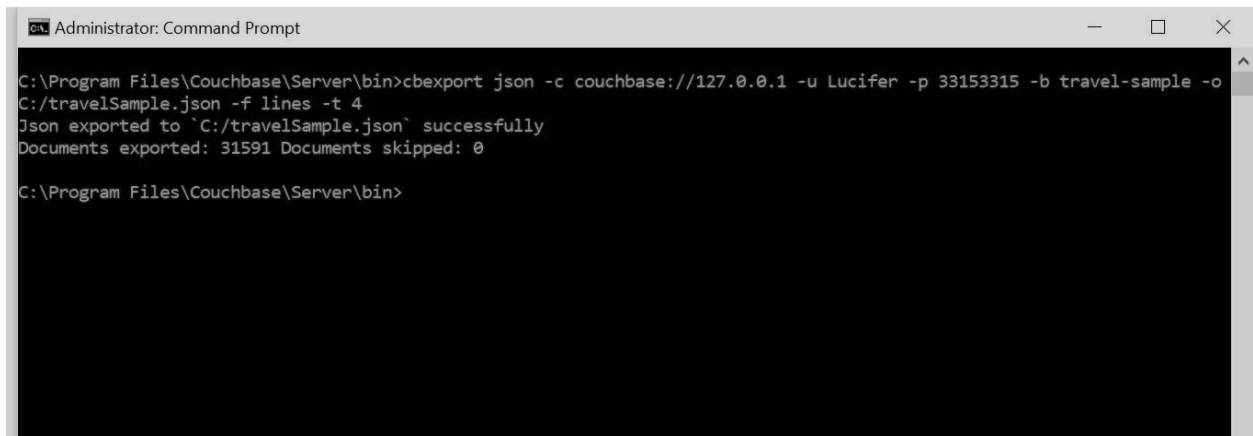

```
1 function (doc, meta) {
2   if(doc.type == "route")
3     emit(meta.id, null);
4 }
```

Reduce: Contains a JavaScript function:


```
1 _count
```

Results: Shows a filter: 'filter: ?limit=6&stale=false&connection_timeout=60000&inclusive_end=true&skip=0&full_set='. Below the filter are buttons for 'Development Time Subset' and 'Full Cluster Data Set'. The 'Full Cluster Data Set' button is highlighted. At the bottom, there are buttons for '<', '>', and 'Show Results'.

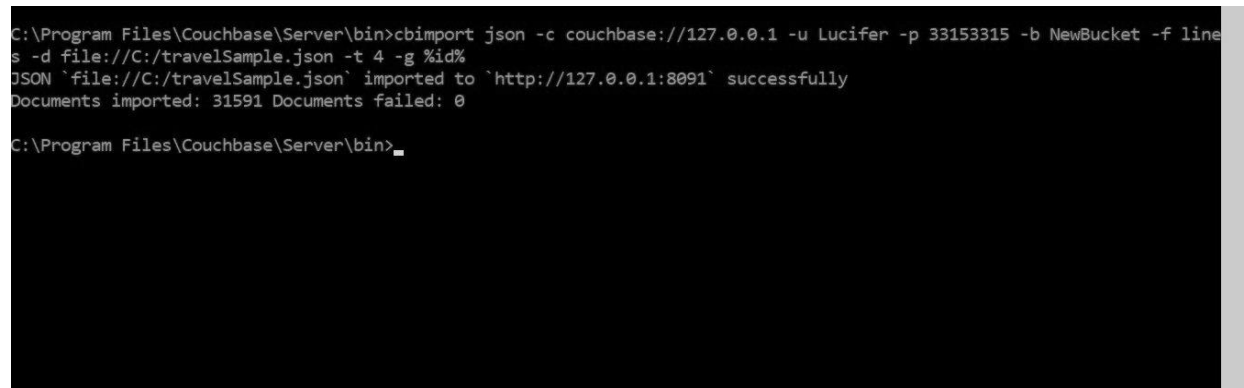
5. Refer CLI interface & try to export the travel sample data.



```
Administrator: Command Prompt

C:\Program Files\Couchbase\Server\bin>cbexport json -c couchbase://127.0.0.1 -u Lucifer -p 33153315 -b travel-sample -o
C:/travelSample.json -f lines -t 4
Json exported to `C:/travelSample.json` successfully
Documents exported: 31591 Documents skipped: 0

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



```
C:\Program Files\Couchbase\Server\bin>cbimport json -c couchbase://127.0.0.1 -u Lucifer -p 33153315 -b NewBucket -f line
s -d file://C:/travelSample.json -t 4 -g %id%
JSON `file://C:/travelSample.json` imported to `http://127.0.0.1:8091` successfully
Documents imported: 31591 Documents failed: 0

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

The screenshot shows the Couchbase Dashboard interface. On the left is a navigation menu with links: Dashboard, Servers, Buckets, XDCR, Security, Settings, Logs, Documents, Query, Indexes, Search, and Views. The main area displays a table of buckets. A search bar at the top left of the table contains the text "filter buckets...".

name ▼	items	resident	ops/sec	RAM used/quota	disk used	
beer-sample	7,303	100%	0	36.4MB / 100MB	24.8MB	Documents Statistics
dummy1	2	100%	0	33.2MB / 100MB	15.6MB	Documents Statistics
NewBucket	28,579	100%	0	67.1MB / 100MB	28.4MB	Documents Statistics

Below the 'NewBucket' row, detailed configuration and usage information is shown:

- Type: Couchbase
- Bucket RAM Quota: 100MB
- Cluster RAM Quota: 4.25GB
- Replicas: 1
- Server Nodes: 1
- Ejection Method: Value-Only
- Conflict Resolution: Sequence Number
- Compaction: Not active

Usage bars are displayed for Memory and Disk:

- Memory:** cluster quota (4.25 GB). Legend: other buckets (300 MB) [blue], this bucket (100 MB) [light blue], remaining (3.86 GB) [orange].
- Disk:** total cluster storage (202 GB). Legend: other buckets (107 MB) [blue], this bucket (28.4 MB) [light blue], remaining (141 GB) [orange].

At the bottom right of the bucket details section are three buttons: Delete, Compact, and Edit.

name ▼	items	resident	ops/sec	RAM used/quota	disk used	
travel-sample	31,591	100%	0	75.2MB / 100MB	66.7MB	Documents Statistics

The screenshot shows the NoSQL Editor web application. The top navigation bar includes links for Dashboard, Servers, Buckets, XDCR, Security, Settings, Logs, Documents, Query, Indexes, Search, and Views. The main header displays "Dummy > Documents" and provides options for "CLASSIC EDITOR" and "ADD DOCUMENT". Below this, there are tabs for "Document Editor" and "Import Documents".

In the "Document Editor" tab, the "Bucket" dropdown is set to "NewBucket". The "Limit" is 50 and the "Offset" is 0. The "Document ID" field contains "optional...". To the right, it says "show range: N1QL WHERE" and "no indexes available...". A blue button labeled "Retrieve Docs" is present.

Below the retrieval controls, it states "50 Results for NewBucket, limit: 50, offset: 0". There is a toggle switch for "enable field editing" which is currently turned off. Navigation links "< prev batch | next batch >" are also visible.

	id	
	10	{\"iata\":\"Q5\",\"icao\":\"MLA\",\"id\":10,\"name\":\"40-Mile Air\",\"type\":\"airline\",\"callsign\":\"MILE-AIR\",\"cour States\"}
	10000	{\"type\":\"route\",\"airline\":\"AF\",\"airlineid\":\"airline_137\",\"destinationairport\":\"MRS\",\"distance\":2881 d\":10000,\"sourceairport\":\"TLV\",\"equipment\":{\"320\",\"schedule\":{\"(\"day\":0,\"flight\":\"AF198...
	10001	{\"destinationairport\":\"NCE\",\"distance\":2735.2013399811754,\"equipment\":{\"320\",\"schedule\":{\"(\"day\":0,\"flight\":\"AF248\",\"utc\":{\"21:24:00\"},{(\"day\":1,\"flight\":\"AF517\",\"utc\":{\"13:36:00\"},{(\"flight\":\"AF...
	10002	{\"schedule\":{\"(\"day\":0,\"flight\":\"AF678\",\"utc\":{\"15:05:00\"},{(\"day\":0,\"flight\":\"AF392\",\"utc\":{\"11:04:00\"}, {\"day\":0,\"flight\":\"AF114\",\"utc\":{\"07:35:00\"},{(\"day\":0,\"flight\":\"AF062\",\"utc\":{\"02:03:00\"},{(\"day\":1,\"f...
	10003	{\"airline\":\"AF\",\"schedule\":{\"(\"day\":0,\"flight\":\"AF986\",\"utc\":{\"22:26:00\"},{(\"day\":0,\"flight\":\"AF962\",\"ut {\"day\":0,\"flight\":\"AF301\",\"utc\":{\"12:11:00\"},{(\"day\":0,\"flight\":\"AF923\",\"utc\":{\"04:31:00...
	10004	{\"airline\":\"AF\",\"airlineid\":\"airline_137\",\"destinationairport\":\"AMS\",\"equipment\":{\"777\",\"schedule\" [(\"flight\":\"AF545\",\"utc\":{\"13:22:00\",\"day\":0},{(\"day\":0,\"flight\":\"AF350\",\"utc\":{\"01:21:00\"},{(\"day\":0,\"fl...
	10005	{\"airlineid\":\"airline_137\",\"destinationairport\":\"MNL\",\"schedule\":{\"(\"day\":0,\"flight\":\"AF117\",\"utc\":{\"(\"day\":0,\"flight\":\"AF996\",\"utc\":{\"16:52:00\"},{(\"day\":1,\"flight\":\"AF210\",\"utc\":{\"14:25:00\"},{(\"...
	10006	{\"airline\":\"AF\",\"distance\":365.28208402314306,\"schedule\":{\"(\"day\":0,\"flight\":\"AF288\",\"utc\":{\"05:02...