

Annex

Databases

Database name

Create Database

{ } JSON

Name	Size	# of Docs	Partitioned	Actions
_replicator	2.3 KB	1	No	<div></div> <div></div> <div></div>
_users	2.3 KB	1	No	<div></div> <div></div> <div></div>
items	0 bytes	0	No	<div></div> <div></div> <div></div>
mycompany	2.8 KB	4	No	<div></div> <div></div> <div></div>
mydb	0 bytes	0	No	<div></div> <div></div> <div></div>
products	8.3 KB	21	No	<div></div> <div></div> <div></div>
products_2	1.6 MB	40	No	<div></div> <div></div> <div></div>

Showing 1-7 of 7 databases. Databases per page 20 1

Fraser on
12/01/2010
v 3.2.2
Log Out

Image 1: Interface of the databases created in CouchDB

products_2 > Mango Query

{ } JSON

Create Document

Query history

Mango Query

1-7

Run Query

Explain

manage indexes

Executed in 6 ms

Country	CustomerID	Description	InvoiceDate	InvoiceNo
<input type="checkbox"/> United Kingdom	13047	ASSORTED COLOUR BIRD OR...	12/01/2010 8:34	536367
<input type="checkbox"/> France	12583	ALARM CLOCK BAKELIKE PINK	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	ALARM CLOCK BAKELIKE RED	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	ALARM CLOCK BAKELIKE GRE...	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	PANDA AND BUNNIES STICKE...	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	STARS GIFT TAPE	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	INFLATABLE POLITICAL GLOBE	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	VINTAGE HEADS AND TAILS C...	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	SET/2 RED RETROSPOT TEA T...	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	ROUND SNACK BOXES SET O...	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	SPACEBOY LUNCH BOX	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	LUNCH BOX I LOVE LONDON	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	CIRCUS PARADE LUNCH BOX	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	CHARLOTTE BAG DOLLY GIRL ...	12/01/2010 8:45	536370
<input type="checkbox"/> France	12583	RED TOADSTOOL LED NIGHT L...	12/01/2010 8:45	536370

Image 2: Execution of query

```
C:\Users\ferna>curl -X PUT http://fernando:123456@127.0.0.1:5984/mydb {"ok":true}
```

Image 3: CURL PUT command to access to a database create

```
C:\Users\ferna>curl -X GET http://fernando:123456@127.0.0.1:5984/_all_dbs ["_replicator","_users","my_db","mycompany","mydb","products"]
```

Image 4: CURL GET command to access to a database create

```
C:\Users\ferna>curl -X DELETE http://fernando:123456@127.0.0.1:5984/my_db
{"ok":true}
```

Image 4: CURL GET command to access to a database create

```
{
  "InvoiceNo": 536365,
  "StockCode": "85123A",
  "Description": "WHITE HANGING HEART T-LIGHT HOLDER",
  "Quantity": 6,
  "InvoiceDate": "12/01/2010 8:26",
  "UnitPrice": 2.55,
  "CustomerID": 17850,
  "Country": "United Kingdom"
},
```

Image 5: One item of dataset in JSON format

The screenshot shows the MongoDB Compass interface. On the left, a sidebar lists the connected instance 'localhost:27017' and a tree view of databases and collections. The 'product' database is expanded, showing 'experiment' and 'products' collections. The main panel displays the 'Collections' tab with a table of collection statistics:

Collection Name	Storage size	Documents	Avg. document size	Indexes	Total index size
experiment	20.48 kB	40	191.00 B	1	20.48 kB
products	4.90 MB	100 K	219.00 B	2	1.58 MB

Image 6: Interface of the databases created in MongoDB

The screenshot shows the 'Indexes' tab for the 'product.products' collection. At the top right, it indicates '100.0k' documents and '2' indexes. The main area displays a table of indexes:

Name and Definition	Type	Size	Usage	Properties
> Quantity_1	REGULAR	561.2 KB	0 (since Sun Dec 04 2022)	
> _id_	REGULAR	1.0 MB	0 (since Sun Dec 04 2022)	UNIQUE

Image 7: Indexes created in a collection

```

> db.products.find({Quantity:{ $gt: "2" }}).explain("executionStats")
< { explainVersion: '1',
  queryPlanner:
    { namespace: 'product.products',
      indexFilterSet: false,
      parsedQuery: { Quantity: { '$gt': '2' } },
      queryHash: '1863E287',
      planCacheKey: '1863E287',
      maxIndexedOrSolutionsReached: false,
      maxIndexedAndSolutionsReached: false,
      maxScansToExplodeReached: false,
      winningPlan:
        { stage: 'COLLSCAN',
          filter: { Quantity: { '$gt': '2' } },
          direction: 'forward' },
      rejectedPlans: [] },
  executionStats:
    { executionSuccess: true,
      nReturned: 35606,
      executionTimeMillis: 105,
      totalKeysExamined: 0,
      totalDocsExamined: 99999,
      executionStages:
        { stage: 'COLLSCAN',
          filter: { Quantity: { '$gt': '2' } },
          nReturned: 35606,
          executionTimeMillisEstimate: 6,

```

Image 8: Query executed in MongoDB shell

The screenshot shows the Microsoft Azure Cosmos DB interface. On the left, a sidebar lists the database structure: 'e-commerce' (Scale), 'c1' (Container), and 'Container_1' (Items). The main area displays a table of items with columns 'id' and '/id'. The table contains 16 rows of data. On the right, a detailed view of an item is shown, displaying its JSON structure with fields like 'InvoiceNo', 'StockCode', 'Description', 'Quantity', 'InvoiceDate', 'UnitPrice', 'CustomerID', 'Country', 'id', '_self', '_etag', '_attachments', and '_ts'.

id	/id
811d65fc-5477-...	811d65fc-5477-...
6620295a-9e3c-...	6620295a-9e3c-...
ba15bc6f-1f5a-4...	ba15bc6f-1f5a-4...
a8f8d282-e5ca-4...	a8f8d282-e5ca-4...
e5e9773b-33d1-...	e5e9773b-33d1-...
2e1aa3bf-d73d-...	2e1aa3bf-d73d-...
cc01a2bd-2916-...	cc01a2bd-2916-...
a7e13a31-8593-...	a7e13a31-8593-...
2b4d627c-3eec-...	2b4d627c-3eec-...
df805716-fab6-4...	df805716-fab6-4...
30cd8373-973d-...	30cd8373-973d-...
7fc9f590-1ef3-4...	7fc9f590-1ef3-4...
8c46f0cc-a43b-4...	8c46f0cc-a43b-4...
d425265a-da14-...	d425265a-da14-...
69d4085c-42ee-...	69d4085c-42ee-...
14eb5293-b593-...	14eb5293-b593-...

```

1 {
2   "InvoiceNo": 536365,
3   "StockCode": "85123A",
4   "Description": "WHITE HANGING HEART T-LIGHT HOLDER",
5   "Quantity": 6,
6   "InvoiceDate": "12/01/2010 8:26",
7   "UnitPrice": 2.55,
8   "CustomerID": 17850,
9   "Country": "United Kingdom",
10  "id": "811d65fc-5477-4286-9eb3-75c34d7681fa",
11  "_id": "14gUaL708A8BAAAAAAAAAAAAAA==",
12  "_self": "dbs/14gUaL708A8B/cols/14gUaL708A8B/docs/14gUaL708A8BAAAAAAAAAAAAAA==/",
13  "_etag": "\"0000eb26-0000-0700-0000-638641110000\"",
14  "_attachments": "attachments/",
15  "_ts": 1669742865
16 }

```

Image 9: CosmosDB interface

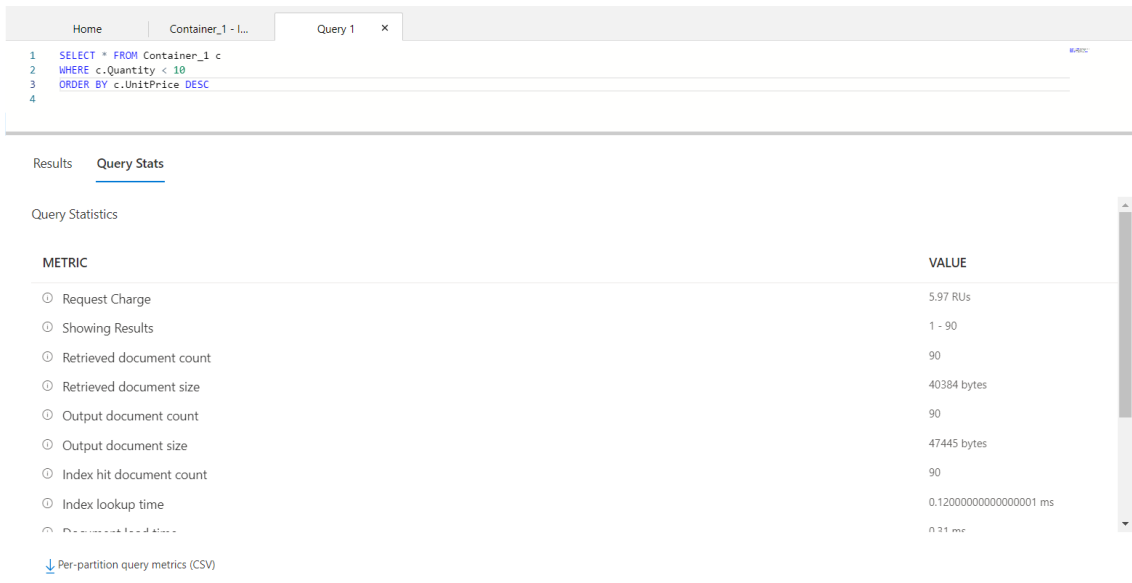


Image 10: Query statistics in CosmosDB

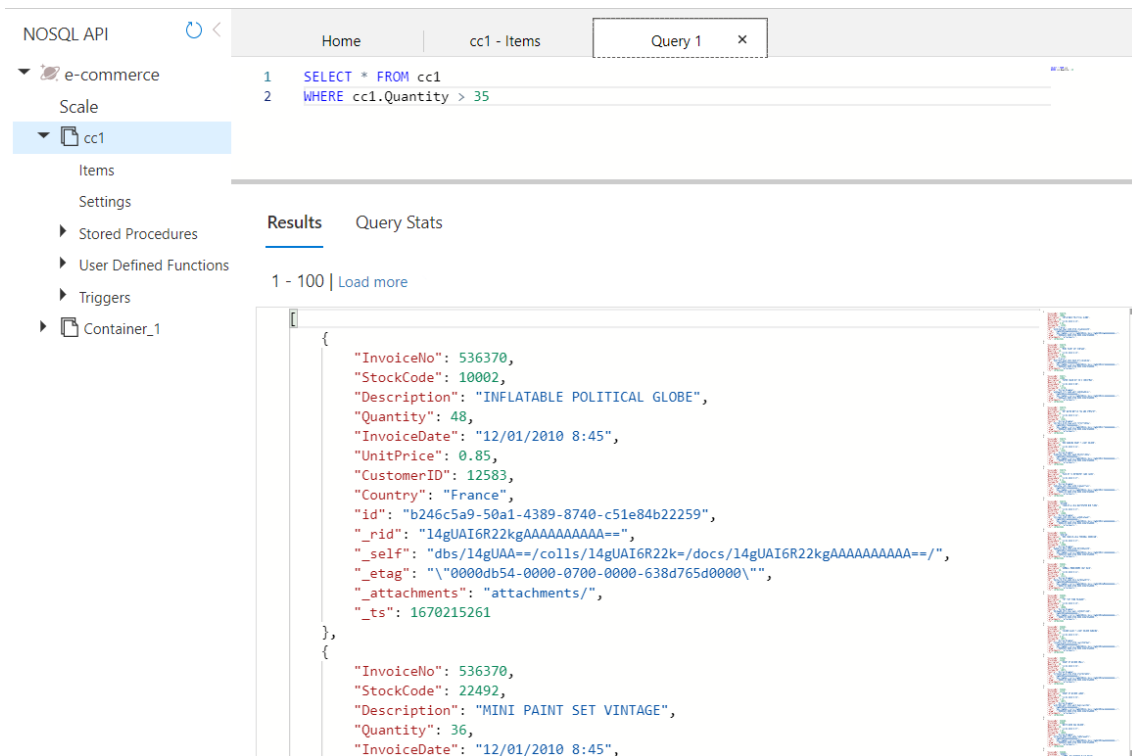


Image 11: Simulation 2

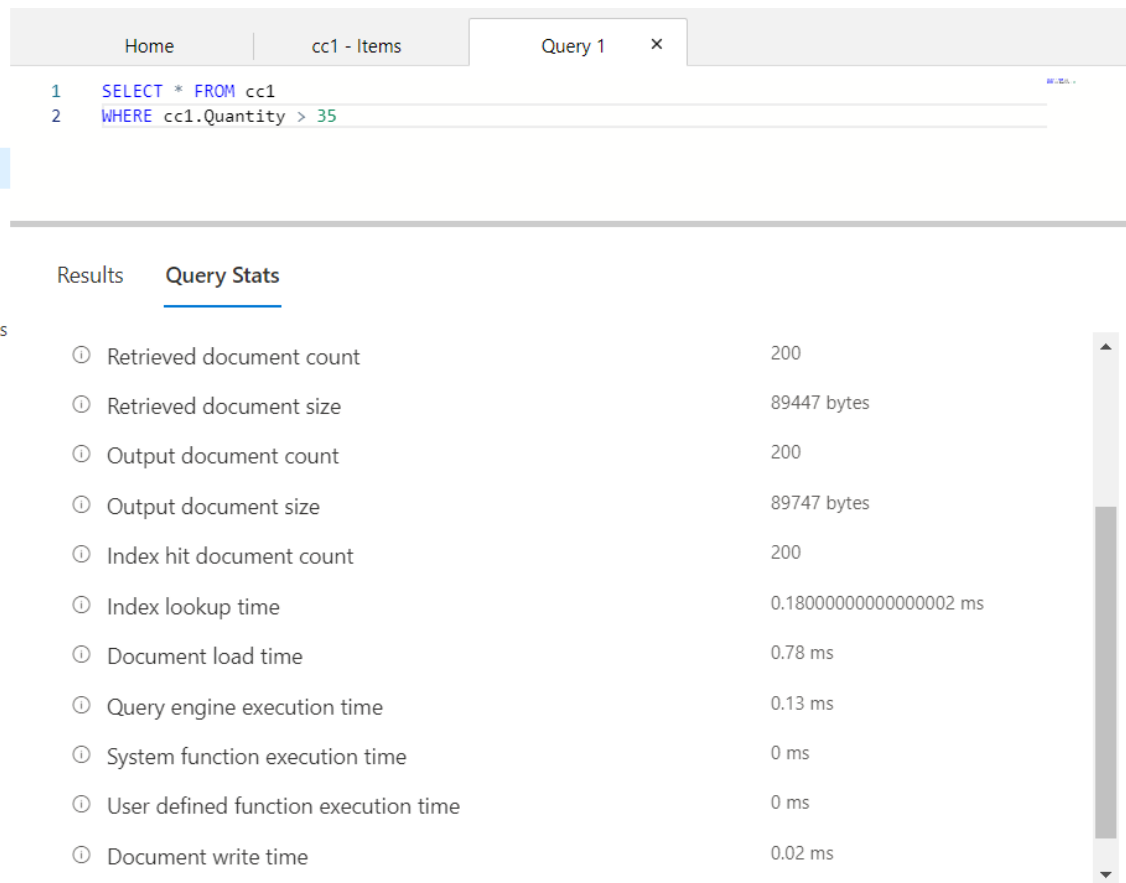


Image 12: Simulation query statistics for the first one hundred values

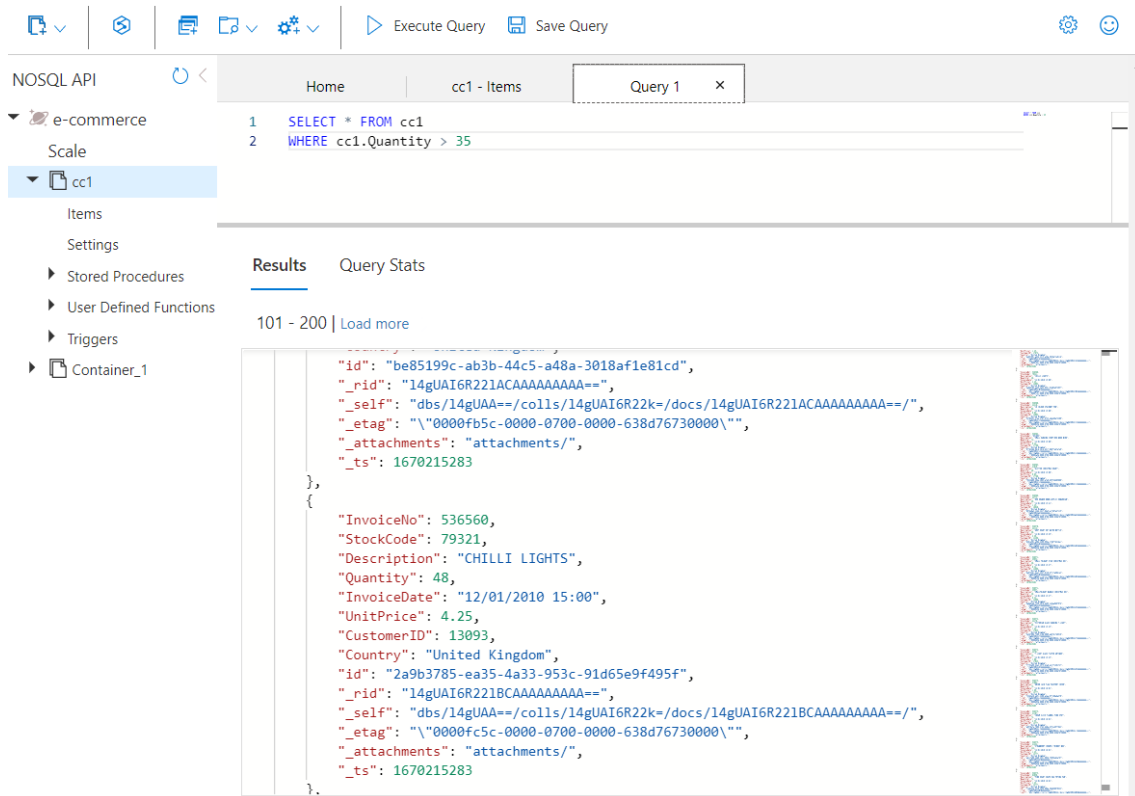


Image 13: Simulation query statistics for the first one hundred values

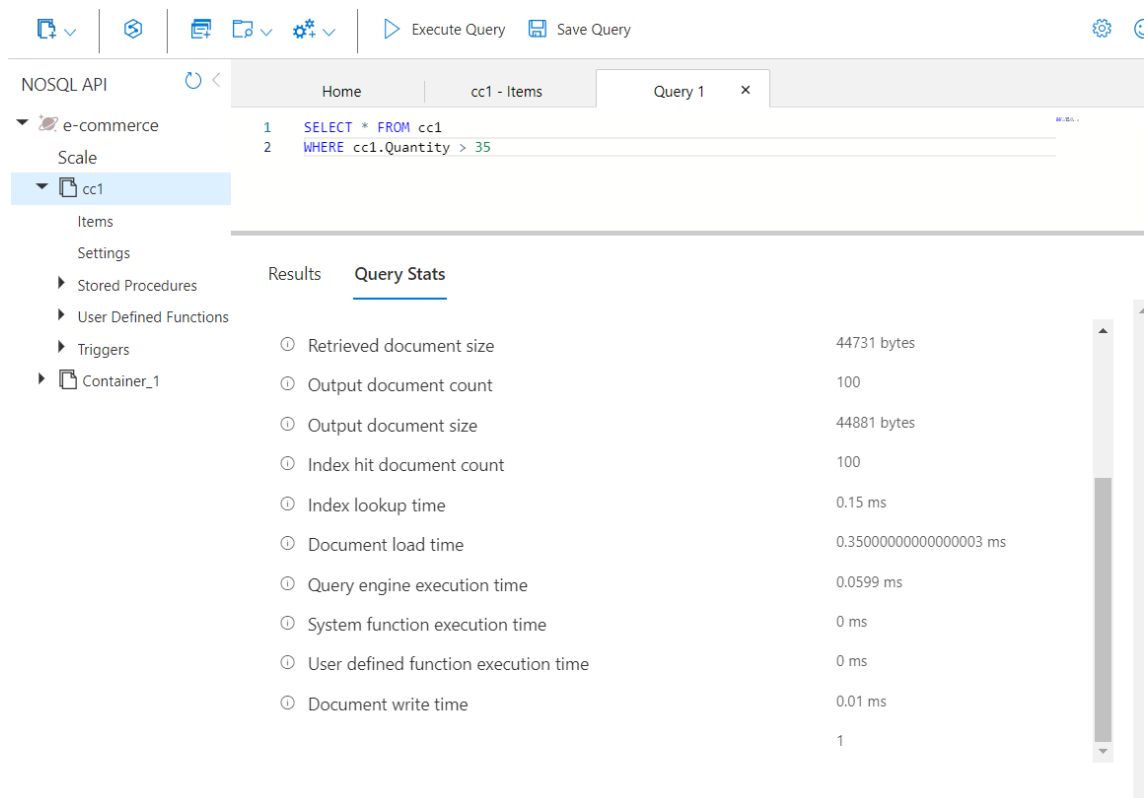


Image 14: Simulation query statistics for the first one hundred values