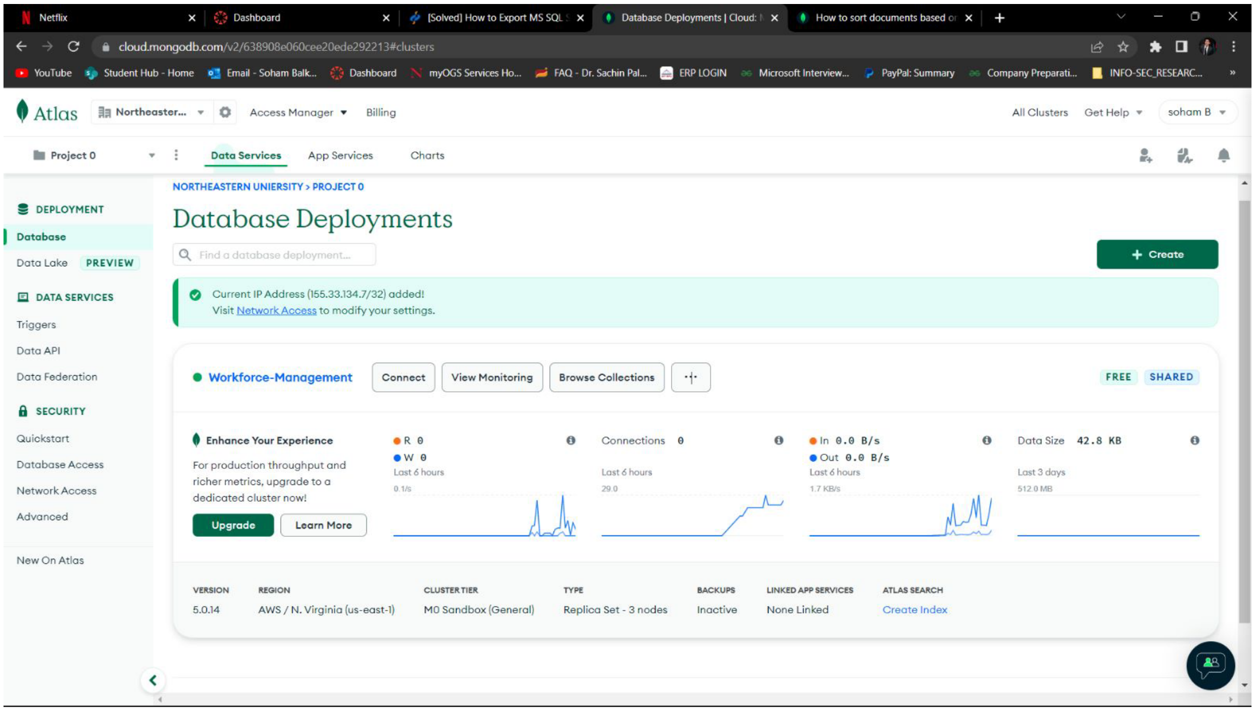
Implementation in NoSQL

NoSQL database technology stores information in JSON documents instead of columns and rows used by relational databases. To be clear, NoSQL stands for “not only SQL” rather than “no SQL” at all.

Combines the flexibility of JSON with the power of SQL for the best of both worlds. Consequently, NoSQL databases are built to be flexible, scalable, and capable of rapidly responding to the data management demands of modern businesses.

MongoDB is one of the foremost open-source NoSQL systems. It is a document-oriented database that uses dynamic schemas to store JSON-like documents. This database solution features a flexible data model, enabling users to store unstructured data. Users can also access full indexing support and replication through intuitive API.

The following screenshot represents the deployment for Workforce Management System in MongoDB.

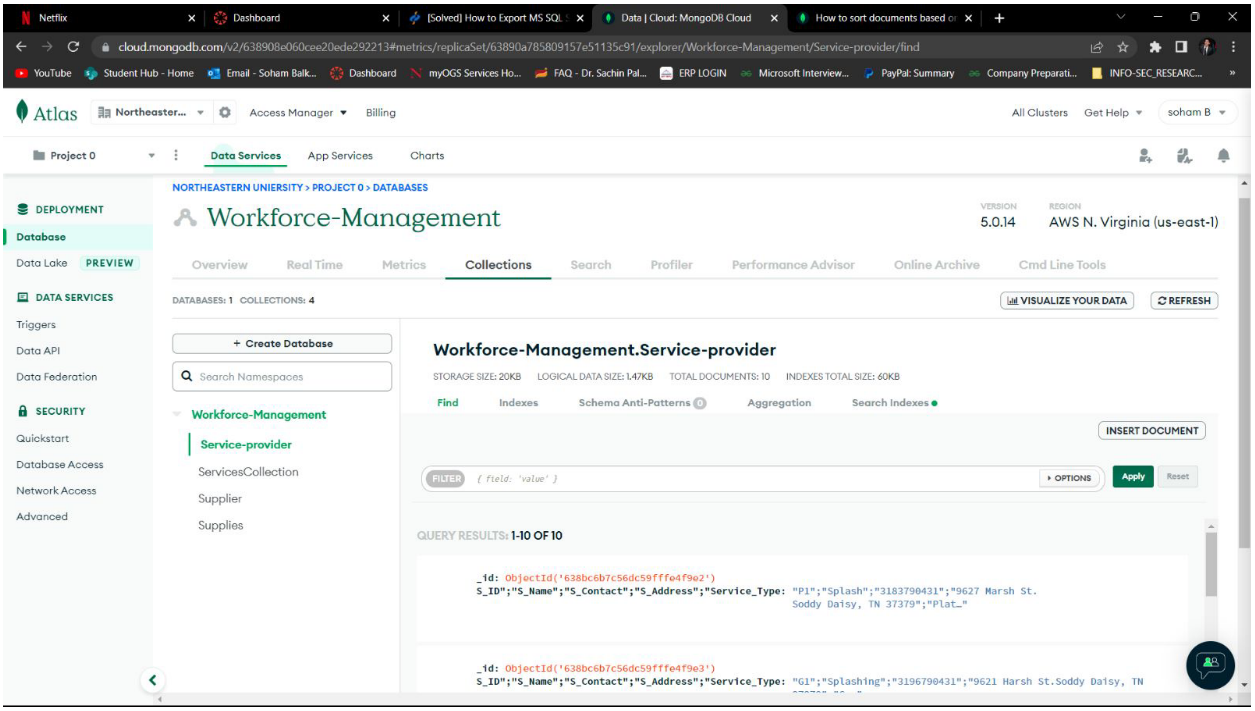


Current IP Address (155.33.134.7/32) added!
Visit Network Access to modify your settings.

For production throughput and richer metrics, upgrade to a dedicated cluster now!

VERSION	REGION	CLUSTER TIER	TYPE	BACKUPS	LINKED APP SERVICES	ATLAS SEARCH
5.0.14	AWS / N. Virginia (us-east-1)	M0 Sandbox (General)	Replica Set - 3 nodes	Inactive	None Linked	Create Index

The following screenshots represent the collections created under the Workforce Management System in MongoDB.



NORTHEASTERN UNIERSITY > PROJECT 0 > DATABASES

Workforce-Management

VERSION 5.0.14 REGION AWS N. Virginia (us-east-1)

DATABASES: 1 COLLECTIONS: 4

Workforce-Management
- Service-provider
- ServicesCollection
- Supplier
- Supplies

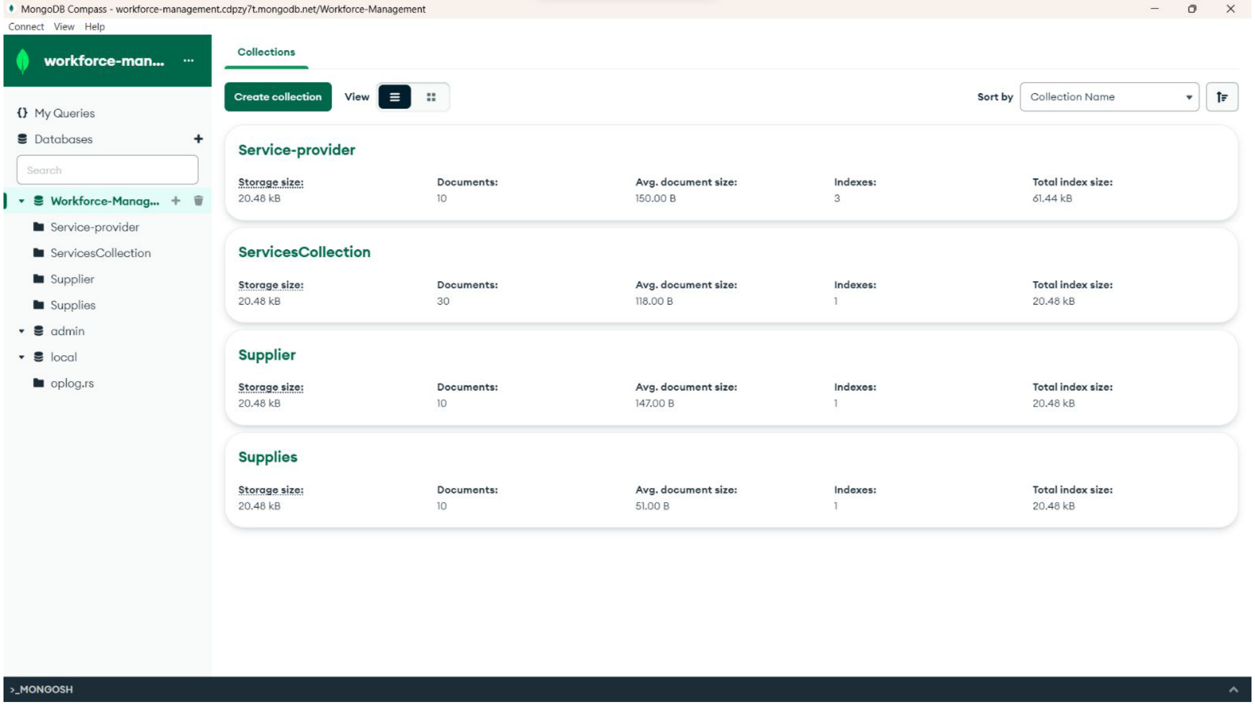
Workforce-Management.Service-provider

STORAGE SIZE: 20KB LOGICAL DATA SIZE: 1.47KB TOTAL DOCUMENTS: 10 INDEXES TOTAL SIZE: 60KB

{ field: 'value' }

QUERY RESULTS: 1-10 OF 10

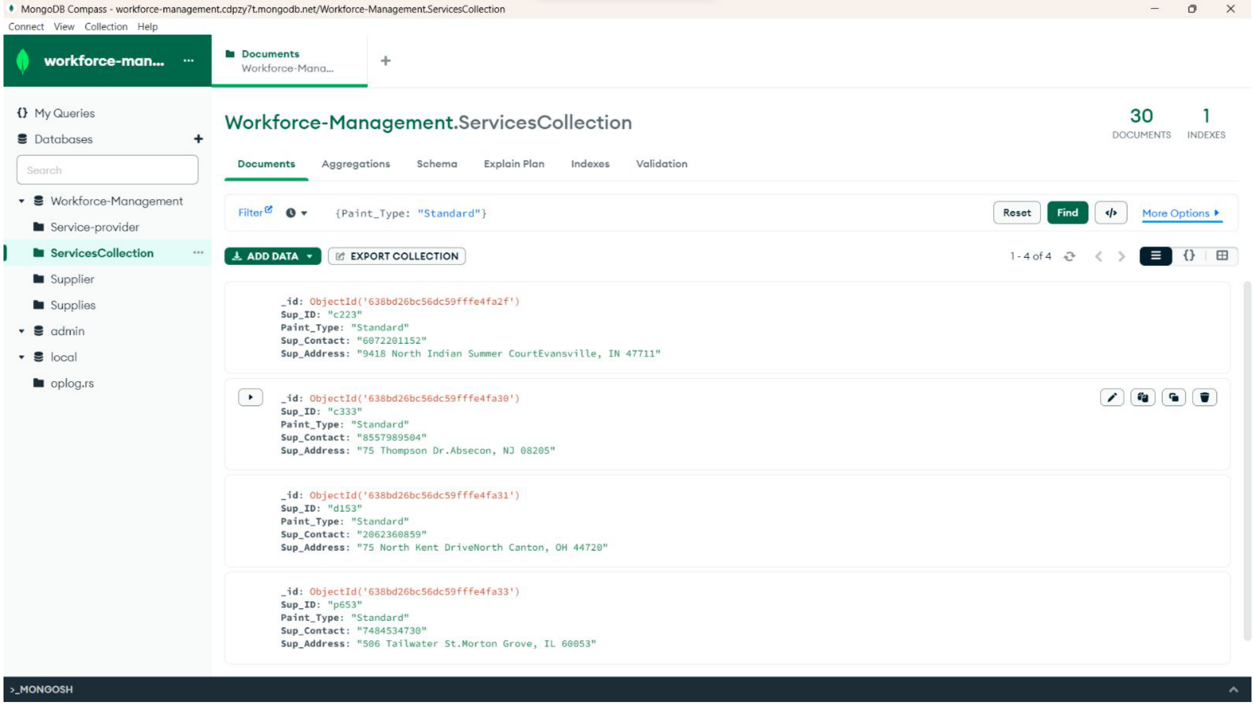
```
_id: ObjectId('638bc6b7c56dc59fffe4f9e2')
S_ID";"S_Name";"S_Contact";"S_Address";"Service_Type: "P1";"Splash";"3183790431";"9627 Marsh St.
                                                       Soddy Daisy, TN 37379";"Plat…"

_id: ObjectId('638bc6b7c56dc59fffe4f9e3')
S_ID";"S_Name";"S_Contact";"S_Address";"Service_Type: "G1";"Splashing";"3196790431";"9621 Harsh St.Soddy Daisy, TN
```



Collection	Storage size:	Documents:	Avg. document size:	Indexes:	Total index size:
Service-provider	20.48 kB	10	150.00 B	3	61.44 kB
ServicesCollection	20.48 kB	30	118.00 B	1	20.48 kB
Supplier	20.48 kB	10	147.00 B	1	20.48 kB
Supplies	20.48 kB	10	51.00 B	1	20.48 kB

Below are the examples of query implementation on Workforce Management System in MongoDB.

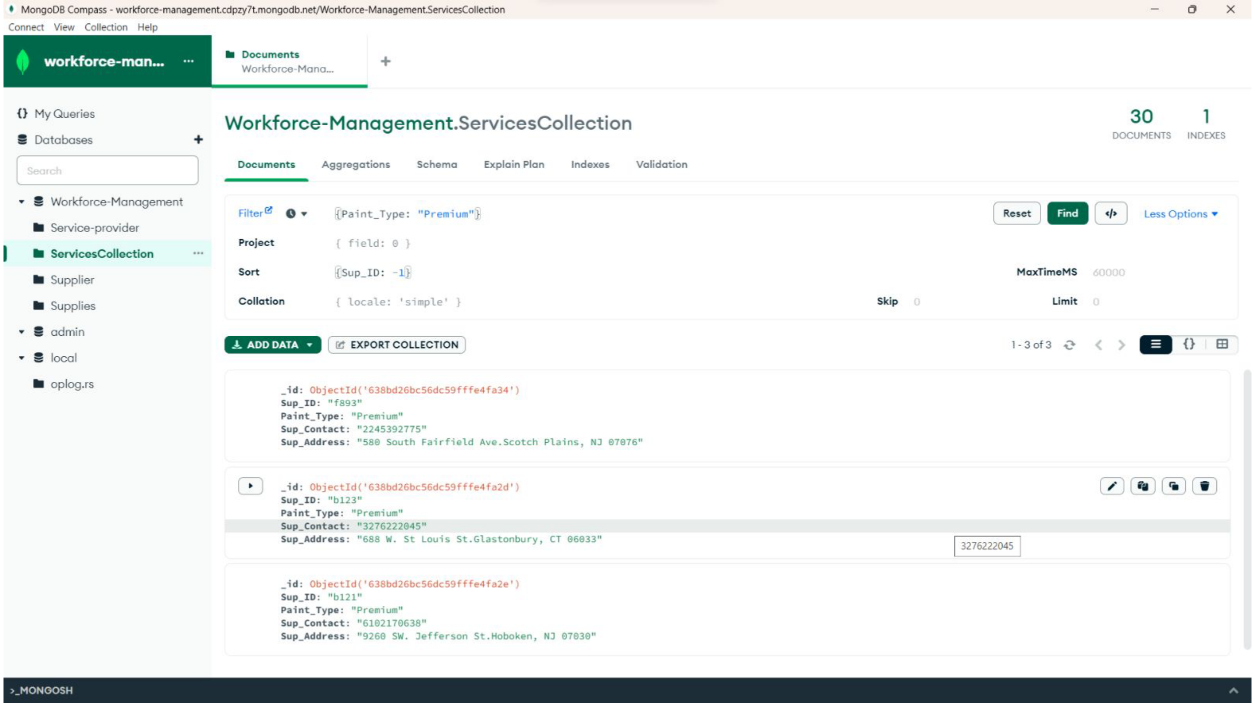
1. **The following screenshot represents the output for selecting supplier details for all those suppliers who supply ‘standard’ paint type for Workforce Management System in MongoDB.**



Filter {Paint_Type: "Standard"}

```
_id: ObjectId('638bd26bc56dc59fffe4fa2f')
Sup_ID: "c223"
Paint_Type: "Standard"
Sup_Contact: "6072201152"
Sup_Address: "9418 North Indian Summer CourtEvansville, IN 47711"

_id: ObjectId('638bd26bc56dc59fffe4fa30')
Sup_ID: "c333"
Paint_Type: "Standard"
Sup_Contact: "8557989504"
Sup_Address: "75 Thompson Dr.Absecon, NJ 08205"

_id: ObjectId('638bd26bc56dc59fffe4fa31')
Sup_ID: "d153"
Paint_Type: "Standard"
Sup_Contact: "2062360859"
Sup_Address: "75 North Kent DriveNorth Canton, OH 44720"

_id: ObjectId('638bd26bc56dc59fffe4fa33')
Sup_ID: "p653"
Paint_Type: "Standard"
Sup_Contact: "7484534730"
Sup_Address: "506 Tailwater St.Morton Grove, IL 60053"
```

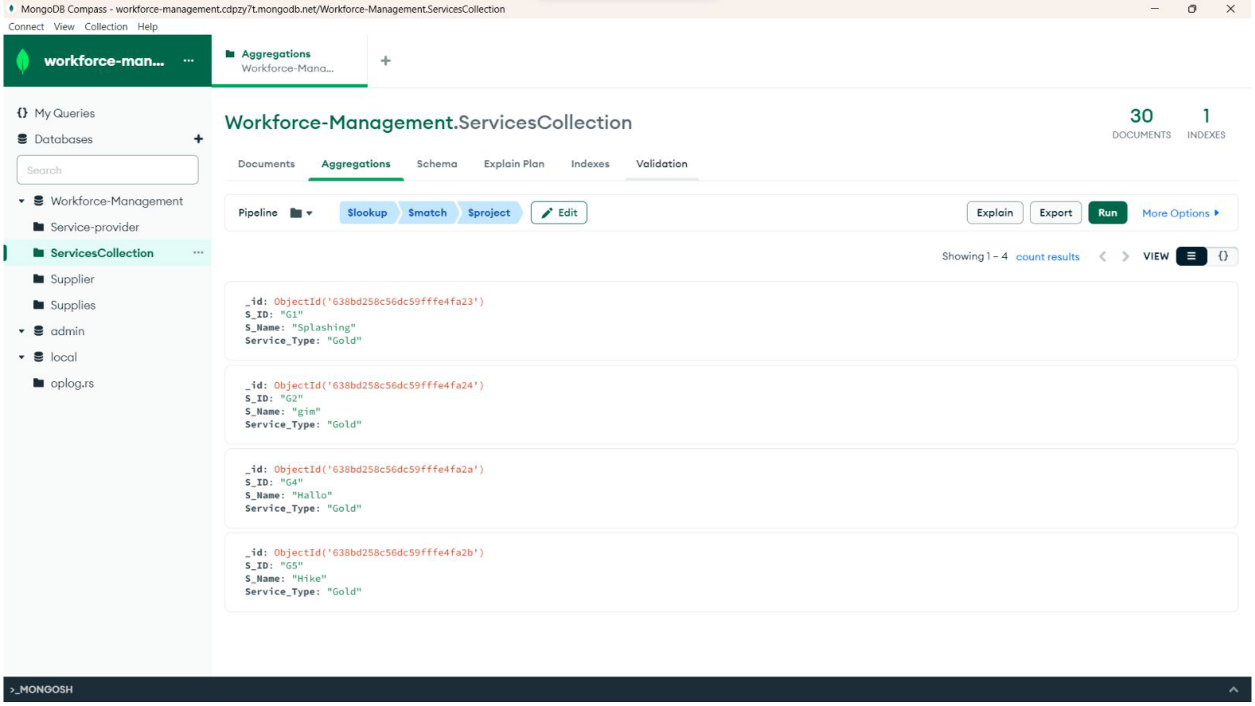
2. **The following screenshot represents the output for selecting supplier details for all those suppliers who supply ‘premium’ paint type for Workforce Management System in MongoDB and sort the result in descending order of supplier Id.**



Filter {Paint_Type: "Premium"}
Project { field: 0 }
Sort {Sup_ID: -1}
MaxTimeMS 60000
Collation { locale: 'simple' }
Skip 0
Limit 0

```
_id: ObjectId('638bd26bc56dc59fffe4fa34')
Sup_ID: "f893"
Paint_Type: "Premium"
Sup_Contact: "2245392775"
Sup_Address: "580 South Fairfield Ave.Scotch Plains, NJ 07076"

_id: ObjectId('638bd26bc56dc59fffe4fa2d')
Sup_ID: "b123"
Paint_Type: "Premium"
Sup_Contact: "3276222045"
Sup_Address: "688 W. St Louis St.Glastonbury, CT 06033"

_id: ObjectId('638bd26bc56dc59fffe4fa2e')
Sup_ID: "b121"
Paint_Type: "Premium"
Sup_Contact: "6102170638"
Sup_Address: "9260 SW. Jefferson St.Hoboken, NJ 07030"
```

3. **The following screenshot represents the output for implementing aggregations and create a pipeline for Workforce Management System in MongoDB, displaying Service Provider Id, Service Provider name for service providers who’s service type is gold.**



```
_id: ObjectId('638bd258c56dc59fffe4fa23')
S_ID: "G1"
S_Name: "Splashing"
Service_Type: "Gold"

_id: ObjectId('638bd258c56dc59fffe4fa24')
S_ID: "G2"
S_Name: "gim"
Service_Type: "Gold"

_id: ObjectId('638bd258c56dc59fffe4fa2a')
S_ID: "G4"
S_Name: "Hallo"
Service_Type: "Gold"

_id: ObjectId('638bd258c56dc59fffe4fa2b')
S_ID: "G5"
S_Name: "Hike"
Service_Type: "Gold"
```