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Your Guide for Success in Database

Import CSV into MongoDB – Multiple Ways

September 3, 2021 by Bijay Kumar Sahoo



In this MongoDB tutorial, We are going to learn "How to import CSV file into MongoDB". We will also cover this with different operations. These are the following topics that we are going to cover in this tutorial:

- Import CSV into MongoDB
- Import CSV into MongoDB using compass
- Import CSV into MongoDB using atlas



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create table

The **CSV** stands for **comma-separated values**. It is a plain text file that includes a list of data. We import the CSV file into MongoDB that will help the developer to easily import for reading the content inside it.

At A Glance - Here's what we'll cover: [show]

Import CSV into MongoDB

In MongoDB, If you want to import the data then MongoDB provides a special tool that is known as **mongoimport**. With the help of this tool, you can import JSON, CSV, or TSV into the MongoDB database.

Oracle Install sample

schemas 21c

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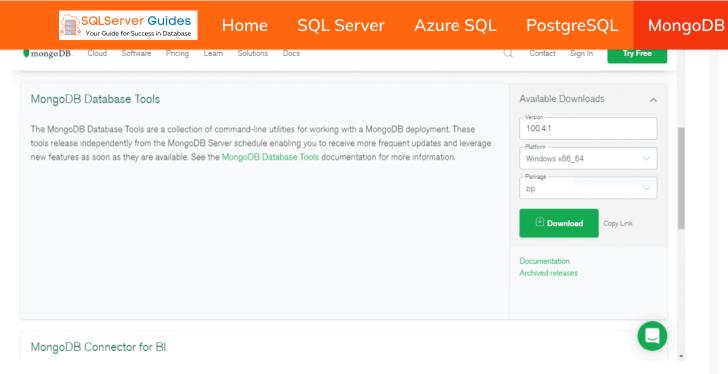
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Name

SQLServer Guides YouTube Q Home **SQL** Server MongoDB Oracle Azure SQL PostgreSQL Your Guide for Success in Database Generally, the tool mongoimport is present in the bin folder of MongoDB ⊗ ezoic report this ad but if it is not available there then you to install it into your system. For downloading the **mongoimport** tool, you have to download the MongoDB database tools .zip file from here.



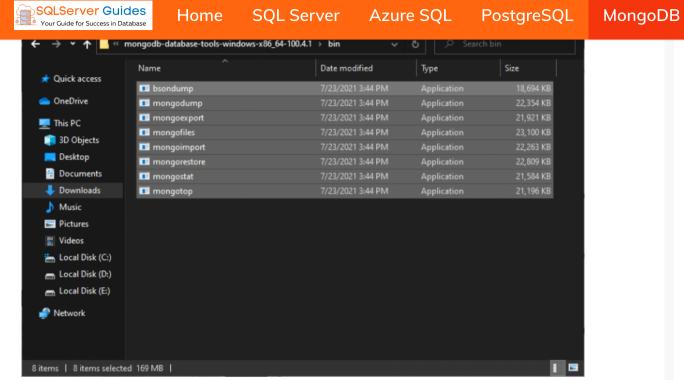
Download MongoDB Database Tools

After downloading the file you have to follow the below steps:

- After downloading the **zip** file, unzip it.
- Now goto bin folder and copy all.exe files and paste all the file into MongoDB bin folder.

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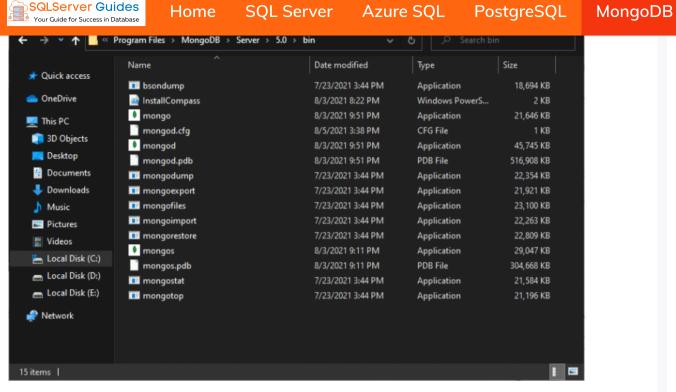


Downloaded MongoDB database tools

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Store all tools in the MongoDB bin folder

 We stored all.exe files into the right path and now you can use the mongoimport tool.

We can import CSV files 2 ways in MongoDB:

- 1. With header row
- 2. Without header row

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help of **-header**. It shows the name of the fields in the first line of the **CSV** file.

Syntax:

mongoimport -db database_name -collection collection_name -type csv -file file location -header

Example:



File Edit Format View Help

1,"Eldon Base for stackable storage shelf, platinum", Muhammed MacIntyre, 3, -213.25, 38.94, 35, Nunavut, Storage & Organization, 0.8

2,"1.7 Cubic Foot Compact ""Cube"" Office Refrigerators",Barry French,293,457.81,208.16,68.02,Nunavut,Appliances,0.58

3,"Cardinal Slant-D® Ring Binder, Heavy Gauge Vinyl", Barry French, 293, 46.71, 8.69, 2.99, Nunavut, Binders and Binder Accessories, 0.39 4, R380, Clay Rozendal, 483, 1198.97, 195.99, 3.99, Nunavut, Telephones and Communication, 0.58

5, Holmes HEPA Air Purifier, Carlos Soltero, 515, 30.94, 21.78, 5.94, Nunavut, Appliances, 0.5

6,G.E. Longer-Life Indoor Recessed Floodlight Bulbs, Carlos Soltero, 515, 4,43,6,64,4.95, Nunavut, Office Furnishings, 0.37

7,"Angle-D Binders with Locking Rings, Label Holders", Carl Jackson, 613, -54.04, 7.3, 7.72, Nunavut, Binders and Binder Accessories, 0.38

8,"SAFCO Mobile Desk Side File, Wire Frame", Carl Jackson, 613, 127.70, 42.76, 6.22, Nunavut, Storage & Organization,

9,"SAFCO Commercial Wire Shelving, Black", Monica Federle, 643, -695.26, 138.14, 35, Nunavut, Storage & Organization,

10, Xerox 198, Dorothy Badders, 678, -226.36, 4.98, 8.33, Nunavut, Paper, 0.38

demo.csv

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This **demo.csv** file we are going to import into the Mongods database.

Import data from CSV file using below command:

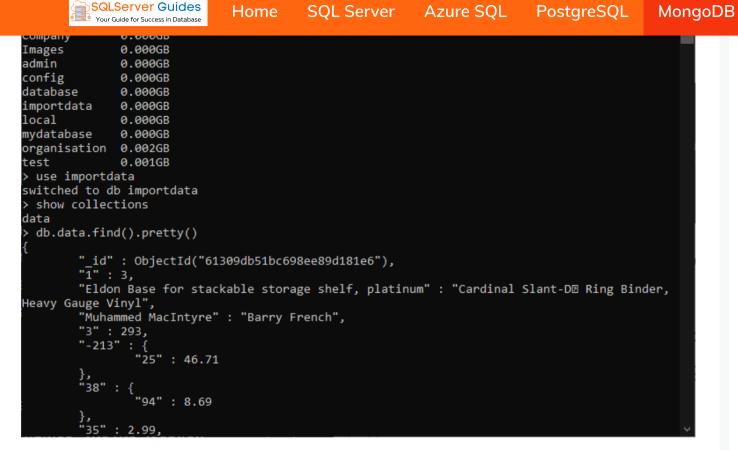
```
mongoimport --db importdata --collection data --type csv --file E:\data.csv --
headerline
```

```
C:\Program Files\MongoDB\Server\5.0\bin>mongoimport --db importdata --collection data --type csv --file E:\data.csv --headerline 2021-09-02T15:17:33.873+0530 connected to: mongodb://localhost/ 2021-09-02T15:17:33.951+0530 9 document(s) imported successfully. 0 document(s) failed to import.

C:\Program Files\MongoDB\Server\5.0\bin>
```

Import CSV file into MongoDB database

As you can see, we successfully import the CSV file into the MongoDB database. Now, you can also check the data in the database.



Data after importing CSV file into MongoDB

Here, the **importdata**, **data** are the database and collection respectively and see the **CSV** file data is also imported into **data** collection.

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• Without header row: By excluding the -header, you can import data without the header row. But, you have to put -field in the place of header. The -field will show the name of the field that you want to give and you have to separate it by a comma.



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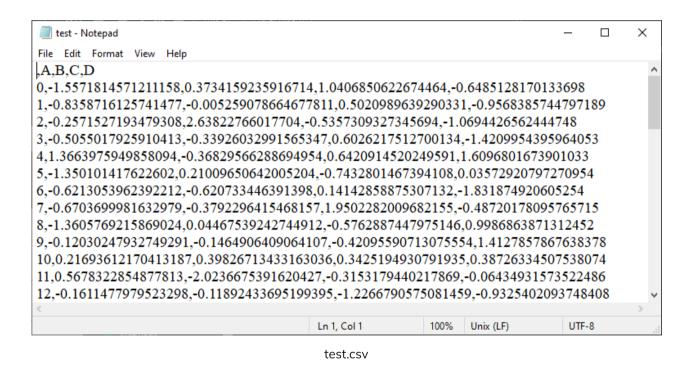
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mongoimport -db database_name -collection collection_name -type csv -fields field_names -file file_location

Example:



This **test.csv** file we are going to import into the MongoDB database.



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mongoimport -db importdata -collection test -type csv -fields ,A,B,C,D -file
E:\test.csv

```
C:\Program Files\MongoDB\Server\5.0\bin>mongoimport --db importdata --collection test --type csv --drop --fields ,A,B,C,D --file E:\test.csv 2021-09-02T15:59:23.186+0530 connected to: mongodb://localhost/2021-09-02T15:59:23.190+0530 dropping: importdata.test 2021-09-02T15:59:23.256+0530 51 document(s) imported successfully. 0 document(s) failed to import.

C:\Program Files\MongoDB\Server\5.0\bin>
```

MongoDB Import CSV into database

We successfully import the CSV file into the MongoDB database. Here, A, B, C, D are the field names, check into your CSV file and write accordingly.

Now, If you want to check the data of the CSV file is stored or not then start the MongoDB server. With the help of the **find()** method, you can



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```
C:\Windows\System32\cmd.exe - mongo
                                                                                         > use importdata
switched to db importdata
> show collections
data
test
> db.test.find().pretty()
        "_id" : ObjectId("6130a783740e0789a7bddf0c"),
"" : "",
        "A" : "A",
        "B" : "B",
        "C" : "C".
        "D" : "D"
        " id" : ObjectId("6130a783740e0789a7bddf0d"),
        "" : 3,
        "A" : -0.5055017925910413,
        "B": -0.33926032991565347,
        "C": 0.6026217512700134,
        "D": -1.4209954395964053
        "_id" : ObjectId("6130a783740e0789a7bddf0e"),
        ... : 0,
        "A" : -1.5571814571211158,
        "B": 0.3734159235916714,
        "C": 1.0406850622674464,
        "D" : -0.6485128170133698
```

Data after importing CSV into MongoDB

In the output, See the data(CSV file) is successfully imported into **data** collection.

Import CSV into MongoDB using compass

In MongoDB, If you want to import the CSV file using compass then you don't require any tool like earlier we used **mongoimport**. You have to simply use the **MongoDB compass** (GUI) and you can easily import the **CSV** file and also perform various operations.

For importing the CSV file you have to follow the following steps:

• Open MongoDB compass

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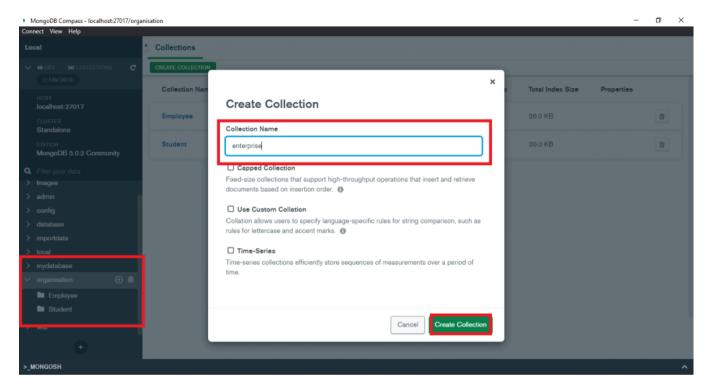
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create a new collection in MongoDB compass

Here, I created a new collection, **enterprise** in **organisation** database. You can write any name for the collection and simply click on **Create Collection** button.

• Now **enterprise** Collection is created.

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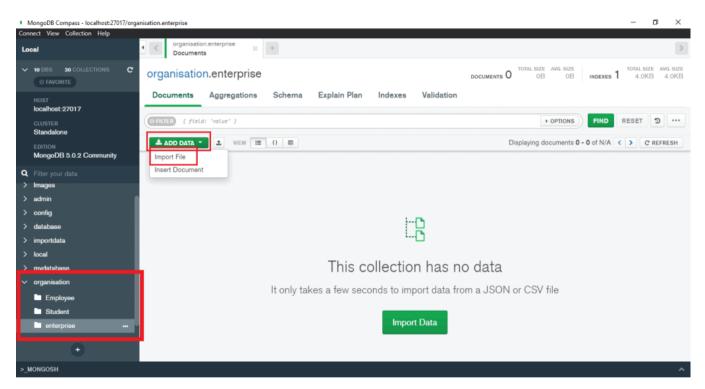
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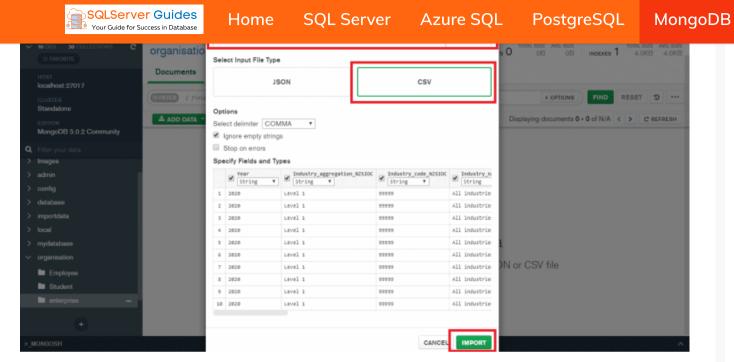
will open a drop-down list and then click on Import File.

• This will open a new tab.



Import CSV into MongoDB using compass

Now, you have to select File that you want to import and and File
 Type like CSV or JSON.



Import CSV into MongoDB compass

Here, we select the CSV **file** and then select the file type **CSV** as we are importing the CSV file. After that click on **IMPORT** Button.

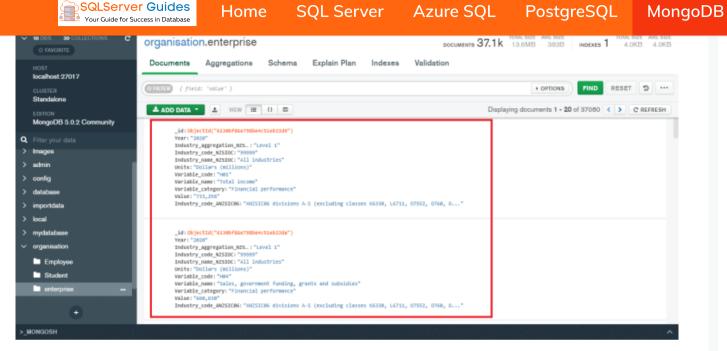
• Now, we Successfully **IMPORT** the CSV file into collection.

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Import CSV into MongoDB using compass

Here, you can see all the data inserted into the collection. This is the simplest way to import the data into the collection using MongoDB compass.

Note that, In MongoDB compass also you can perform aggregation operations and many other things as well.

Read: How to store images in MongoDB

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Import CSV into MongoDB using atlas

As you know **Atlas** is MongoDB **database-as-a-service**. We use MongoDB atlas for backs up data using the **native capabilities of the cloud provider**.

It provides various platforms where you can deploy like Amazon Web Services(AWS), Google Cloud Platform(GCP), and Microsoft Azure. The service will offer **pay-as-you-go pricing**.

To import the CSV file into MongoDB using the atlas, you have to use the **mongoimport** tool.

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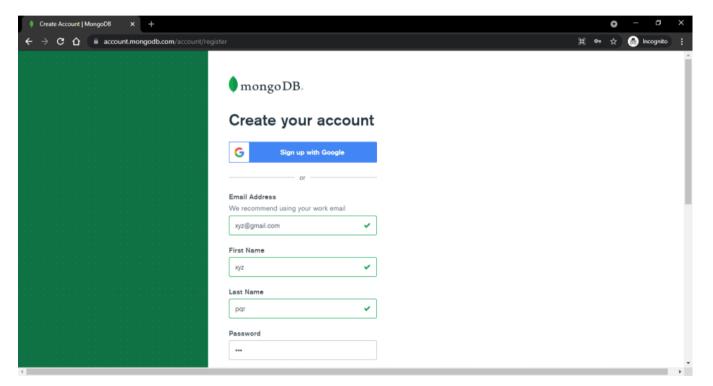
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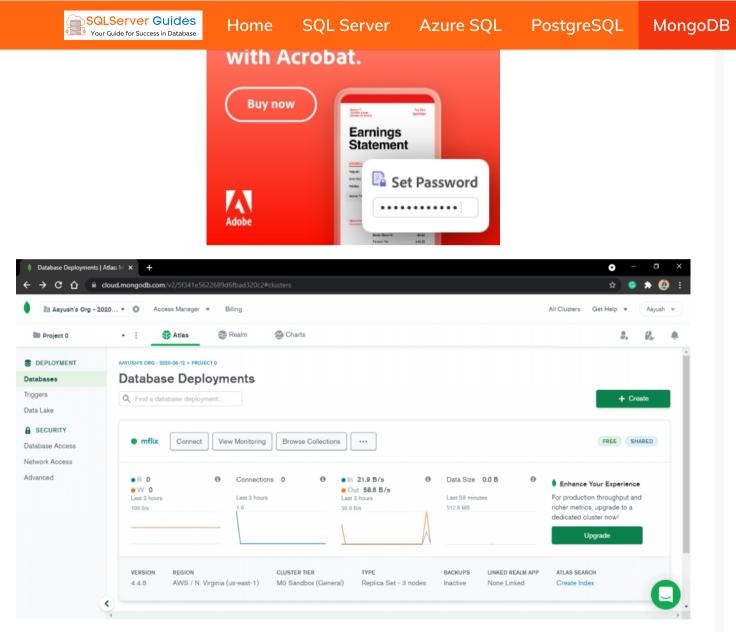
- Login to your MongoDB atlas account.
- If you don't have an account, create a new one click.



Create a new account on MongoDB atlas

Here, after clicking on the above link. It will open this for you and you have to simply write your detail and your will account create successfully.

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Login into MongoDB atlas

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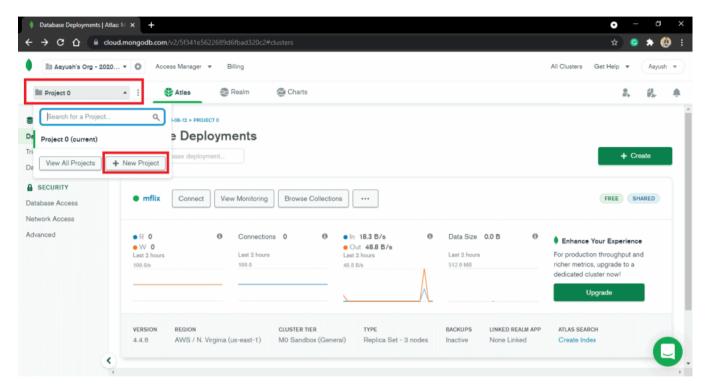
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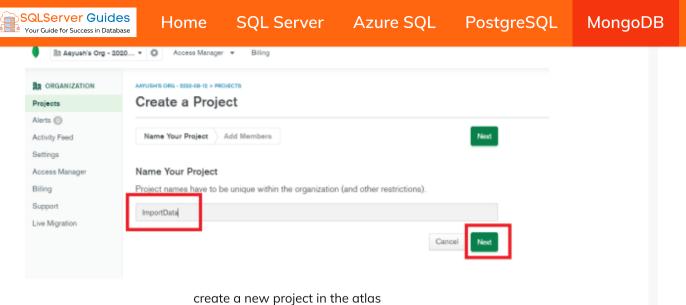
• Now you have to create a project.



Create a new project

Here, you have to click on **Project 0** drop-down menu and click on the **New Project** button. This will open a new window

• Write the project name ImportData and click on Next button.

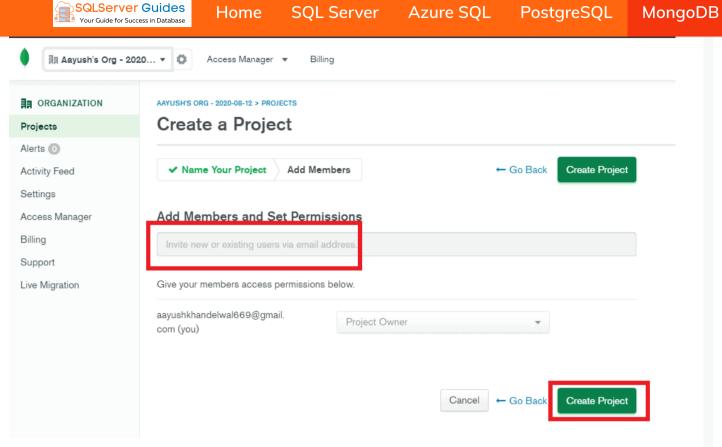


• Now it will ask you to **Add Member**, if you want to then add otherwise click on **Create Project** button.

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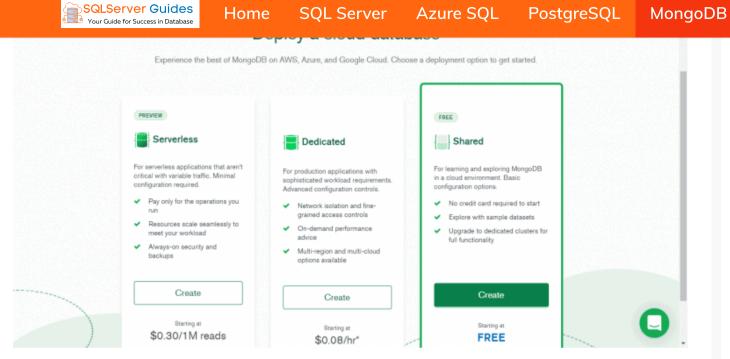


Add Members to the project

- Build a Database
- After click on build database button deploy a cloud database.

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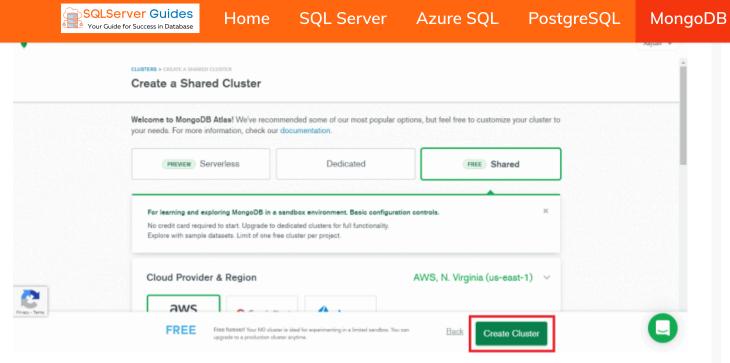
Deploy a cloud database on atlas

Here, select a shared cloud database that is free for you so Create
it.

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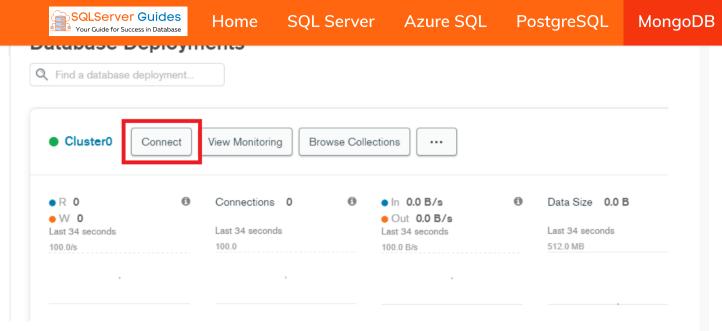


Create a shared cluster in the atlas

Here, we are using AWS (AWS, N. Virginia (us-east-1)) service that is free for you. But I recommend you to read all the information carefully.

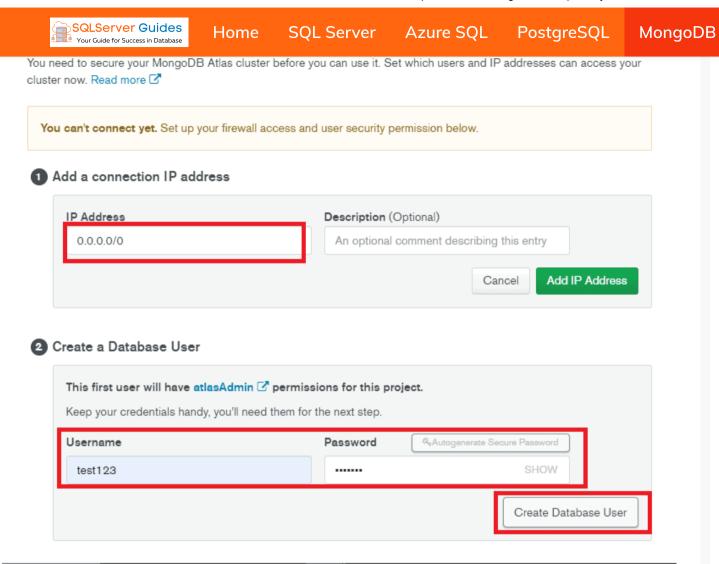
- Click on Create Cluster button.
- It will take 1-3 min for creating the cluster so you have to wait.
- After successfully creating cluster fill all the detail for deployment of cluster.

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Database Deployments

 Now create the database username and password and add IP address.



Create a database user and set add IP address in the atlas

Here, we set an **IP address** that can access anywhere. You can also create your personal IP address. After that **create a database user** (test123) and

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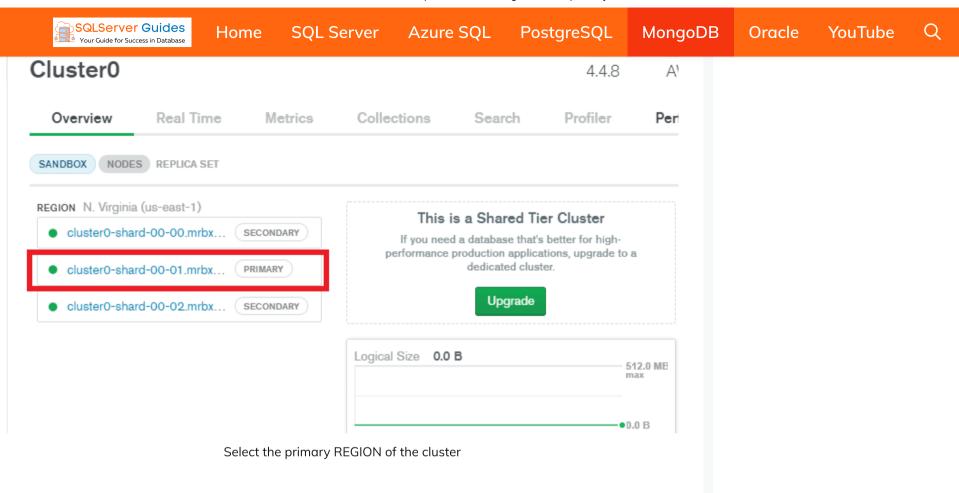
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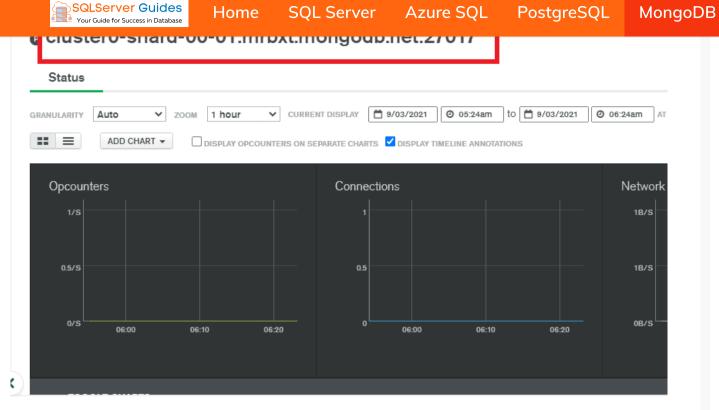
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- you have Choose a connection method, here I am doing on MongoDB shell
- Now click on cluster name **Cluster 0** and select the primary **REGION**.



• This will provide the full **host name** that we use further in **MongoDB** shell to import CSV file.



Full Host Name

- Now, we import the CSV file into database, for this we use mongoimport tool.
- Open the command prompt and use the below command to import CSV file

```
mongoimport --host cluster0-shard-00-01.mrbxt.mongodb.net:27017 --db starwars
--collection test --type csv --drop --fields ,A,B,C,D --file E:\test.csv --
```

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```
C:\WINDOWS\system32\cmd.exe
                                                                                                        C:\Users\user>mongoimport --host cluster0-shard-00-01.mrbxt.mongodb.net:27017 --db starwars --collection test
 type csy --drop --field .A.B.C.D --file E:\test.csy --authenticationDatabase admin --ssl --username test123-
 -password test123
                               error parsing command line options: unknown option "field"
2021-09-03T12:04:08.469+0530
2021-09-03T12:04:08.470+0530
                               try 'mongoimport --help' for more information
C:\Users\user>mongoimport --host cluster0-shard-00-01.mrbxt.mongodb.net:27017 --db starwars --collection test
 -type csv --drop --fields .A.B.C.D --file E:\test.csv --authenticationDatabase admin --ssl --username test123
 --password test123
                               connected to: mongodb://cluster0-shard-00-01.mrbxt.mongodb.net:27017/
2021-09-03T12:04:36.725+0530
                               dropping: starwars.test
2021-09-03T12:04:37.036+0530
2021-09-03T12:04:38.027+0530
                               51 document(s) imported successfully. 0 document(s) failed to import.
C:\Users\user>
```

Import CSV file into MongoDB atlas

Here first, we write the **mongoimport** (tool) for importing the CSV file then provide the full hostname. After that provide the Database and collection name **starwars**, **test** respectively.

When you are importing CSV you have to provide the **fields** name as well as per given in CSV file like here (A, B, C, D). After that provide the **authenticationDatabase** that is always **admin** and then the **username** and **password** that we created earlier.

Start the MongoDB server using below command.

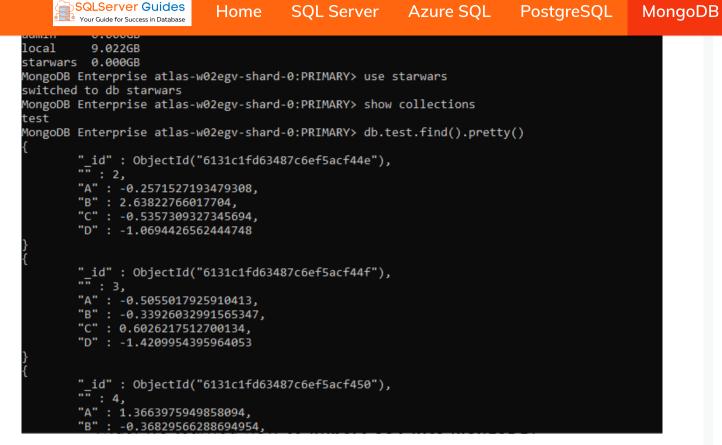
```
mongo "mongodb+srv://cluster0.mrbxt.mongodb.net/myFirstDatabase" --username
test123
```

```
🖭 C:\WINDOWS\system32\cmd.exe - mongo "mongodb+srv://cluster0.mrbxt.mongodb.net/myFirstDatabase" --username test123
C:\Users\user>mongo "mongodb+srv://cluster0.mrbxt.mongodb.net/myFirstDatabase" --username test123
MongoDB shell version v5.0.2
Enter password:
connecting to: mongodb://cluster0-shard-00-00.mrbxt.mongodb.net:27017,cluster0-shard-00-01.mrbxt.mongodb.net:2
7017,cluster0-shard-00-02.mrbxt.mongodb.net:27017/myFirstDatabase?authSource=admin&compressors=disabled&gssapi
ServiceName=mongodb&replicaSet=atlas-w02egv-shard-0&ssl=true
Implicit session: session { "id" : UUID("05dec166-c5fb-4112-ad82-1b7753fba95e") }
MongoDB server version: 4.4.8
WARNING: shell and server versions do not match
Warning: the "mongo" shell has been superseded by "mongosh",
which delivers improved usability and compatibility.The "mongo" shell has been deprecated and will be removed
an upcoming release.
We recommend you begin using "mongosh".
For installation instructions, see
https://docs.mongodb.com/mongodb-shell/install/
MongoDB Enterprise atlas-w02egv-shard-0:PRIMARY>
```

Start atlas MongoDB Server

Here, after executing the command, It will ask you to enter the **password** then it starts the server.

Now check the data inside the database.



Import CSV into MongoDB atlas

Here, you see **CSV** file data is successfully imported into the MongoDB database.

Read: MongoDB group by count

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Import CSV into MongoDB using python

First of all, I say **storing the CSV file in MongoDB using python** would be a bad idea because it is impractical to manipulate and query the data in that format.

But you still want to import then convert it into JSON documents to add it to the MongoDB database.

Example:

We took an example to import CSV files into MongoDB using Python.

```
import csv
import json
import pandas as pd
import sys, getopt, pprint
from pymongo import MongoClient

#CSV to JSON Conversion
csvfile = open('E:/Sample.csv', 'r')
reader = csv.DictReader( csvfile )
mongo_client=MongoClient()
```

```
header= [ "Serial Number", "Company Name", "Employee Markme", "Description", "Leave"]
for each in reader:
    row={}
    for field in header:
        row[field]=each[field]

db.sample.insert(row)
```

In this Python code, we import some libraries as CSV, JSON, pandas and pymongo. Here, **pandas ar**e used to read the CSV file and **pymongo** to make the connection between Python and MongoDB databases.

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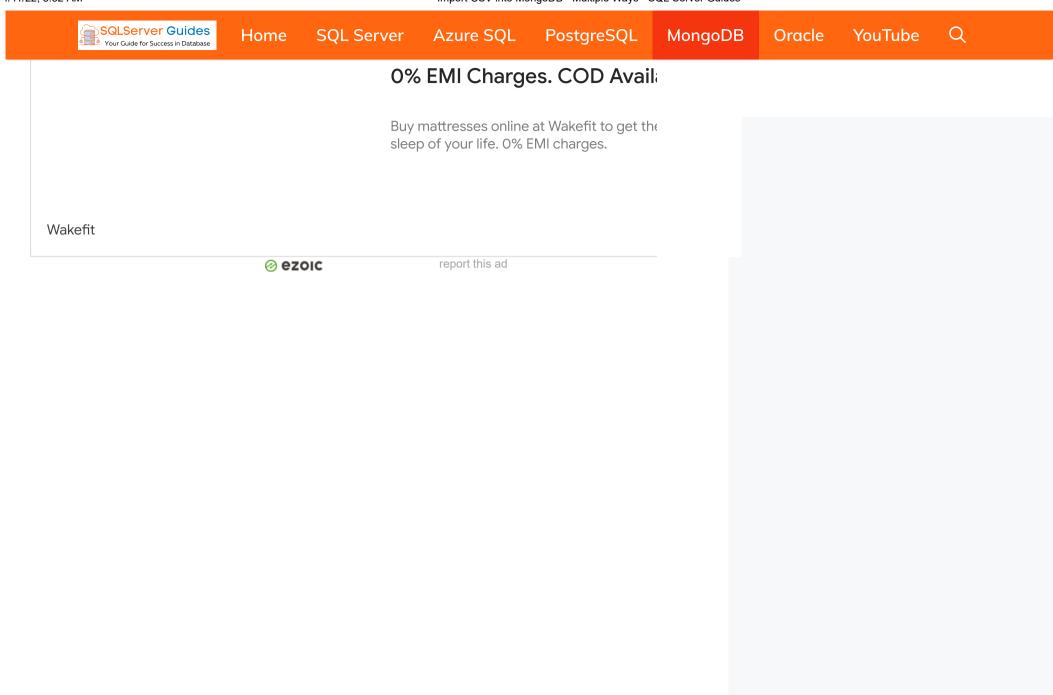
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into a **variable**(header). Use **insert()** method to store data into database with the help of for loop.

```
demo.py X
 🅏 demo.py > ...
       import csv
       import json
       import pandas as pd
       import sys, getopt, pprint
      from pymongo import MongoClient
      #CSV to JSON Conversion
      csvfile = open('E:/Sample.csv', 'r')
      reader = csv.DictReader( csvfile )
      mongo client=MongoClient()
      db=mongo_client.DataImport
      db.sample.drop()
      header= [ "Serial Number", "Company Name", "Employee Markme", "Description", "Leave"]
       for each in reader:
           row={}
           for field in header:
               row[field]=each[field]
           db.sample.insert(row)
```

Import CSV into MongoDB using python

After executing the above code, If you want to check the data of the CSV file then start the MongoDB server and check it.



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```
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 show collections
sample
 db.sample.find().pretty()
       " id" : ObjectId("6131e4a94437f025cf2ee33f"),
       "Serial Number": "9788189999599",
       "Company Name" : "TALES OF SHIVA",
       "Employee Markme" : "Mark",
       "Description": "mark",
       "Leave" : "0"
       " id" : ObjectId("6131e4a94437f025cf2ee340"),
       "Serial Number": "9780099578079",
       "Company Name" : "1Q84 THE COMPLETE TRILOGY",
       "Employee Markme" : "HARUKI MURAKAMI",
       "Description": "Mark",
       "Leave": "0"
       " id" : ObjectId("6131e4a94437f025cf2ee341"),
       "Serial Number": "9780198082897",
       "Company Name" : "MY KUMAN",
       "Employee Markme" : "Mark",
       "Description": "Mark",
       "Leave" : "0"
       " id" : ObjectId("6131e4a94437f025cf2ee342");
```

Import CSV file into MongoDB using python

Here, you can see the database and collection name, DataImport and Sample respectively created successfully and data is also stored in the Q

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using **python**.

You may also like reading the following MongoDB tutorials.

- Import JSON and insert JSON into MongoDB
- How to get id from mongodb after insert
- How to check if MongoDB is installed + MongoDB Version
- MongoDB sort by date
- MongoDB order by date
- Current date in MongoDB
- MongoDB sort by field
- Export MongoDB to CSV
- Create tables in MongoDB
- MongoDB join two collections

In this tutorial, you have learned **How to import CSV into MongoDB** in different ways and also covered in detail how to start MongoDB atlas to import CSV. These are the following topics that we covered in this tutorial:



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- Import CSV into MongoDB
- Import CSV into MongoDB using compass
- Import CSV into MongoDB using atlas
- Import CSV into MongoDB using python



Bijay Kumar Sahoo

After working for more than 15 years in the Software field, especially in Microsoft technologies, I have decided to share my expert knowledge of SQL Server. Check out all the SQL Server and related database tutorials I have shared here. Most of the readers are from countries like the United States of America, the United Kingdom, New Zealand, Australia, Canada, etc. I am also a Microsoft MVP. Check

out more here.







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