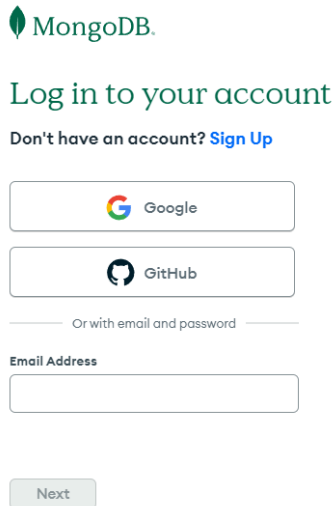


MongoDB Setup

Create Account

To get started with creating the Gator Security database instance navigate to: <https://account.mongodb.com/> and set up a free account.



The image shows the MongoDB account creation page. It features the MongoDB logo at the top left. Below it, the text "Log in to your account" is displayed. Underneath, there is a link "Don't have an account? Sign Up". There are two large buttons for social login: "Google" and "GitHub". Below these, a text input field is labeled "Email Address". At the bottom, there is a "Next" button.

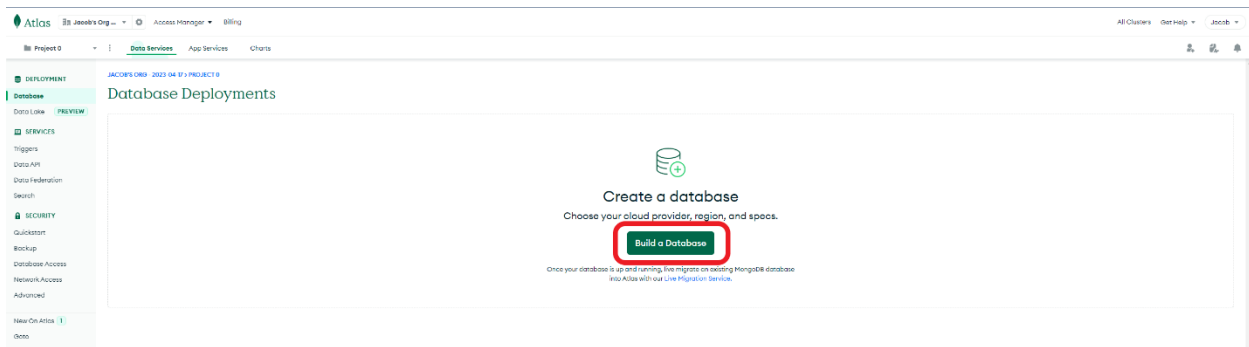
Discover What's New in MongoDB 6.0

Power modern applications with enriched querying capabilities, new operators, added encryption features and more.


[Check out what's new](#) →

Create a New Cluster

After you have created your account, login and proceed to the Atlas Dashboard. Upon account creation Atlas will automatically generate a default project named *Project0* that you can create databases within. It is not necessary to create a new project unless this is desired. While under *Database Deployments* click the *Build a Database* button to create a new cluster.



The next page will prompt you to select the type of cluster you want to create. Select the *M0 Free* option. You may change the provider for the cluster as well as the region, however, this is not necessary, and you can leave the defaults. Finally, you can choose a name for the cluster. Similarly, the default name can be left alone as this name is for the cluster (server) that the database will reside within, and not the name of your actual database. When all selections have been completed click the *Create* button to create the new cluster.

 **MongoDB.**

Deploy your database

Use a template below or set up [advanced configuration options](#). You can also edit these configuration options once the cluster is created.

M10**\$0.08/hour**

For production applications with sophisticated workload requirements.

STORAGE	RAM	vCPU
10 GB	2 GB	2 vCPUs

SERVERLESS**\$0.10/1M reads**

For application development and testing, or workloads with variable traffic.


STORAGE	RAM	vCPU
Up to 1TB	Auto-scale	Auto-scale


M0**FREE**


For learning and exploring MongoDB in a cloud environment.

STORAGE	RAM	vCPU
512 MB	Shared	Shared

Provider








Region

★ Recommended region ⓘ

 **N. Virginia (us-east-1)** ★

Name

You cannot change the name once the cluster is created.

FREE

Create

[Access Advanced Configuration](#)

Free forever! Your M0 cluster is ideal for experimenting in a limited sandbox. You can upgrade to a production cluster anytime.

[I'll deploy my database later](#)

The next screen will require the user to create a database user account to access the database. This account is separate from the MongoDB user account and should have a different username and password. Make sure to save this password in a secure location as once the account has been created this password cannot be recovered and a new one must be generated. If the password is changed this can cause issues for the web application as all code that utilizes this password must also be updated.

JACOB'S ORG - 2023-04-17 > PROJECT 0

Security Quickstart

To access data stored in Atlas, you'll need to create users and set up network security controls. [Learn more about security setup](#)

✓ How would you like to authenticate your connection?

Your first user will have permission to read and write any data in your project.

Username and Password

Certificate

Create a database user using a username and password. Users will be given the *read and write to any database privilege* by default. You can update these permissions and/or create additional users later. Ensure these credentials are different to your MongoDB Cloud username and password. You can manage existing users via the [Database Access Page](#).

Username

Enter username

Password

Enter password

🔑 Autogenerate Secure Password

📋 Copy

Create User

Username

Authentication Type

admin

Password


✎ EDIT

🗑 REMOVE

The form below prompts the user to enter any IP addresses that will be connecting to the database. For development, each user can provide their IP address to be added to the list. Alternatively, the IP address *0.0.0.0* can be entered and this will grant access to any IP address that attempts to connect to the database. The user connecting still must connect using a database user account. Once these fields have been filled out click the *Finish and Close* button.

✔ Where would you like to connect from?


Enable access for any network(s) that need to read and write data to your cluster.



My Local Environment

Use this to add network IP addresses to the IP Access List. This can be modified at any time.

ADVANCED



Cloud Environment

Use this to configure network access between Atlas and your cloud or on-premise environment. Specifically, set up IP Access Lists, Network Peering, and Private Endpoints.

Add entries to your IP Access List

Only an IP address you add to your Access List will be able to connect to your project's clusters. You can manage existing IP entries via the [Network Access Page](#).

IP Address

Enter IP Address

Description

Enter description

Add My Current IP Address

Add Entry

IP Access List	Description	
0.0.0.0/0	Access for all IPs	<div>EDIT</div> <div>REMOVE</div>
<div></div>	My IP Address	<div>EDIT</div> <div>REMOVE</div>

Finish and Close

Install MongoDB Command Line Tools

The next step involves installing MongoDB's command line tools. These are necessary to properly import the database dump into your newly created cluster. Navigate to: <https://www.mongodb.com/docs/database-tools/installation/installation/> to find information on installing Database tools for various systems. This guide will go through the process in windows.

Installation

Installing the Database Tools

The MongoDB Database Tools are a suite of command-line utilities for working with MongoDB. Follow the guides below to install the Database Tools on your platform:

Linux	Installing the Database Tools on Linux
macOS	Installing the Database Tools on macOS
Windows	Installing the Database Tools on Windows

On the next window scroll down and be sure to select the instructions for using the *MSI installer*. After downloading the installer, follow the instructions provided by MongoDB.

Installation

The MongoDB Database Tools can be installed with an MSI installer, or downloaded as a ZIP archive. Select the tab below depending on your desired installation method:



1 Download the Database Tools MSI installer.

Open the [MongoDB Download Center](#). Using the drop-down menu on the right-hand side of the page:

1. Select the `Windows x86_64` Platform
2. Select the `msi` Package
3. Click the **Download** button

2 Run the MSI installer.

Double-click the downloaded MSI installer to install the Database Tools. During the install you may customize the installation directory if desired.

3 Make the DB Tools available in your PATH.

You may wish to make the Database Tools available in your system's `PATH` environment variable, which allows referencing each tool directly on the command prompt by name, without needing to specify its full path, or first navigating to its parent directory.

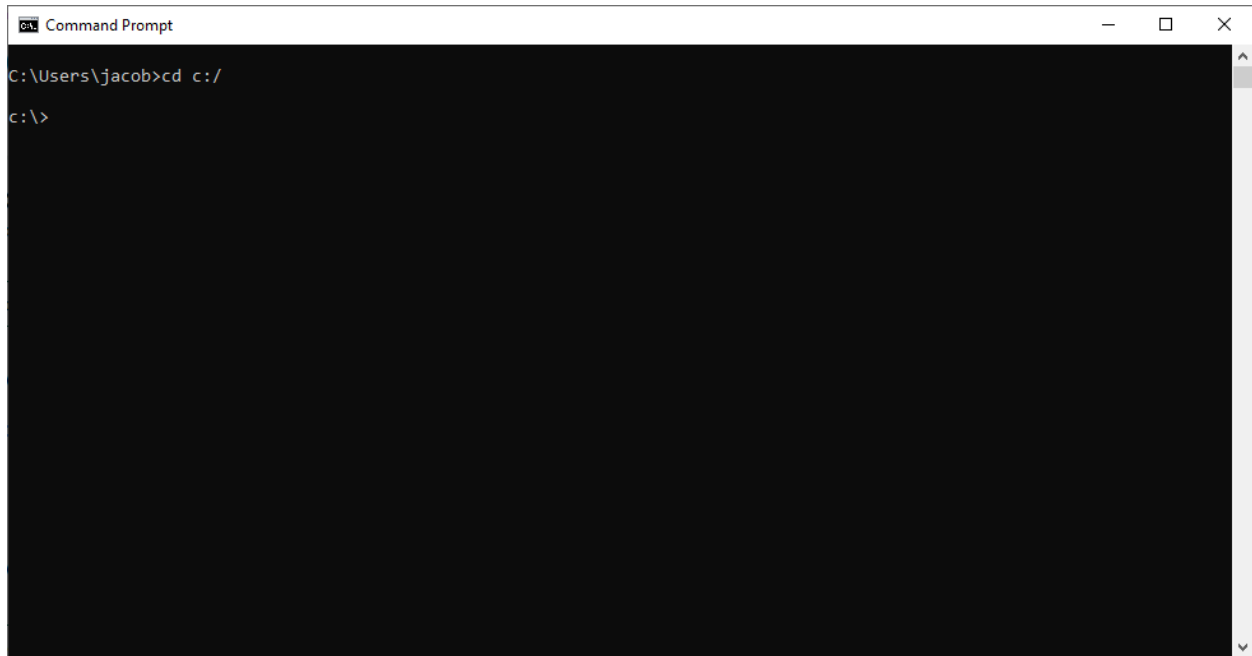
Once you've installed the Database Tools, follow the instructions below to add the install directory to your system's `PATH` environment variable.:

1. Open the **Control Panel**.
2. In the **System and Security** category, click **System**.
3. Click **Advanced system settings**. The **System Properties** modal displays.
4. Click **Environment Variables**.
5. In the *System variables* section, select `Path` and click **Edit**. The **Edit environment variable** modal displays.
6. Click **New** and add the filepath to the location where you installed the Database Tools.
7. Click **OK** to confirm your changes. On each other modal, click **OK** to confirm your changes.

Once set, you can run any of the Database Tools directly from your command prompt. Consult the reference page for the specific tool you wish to use for its full syntax and usage.

Prepare Files for Import

When importing into the database, the MongoDB command will look for the *dump* folder in the command line's current working directory. If desired, you may change directories to the location of the dump folder. However, for simplicity this guide will change the working directory to *c:/*. Open the command line and enter the command (inside of the quotes): "*cd c:/*".



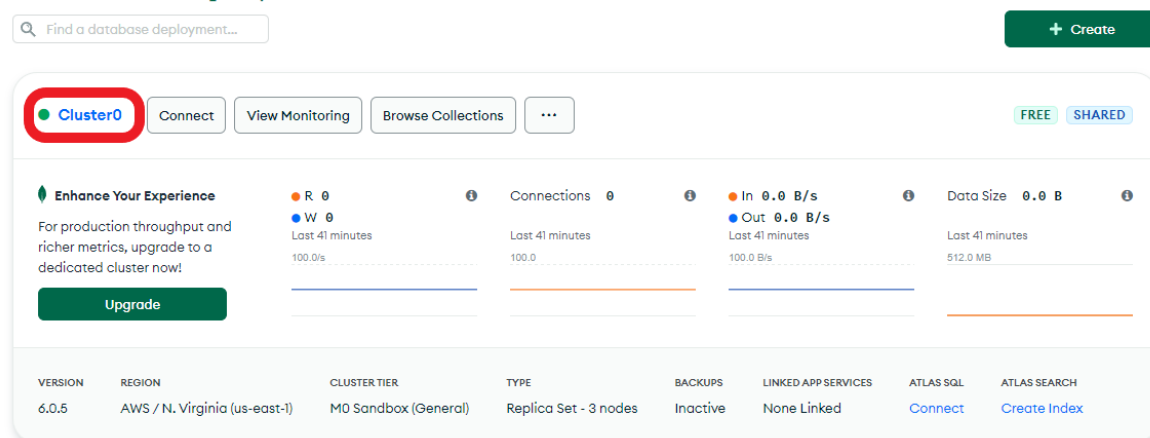
```
Command Prompt
C:\Users\jacob>cd c:/
c:\>
```

Next, unzip the *Gator_Security_DB_Dump.zip* file and place the *dump* folder into *c:/*.

Import the Database

The last step is to locate the *Binary Import* command for your MongoDB cluster. This can be found by first selecting your cluster, and then clicking on *Cmd Line Tools*.

Database Deployments



Find a database deployment... [+ Create](#)

Cluster0 [Connect](#) [View Monitoring](#) [Browse Collections](#) [...](#) FREE SHARED

Enhance Your Experience
For production throughput and richer metrics, upgrade to a dedicated cluster now!
[Upgrade](#)

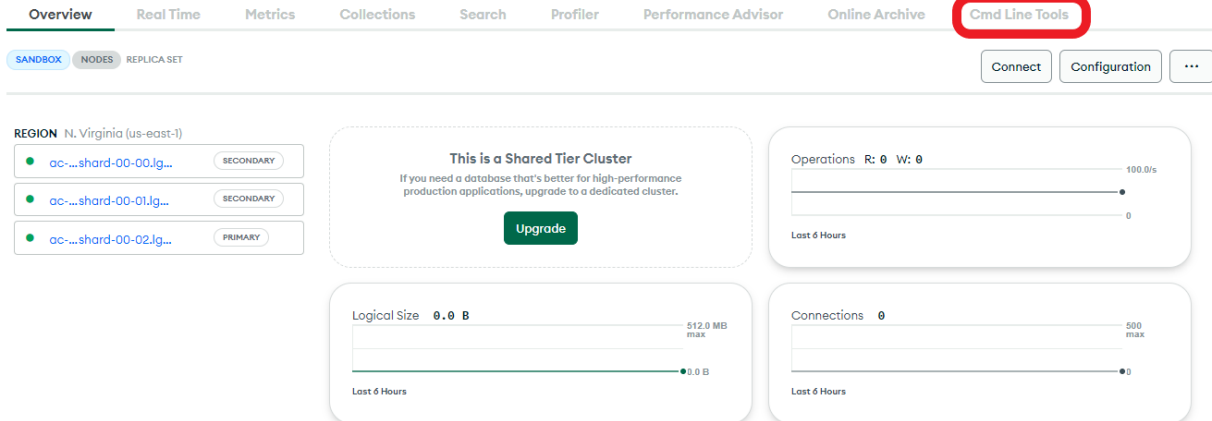
Connections 0
Last 41 minutes
100.0

In 0.0 B/s
Last 41 minutes
100.0 B/s

Out 0.0 B/s
Last 41 minutes
100.0 B/s

Data Size 0.0 B
Last 41 minutes
512.0 MB

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



Once on the *Cmd Line Tools* tab, scroll down and look for the section on *Binary Import and Export Tools*. Copy the command given under *mongorestore* and replace the *<PASSWORD>* with the password for the database user account created in the previous section.

The page content includes the following sections:

- Connect To Your Cluster**
Methods to connect your application to your cluster via MongoShell, URI, or Compass can be found in the connect modal.
Connect Instructions
- Manage Your Cluster From the Command Line Interface**
Create and manage MongoDB Atlas resources from your command line and easily automate them using scripts. [Learn more](#)
Install Atlas CLI
- Manage Your Cluster From the Command Line**
Use command line utilities to import and export data, restore backups, and view diagnostics
Install MongoDB Database Tools
- Binary Import and Export Tools**
Replace **PASSWORD** with the password for the admin user and **DATABASE** with the name of the database you wish to import/export to your cluster.
[mongorestore](#) | creates a new database or adds data to an existing database. By default, mongorestore reads the database dump in the dump/ sub-directory of the current directory; to restore from a different directory, pass in the path to the directory as a final argument.
`mongorestore --uri mongodb+srv://admin:<PASSWORD>@cluster0.mongodb.net`
[mongodump](#) | creates a binary export of the contents of a database
`mongodump --uri mongodb+srv://admin:<PASSWORD>@cluster0.mongodb.net/<DATABASE>`

After you replace your *<PASSWORD>* with your database user account password, paste this command into the command line and hit enter to start the database import.

```
Command Prompt
C:\Users\jacob>cd c:/

c:\>mongorestore --uri mongodb+srv://admin:cluster0.mongodb.net
2023-04-22T11:14:57.403-0400 WARNING: On some systems, a password provided directly in a connection string or using --uri may be visible to system status programs such as 'ps' that may be invoked by other users. Consider omitting the password to provide it via stdin, or using the --config option to specify a configuration file with the password.
2023-04-22T11:14:58.126-0400 using default 'dump' directory
2023-04-22T11:14:58.127-0400 preparing collections to restore from
2023-04-22T11:14:58.131-0400 reading metadata for test.CYOAQuestionInfo from dump\test\CYOAQuestionInfo.metadata.json
2023-04-22T11:14:58.134-0400 reading metadata for test.DNDQuestionInfo from dump\test\DNDQuestionInfo.metadata.json
2023-04-22T11:14:58.137-0400 reading metadata for test.GameQuestionInfo from dump\test\GameQuestionInfo.metadata.json
2023-04-22T11:14:58.141-0400 reading metadata for test.MatchingQuestionInfo from dump\test\MatchingQuestionInfo.metadata.json
2023-04-22T11:14:58.143-0400 reading metadata for test.TraditionalQuestionInfo from dump\test\TraditionalQuestionInfo.metadata.json
2023-04-22T11:14:58.147-0400 reading metadata for test.UserInfo from dump\test\UserInfo.metadata.json
2023-04-22T11:14:58.456-0400 restoring test.CYOAQuestionInfo from dump\test\CYOAQuestionInfo.bson
2023-04-22T11:14:58.560-0400 restoring test.TraditionalQuestionInfo from dump\test\TraditionalQuestionInfo.bson
2023-04-22T11:14:58.560-0400 restoring test.DNDQuestionInfo from dump\test\DNDQuestionInfo.bson
2023-04-22T11:14:58.588-0400 restoring test.MatchingQuestionInfo from dump\test\MatchingQuestionInfo.bson
2023-04-22T11:14:58.600-0400 finished restoring test.TraditionalQuestionInfo (11 documents, 0 failures)
2023-04-22T11:14:58.609-0400 finished restoring test.CYOAQuestionInfo (35 documents, 0 failures)
2023-04-22T11:14:58.625-0400 finished restoring test.DNDQuestionInfo (9 documents, 0 failures)
2023-04-22T11:14:58.642-0400 finished restoring test.MatchingQuestionInfo (4 documents, 0 failures)
2023-04-22T11:14:58.725-0400 restoring test.GameQuestionInfo from dump\test\GameQuestionInfo.bson
2023-04-22T11:14:58.748-0400 restoring test.UserInfo from dump\test\UserInfo.bson
2023-04-22T11:14:58.766-0400 finished restoring test.GameQuestionInfo (18 documents, 0 failures)
2023-04-22T11:14:58.787-0400 finished restoring test.UserInfo (1 document, 0 failures)
2023-04-22T11:14:58.787-0400 no indexes to restore for collection test.MatchingQuestionInfo
2023-04-22T11:14:58.787-0400 no indexes to restore for collection test.DNDQuestionInfo
2023-04-22T11:14:58.788-0400 no indexes to restore for collection test.GameQuestionInfo
2023-04-22T11:14:58.788-0400 no indexes to restore for collection test.TraditionalQuestionInfo
2023-04-22T11:14:58.788-0400 restoring indexes for collection test.UserInfo from metadata
2023-04-22T11:14:58.789-0400 index: &idx.IndexDocument{Options:primitive.M{"background":true, "name":"email_1", "unique":true, "v":2},
Key:primitive.D{primitive.E{Key:"email", Value:1}}, PartialFilterExpression:primitive.D(nil)}
2023-04-22T11:14:58.789-0400 no indexes to restore for collection test.CYOAQuestionInfo
2023-04-22T11:14:58.950-0400 78 document(s) restored successfully. 0 document(s) failed to restore.

c:\>
```

Check for Successful Import

To check that the data was successfully imported, click on your cluster under *Database Deployments* and then navigate to the *Collections* tab.

Database Deployments

+ Create

Cluster0

Connect

View Monitoring

Browse Collections

...

FREE SHARED

Enhance Your Experience

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

Upgrade

R 0

W 0

Last 41 minutes

100.0/s

Connections 0

Last 41 minutes

100.0

In 0.0 B/s

Out 0.0 B/s

Last 41 minutes

100.0 B/s

Data Size 0.0 B

Last 41 minutes

512.0 MB

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

DATABASES: 1 COLLECTIONS: 6

REFRESH

+ Create Database

Q Search Namespaces

test

CYOAQuestionInfo

DNDQuestionInfo

GameQuestionInfo

MatchingQuestionInfo

TraditionalQuestionInfo

UserInfo

test.CYOAQuestionInfo

STORAGE SIZE: 36KB LOGICAL DATA SIZE: 36.17KB TOTAL DOCUMENTS: 35 INDEXES TOTAL SIZE: 20KB

Find

Indexes

Schema Anti-Patterns

Aggregation

Search Indexes

Charts

INSERT DOCUMENT

Filter

Type a query: { field: 'value' }

Reset

Apply

More Options

QUERY RESULTS: 1-20 OF MANY

```
_id: ObjectId('63fbfd72431674d2944108df')
parentQuestionId: ObjectId('63fbfcc7431674d2944108db')
questionNumber: 1
question: "You've been tasked by your organization with testing a C socket program..."
type: 3
options: Array
answer: "There appears to be a buffer overflow vulnerability, meaning a client..."
__v: 0
explanation: "There is a buffer overflow vulnerability at line 26."
```

```
_id: ObjectId('63fbfe54431674d29441099c')
parentQuestionId: ObjectId('63fbfcc7431674d2944108db')
questionNumber: 2
question: "Describe the cause of the buffer overflow vulnerability."
type: 3
options: Array
answer: "The buffer clientCode is initialized to a size of 8, but up to 1000 bytes..."
explanation: "992 bytes could be written beyond the end of the clientCode buffer."
__v: 0
```

```
_id: ObjectId('63fbfee2431674d29441092d')
parentQuestionId: ObjectId('63fbfcc7431674d2944108db')
questionNumber: 3
question: "The server is now being run with a debugger, which is displayed alongside..."
type: 3
options: Array
answer: "0x7fffffff4c0"
```

PREVIOUS

1-20 of many results

NEXT

Exporting the Database

Similarly, to importing the database, to export the database navigate again to the *Binary Import and Export Tools* section on the *Cmd Line Tools* tab. For exporting the data replace the `<PASSWORD>` with your database user account password. Unlike the import command the export command requires the name of the database you wish to export. In the command, replace `<DATABASE>` with the name of the database you wish to export.

Cluster0

VERSION
6.0.5

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

CLUSTER TIER
M0 Sandbox (General)

Overview

Real Time

Metrics

Collections

Search

Profiler

Performance Advisor

Online Archive

Cmd Line Tools

Connect To Your Cluster

Methods to connect your application to your cluster via MongoShell, URI, or Compass can be found in the connect modal.

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Install Atlas CLI

Manage Your Cluster From the Command Line

Use command line utilities to import and export data, restore backups, and view diagnostics

Install MongoDB Database Tools

Binary Import and Export Tools

Replace `PASSWORD` with the password for the admin user and `DATABASE` with the name of the database you wish to import/export to your cluster.

[mongorestore](#) creates a new database or adds data to an existing database. By default, mongorestore reads the database dump in the dump/ sub-directory of the current directory; to restore from a different directory, pass in the path to the directory as a final argument.

`mongorestore --uri mongodb+srv://admin:<PASSWORD>@cluster0.mongodb.net`

[mongodump](#) creates a binary export of the contents of a database

`mongodump --uri mongodb+srv://admin:<PASSWORD>@cluster0.mongodb.net/<DATABASE>`

Opposite to the import command, the export command will create the *dump* directory (if necessary) in the command line's current working directory. The contents of the database will be placed in the newly created (or existing) *dump* directory.

```
Command Prompt
C:\Users\jacob>cd c:/

c:\>mongodump --uri mongodb+srv://admin: [REDACTED]@cluster0.[REDACTED].mongodb.net/test
2023-04-22T11:31:11.445-0400 WARNING: On some systems, a password provided directly in a connection string or using -
-uri may be visible to system status programs such as `ps` that may be invoked by other users. Consider omitting the pas
sword to provide it via stdin, or using the --config option to specify a configuration file with the password.
2023-04-22T11:31:12.669-0400 writing test.TraditionalQuestionInfo to dump\test\TraditionalQuestionInfo.bson
2023-04-22T11:31:12.705-0400 writing test.CYOAQuestionInfo to dump\test\CYOAQuestionInfo.bson
2023-04-22T11:31:12.741-0400 writing test.DNDQuestionInfo to dump\test\DNDQuestionInfo.bson
2023-04-22T11:31:12.783-0400 writing test.GameQuestionInfo to dump\test\GameQuestionInfo.bson
2023-04-22T11:31:12.890-0400 done dumping test.GameQuestionInfo (18 documents)
2023-04-22T11:31:12.893-0400 done dumping test.TraditionalQuestionInfo (11 documents)
2023-04-22T11:31:12.927-0400 done dumping test.DNDQuestionInfo (9 documents)
2023-04-22T11:31:12.931-0400 writing test.MatchingQuestionInfo to dump\test\MatchingQuestionInfo.bson
2023-04-22T11:31:12.932-0400 done dumping test.CYOAQuestionInfo (35 documents)
2023-04-22T11:31:12.965-0400 writing test.UserInfo to dump\test\UserInfo.bson
2023-04-22T11:31:13.007-0400 done dumping test.MatchingQuestionInfo (4 documents)
2023-04-22T11:31:13.039-0400 done dumping test.UserInfo (1 document)

c:\>
```