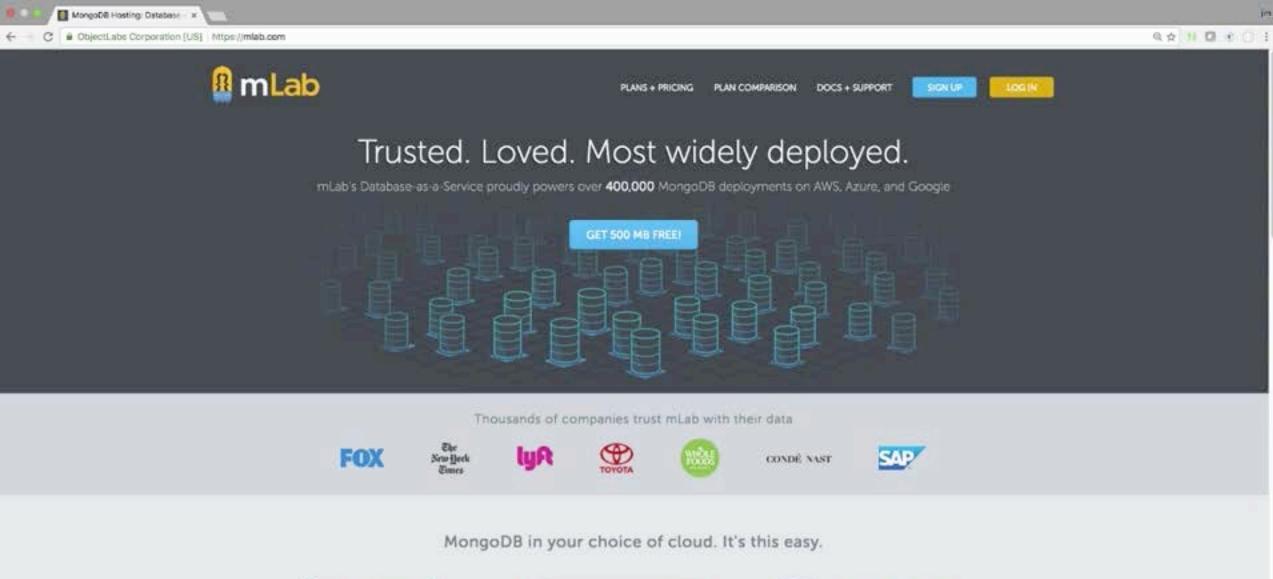
# Provisioning mLab MongoDB

Capstone: Photo Tourist Web Application



## In this lecture, we will discuss...

- ♦ Provisioning MongoDB from mLab
  - staging
  - production











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PLAN COMPARISON

DOCS + SUPPORT

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# Trusted. Loved. Most widely deployed.

mLab's Database-as-a-Service proudly powers over 400,000 MongoDB deployments on AWS, Azure, and Google



MongoDB Hosting: Database - ×

DOCS + SUPPORT





# Trusted. Loved. Most widely deployed.

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WELCOME

Single-node deployments intended for environments that do not require high availability.

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PLAN COMPARISON

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ACCOUNT

LOG OUT

{ user: "ejavaguy", account: "ejavaguy" }

Home

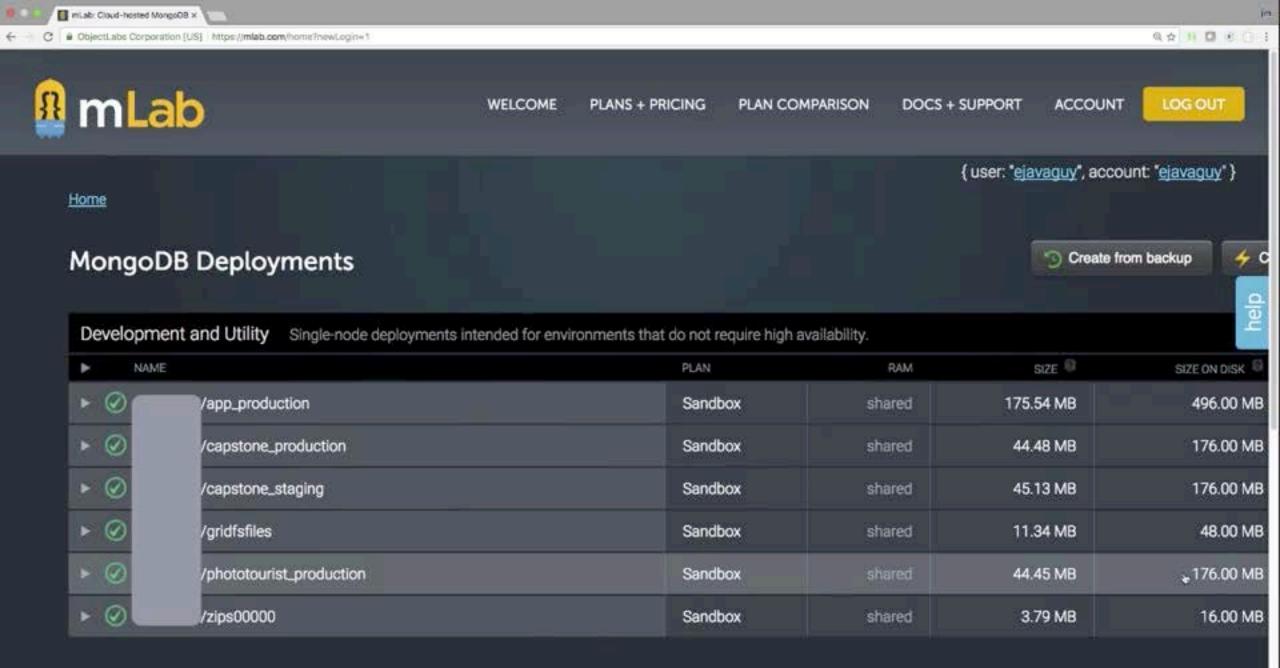
## **MongoDB Deployments**

Development and Utility

ObjectLabs Corporation (US) https://mlab.com/home?newLogin=1

Create from backup

SIZE D PLAN. NAME RAM SIZE ON DISK ♥ 175.54 MB 496.00 MB /app\_production Sandbox shared ♥ /capstone\_production Sandbox shared 44.48 MB 176.00 MB ▼ @ 176.00 MB /capstone\_staging Sandbox shared 45.13 MB ♥ /gridfsfiles Sandbox shared 11.34 MB 48.00 MB /phototourist\_production 44.45 MB 176.00 MB Sandbox shared /zips00000 3.79 MB 16.00 MB Sandbox shared



WELCOME

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PLAN COMPARISON

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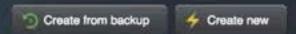
LOG OUT

help

{ user: "ejavaguy", account: "ejavaguy" }

Home

## **MongoDB Deployments**





## **Private Environments**





C @ ObjectLabs Corporation (US) https://mlab.com/creste

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Home

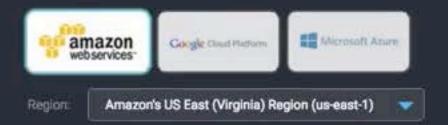
## Create new deployment

Fill out this form to create a brand-new MongoDB deployment in the cloud location of your choice.

Alternatively, you can create a new deployment from backup.

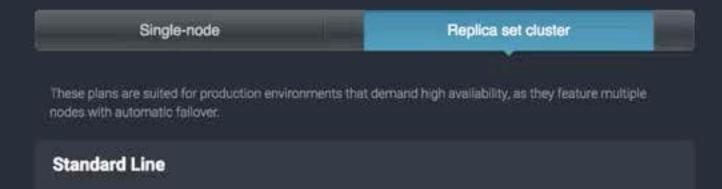
Þ.

#### **Cloud Provider:**



The most economical plans for applications running on AWC

#### Plan (view plan details):



{ user: "ejavaguy", account: "ejavaguy" }



C @ ObjectLabs Corporation (US) https://mlab.com/create







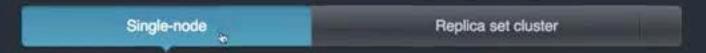
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#### **Cloud Provider:**



#### Plan (view plan details):



These plan(s) are perfect for development/testing/staging environments as well as for utility instances that do not require high availability.

#### Standard Line

The most economical plans for applications running on AWS.

- Sandbox (shared, 0.5 GB)
- M2 Cingle-node (7 5 CB 100 CB CCD block stormen)

FREE

¢ 420

C @ ObjectLabs Corporation (US) https://mlab.com/create

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#### Standard Line

The most economical plans for applications running on AWS.

Sandbox (shared, 0.5 GB)	FREE

- M3 Single-node (7.5 GB, 120 GB SSD block storage) \$ 420
- M4 Single-node (15 GB, 240 GB SSD block storage) \$835
- M5 Single-node (34.2 GB, 480 GB SSD block storage) \$1310
- M6 Single-node (68.4 GB, 700 GB SSD block storage) \$ 2045

#### **High Storage Line**

Plans which offer a higher storage to RAM ratio than those in the Standard line and are geared towards. applications that need to store large amounts of data but have more modest performance requirements.

M3 Single-node (7.5 GB, 300 GB SSB block storage)	\$ 500
---	--------

- M4 Single-node (15 GB, 600 GB SSD block storage) \$1000
- M5 Single-node (34.2 GB, 1 TB SSD block storage) \$1545
- \$ 2180 M6 Single-node (68.4 GB, 1 TB SSD block storage)

help

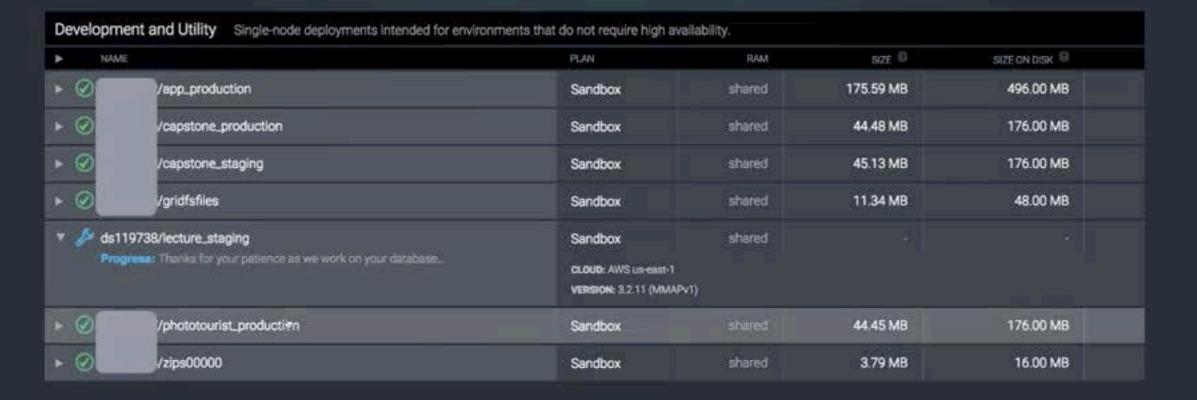
Home

0

Success! Your new database, lecture\_staging, is listed below.

## MongoDB Deployments

Create new





84 H C 6 B 1



Sandbox (shared, 0.5 GB)	FREE
M3 Single-node (7.5 GB, 120 GB SSD block storage)	\$ 420
M4 Single-node (15 GB, 240 GB SSD block storage)	\$ 835
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<ul> <li>M3 Single-node (7.5 GB, 300 GB SSD block storage)</li> </ul>
---

- M4 Single-node (15 GB, 600 GB SSD block storage)
   \$ 1000
- M5 Single-node (34.2 GB, 1 TB SSD block storage)
   \$1545
- M6 Single-node (68.4 GB, 1 TB SSD block storage)
   \$2180

MongoDB version: 3.2.x (MMAPv1) \$

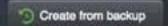
## Database Name:

lecture\_staging

들

Success! Your new database, lecture\_staging, is listed below.

## **MongoDB Deployments**





NAM	E	PLAN	RAM	size (0	SIZE ON DISK 🔞
0	/app_production	Sandbox	shared	175.59 MB	496.00 MB
· Ø	/capstone_production	Sandbox	shared	44,48 MB	176.00 MB
0	/capstone_staging	Sandbox	shared	45.13 MB	176.00 MB
Ø	/gridfsfiles	Sandbox	shared	11.34 MB	48.00 MB
	19738/lecture_staging presse: Thanks for your patience as we work on your database	Sandbox CLOUD: AWS us-east-1 VERSION: 3.2.11 (MMAPVI)	shared		
0	/phototourist_production	Sandbox	shared	44.45 MB	176.00 MB
· Ø	/zips00000	Sandbox	shared	3.79 MB	16.00 MB

#### Home

Success! Your new database, lecture\_staging, is listed below.

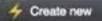
## **MongoDB Deployments**

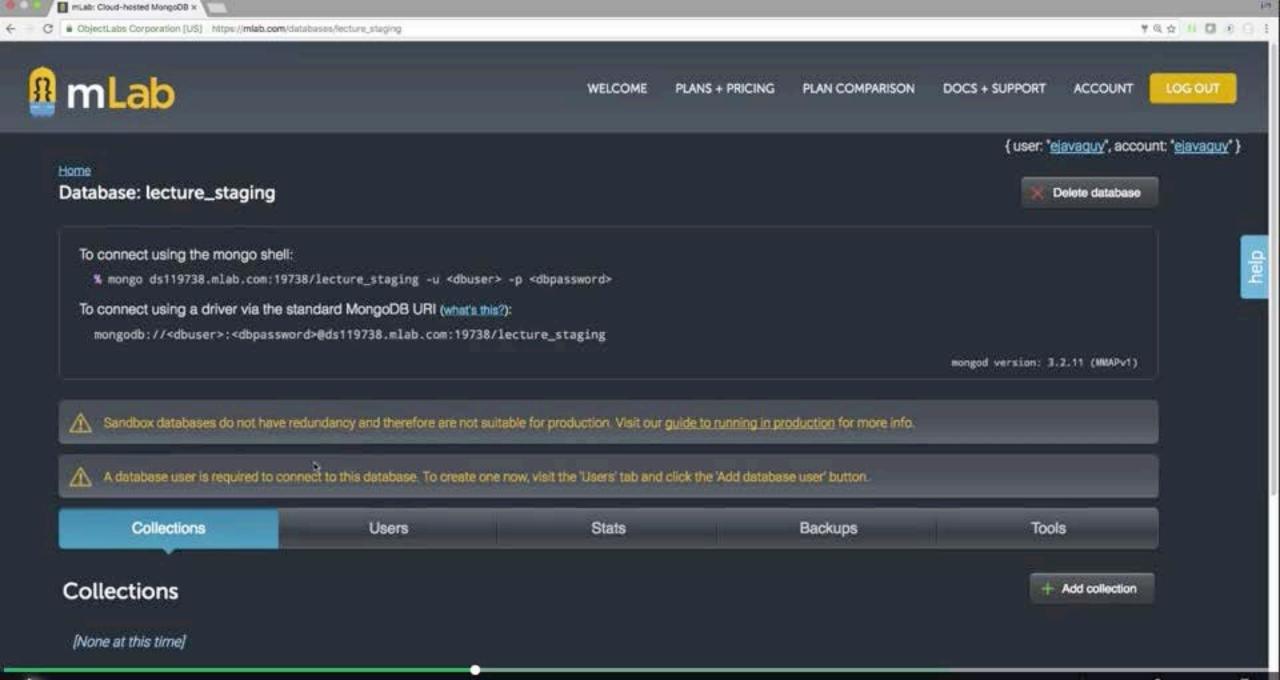


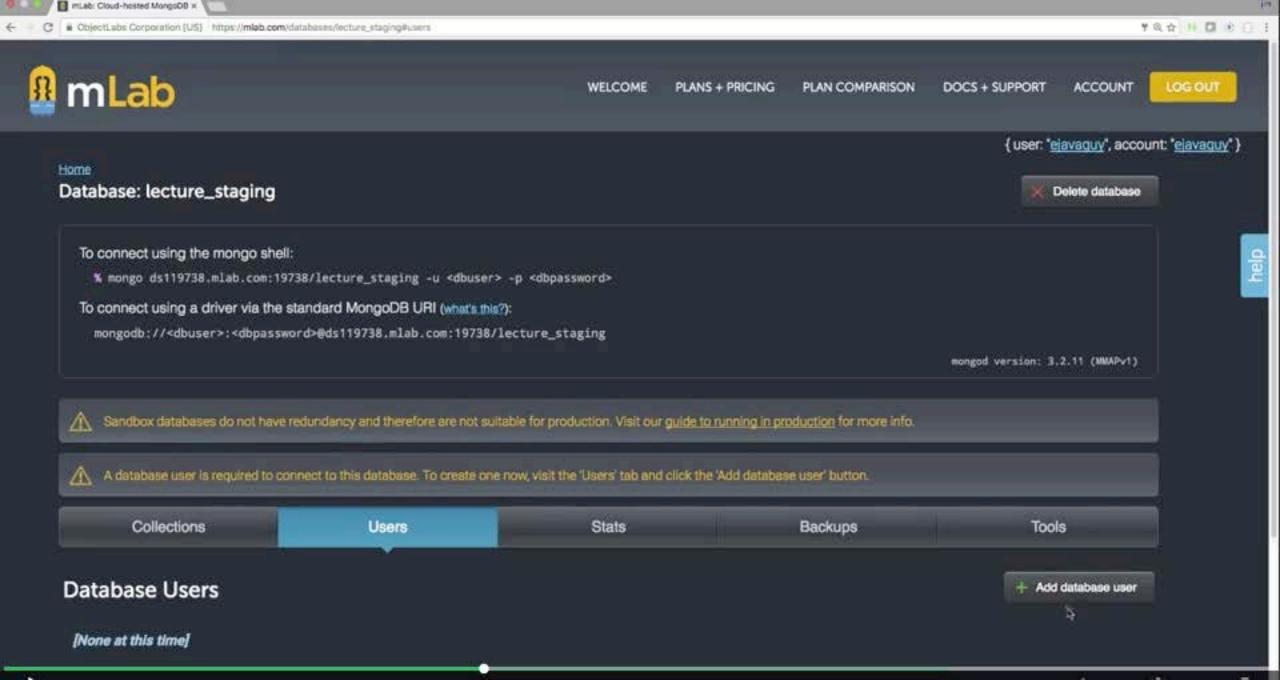


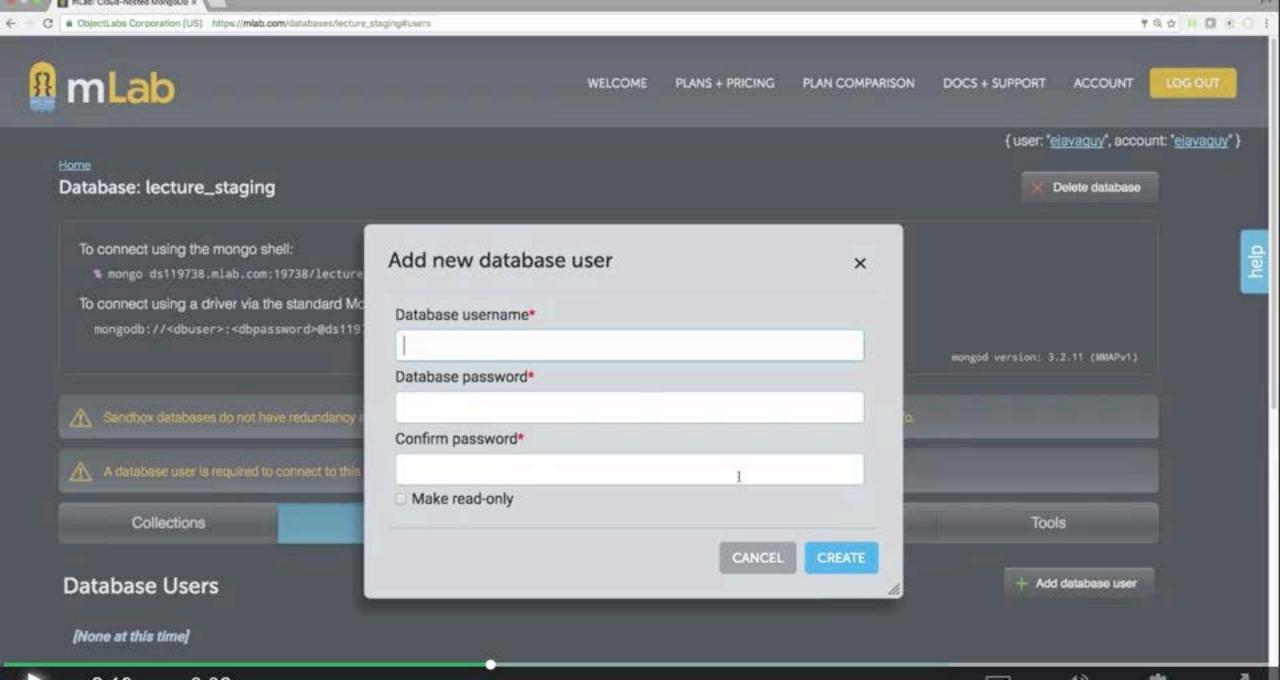
NAM!		PLAN	RAM	size 0	SIZE ON DISK <sup>©</sup>
0	/app_production	Sandbox	shared	175.59 MB	496.00 MB
<b>⊘</b>	/capstone_production	Sandbox	shared	44.48 MB	176.00 MB
0	/capstone_staging	Sandbox	shared	45.13 MB	176.00 MB
<b>⊘</b>	/gridfsfiles	Sandbox	shared	11.34 MB	48.00 MB
ds1	19738/lecture_staging	Sandbox	44.00	0.00 KB	0.00 KB
0	/phototourist_production	Sandbox	shared	44.45 MB	176.00 MB
0	/zips00000	Sandbox	shared	3.79 MB	16.00 MB

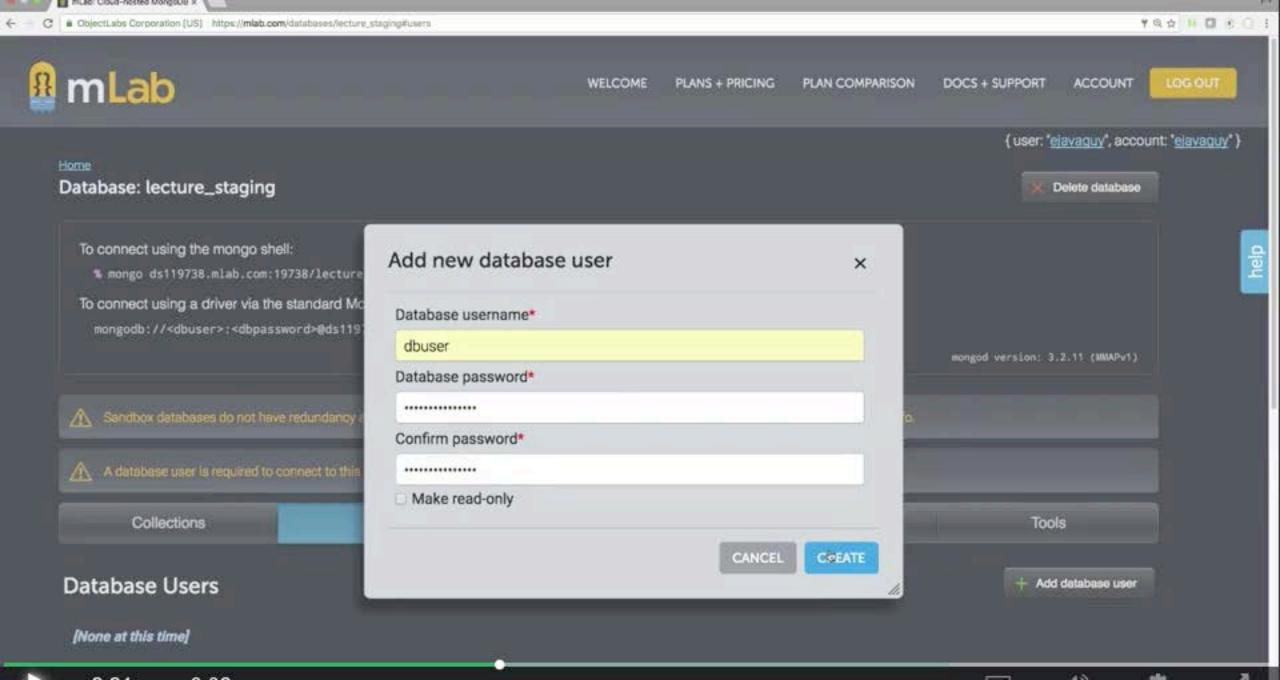
## **Private Environments**











## Database: lecture\_staging

To connect using the mongo shell:

% mongo ds119738.mlab.com:19738/lecture\_staging -u <dbuser> -p <dbpassword>

To connect using a driver via the standard MongoDB URI (what's this?):

mongodb://<dbuser>:<dbpassword>@ds119738.mlab.com:19738/lecture\_staging

1

Sandbox databases do not have redundancy and therefore are not suitable for production. Visit our guide to running in production for more info.

Collections

Users

Stats

Backups

## Database Users

NAME

READ ONLY?

#### Home

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Users

Stats

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## Database Users

NAME

READ ONLY?

7/44/03/03/03/03/03

10000000011

{ user

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A

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Collections

Users

Stats

Backups

## Database Users

NAME

READ ONLY?

help

DOCS + SUPPORT

ACCOUNT

{user: 'ejavaguy', account: 'ejavaguy' }

Create new

Home

## **MongoDB Deployments**

Create from backup

► NAM		PLAN	RAM	SIZE 🔢	SIZE ON DISK
· @	/app_production	Sandbox	shared	175.59 MB	496.00 MB
· Ø	/capstone_production	Sandbox	shared	44.48 MB	176.00 MB
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►	19738/lecture_staging	Sandbox	shared	0.00 KB	0.00 KB
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<b>▶</b> ∅	/zips00000	Sandbox	shared	3.79 MB	16.00 MB

## **Private Environments**



+ Add collection

Delete all collections



## Collections

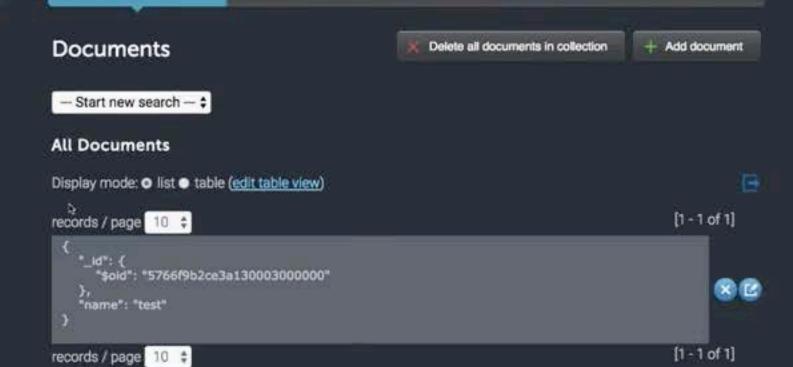
NAME	DOCUMENTS	CAPPED?	SIZE (I)	
bars		false	8.03 KB	<b>8</b>
image_contents	480	false	175.55 MB	8
locations	15	false	30.97 KB	8

## System Collections

NAME	DOCUMENTS	SIZE
system indexes	6	1.03 KB







From the "Documents" tab you can browse and search for objects in this collection. All standard query constructs are supported except for map/reduce queries. To use map/reduce, use the MongoDB shell (note that temporary result collections will be viewable in mLab).

You can also add, edit, and delete individual documents from here. Bulk collection updates are not yet supported in this UI (although they are supported in the shell).



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COMPANY PRODUCT SUPPORT

#### Collection: bars 🗹



#### Indexes (full docs)

From the "Indexes" tab you can manage indexes for this collection. Index configuration is stored in the system indexes collection for this database, but you should create indexes either via this page or the ensureIndex method.

#### Standard Indexes (full docs)

From this UI, you can create simple or compound indexes that are optionally unique and/or sparse. You can even index a key inside an embedded object (e.g. address.city).

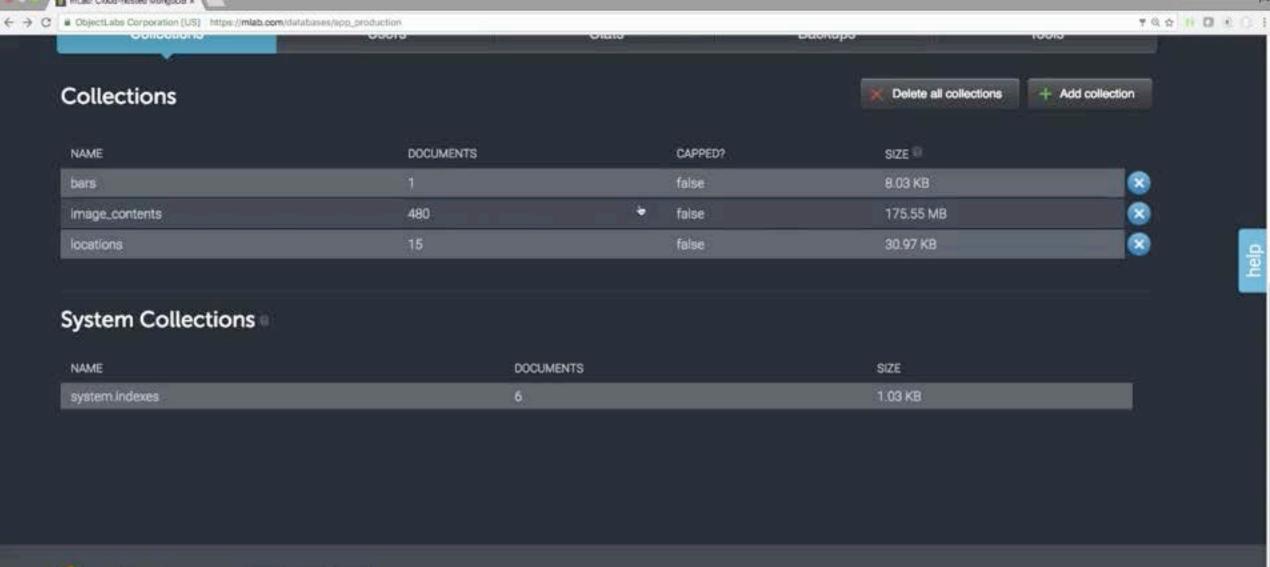
When you see indexed fields that look like:

```
{ <field-name> : <-1 or 1> }
```

...the 1 indicates an ascending sort order and -1 a descending sort order. Sort order only matters for compound indexes.

#### Geospatial Indexes (full docs)

You can also create a 2d or 2dsphere geospatial index here. Please note that starting with MongoDB 2.4 and above, multiple geospatial indexes per collection are allowed unless you're making use of the geoNear database command and/or the \$geoNear aggregation pipeline operator. You can read further about these considerations.





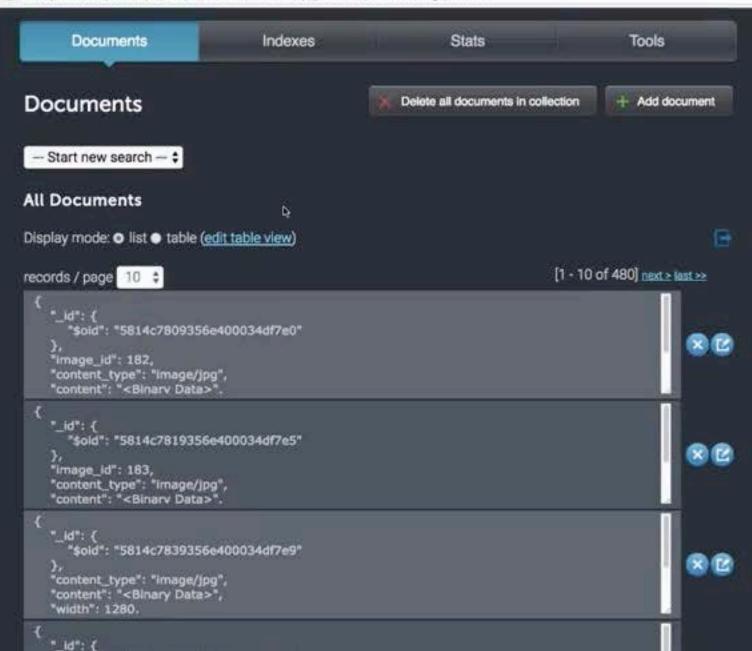
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#### Documents (aka Objects)

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## **Documents**

Delete all documents in collection

- Add document

- Start new search - \$

#### **All Documents**

Display mode: ● list ● table (edit table view)

records / page 10 \$ 5010 : 5014C/6U935664UUU3401/6U [1 - 10 of 480] rext > last >>

```
"image_id": 182.
"content_type": "image/jpg",
"content": "<Binary Data>",
"width": 89,
"height": 67
```

```
"_id": {
  "Soid": "5814c7819356e400034df7e5"
```

"image\_id": 183, "content\_type": "image/jpg", "content": "<Binary Data>".

"width": 1280.

" id": { "\$old": "5814c7839356e400034df7e9" "content\_type": "image/jpg", "content": "<Binary Data>",

"\_id": { "Soid": "5814c7839356e400034df7ea" "image id": 184.



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#### Indexes (full docs)

From the "Indexes" tab you can manage indexes for this collection. Index configuration is stored in the <a href="mailto:system.indexes">system.indexes</a> collection for this database, but you should create indexes either via this page or the <a href="mailto:ensureIndex">ensureIndex</a> method.

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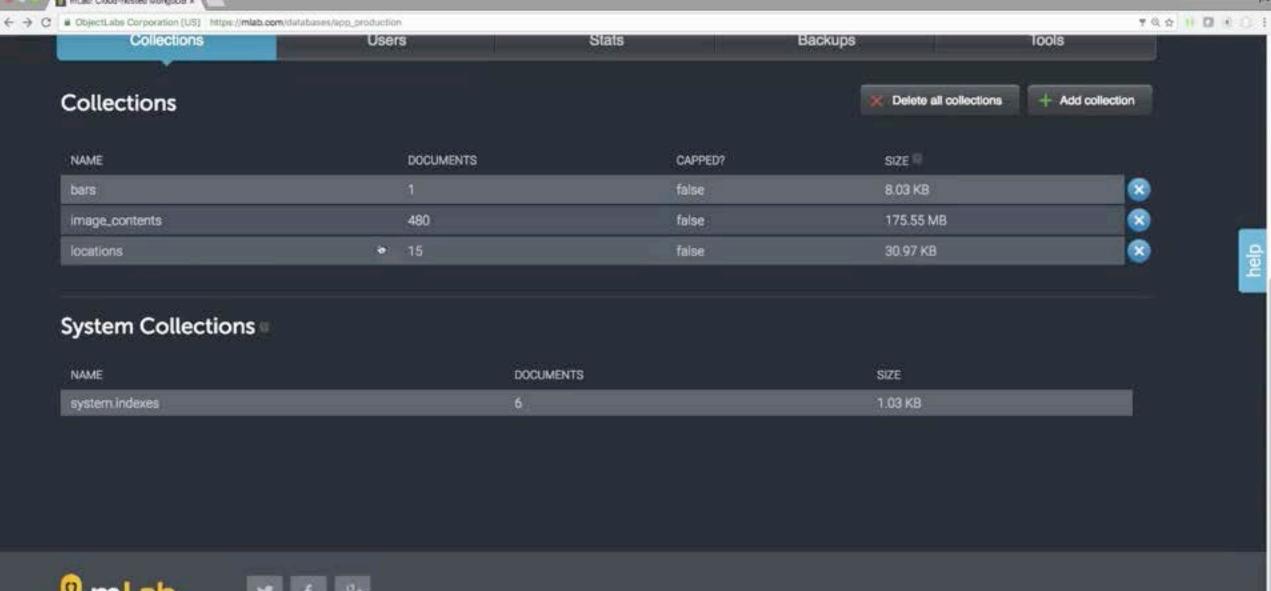
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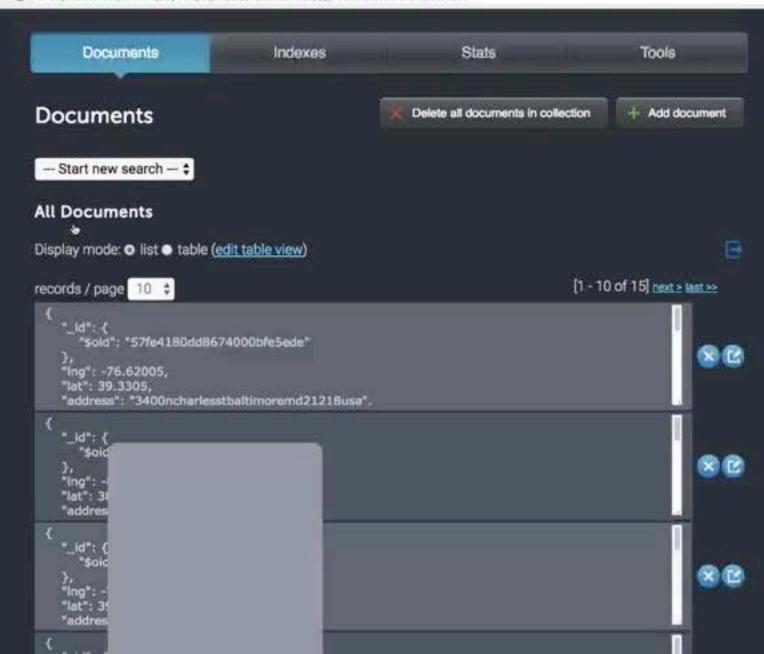




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CUMBRIDE

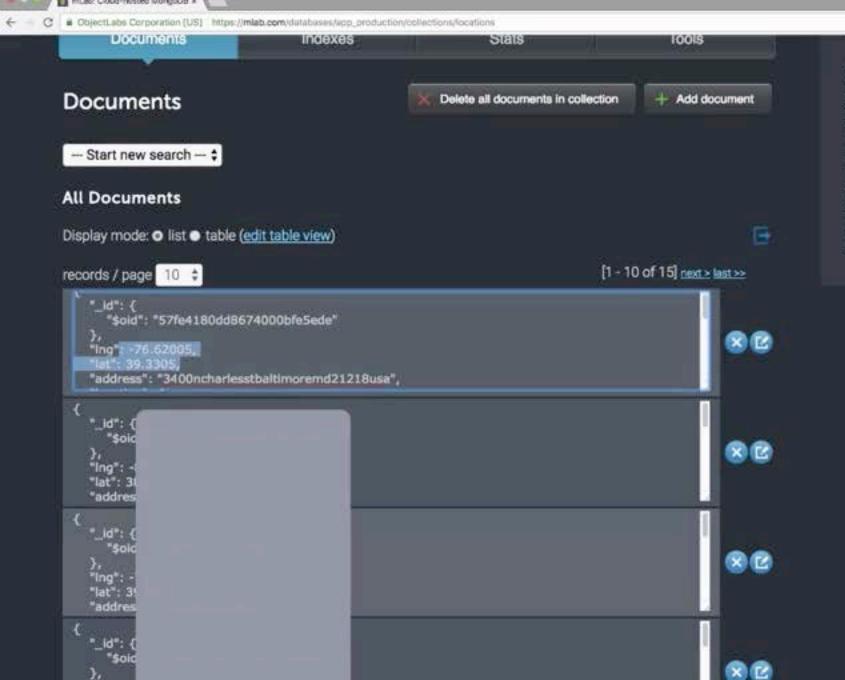
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PLAN COMPARISON

DOCS + SUPPORT

ACCOUNT

LOG OUT

{ user: 'ejavaguy', account: 'ejavaguy' }

Home: ( do : "app\_production", collection: "locations")

Document: 57fe4180dd8674000bfe5ede

## Edit document (view keyboard shortcuts)

Delete

```
"_id": {
           "$oid": "57fe4180dd8674000bfe5ede"
       "lng": -76.62005,
       "lat": 39.3305,
       "address": "3400ncharlesstbaltimoremd21218usa",
       "location": {
           "formatted_address": "3400 N Charles St, Baltimore, MD 21218, USA",
           "position": {
               "lng": -76.6200464,
               "lat": 39.3304957
           1.
           "address": {
               "street_address": "3400 North Charles Street",
               "city": "Baltimore",
               "state_code": "MD",
               "zip": "21218",
               "country_code": "US"
22 }
```





WELCOME

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PLAN COMPARISON

DOCS + SUPPORT

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{ user: "ejavaguy", account: "ejavaguy" }

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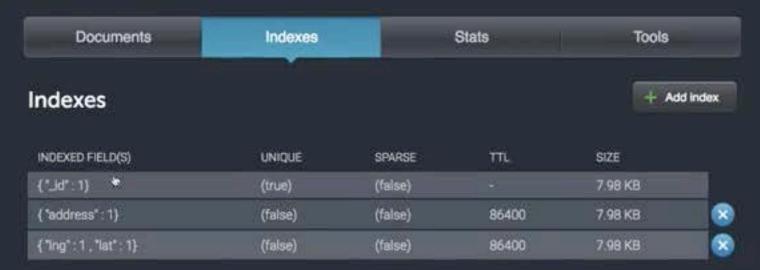
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        "lng": -76.62005,
        "lat": 39.3305,
        "address": "3400ncharlesstbaltimoremd21218usa",
            "formatted_address": "3400 N Charles St, Baltimore, MD 21218, USA",
                "lng": -76.6200464.
13
14
15
16
17
18
19
           "address": {
                "street_address": "3400 North Charles Street",
                "city": "Baltimore",
                "state_code": "WD",
22 }
```

#### Collection: locations



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# Summary

- ♦ Provisioned MongoDBs on mLab
  - staging instance
  - production instance

## What's Next?

♦ Staging and Production Heroku Deployment