Deploying Web Apps

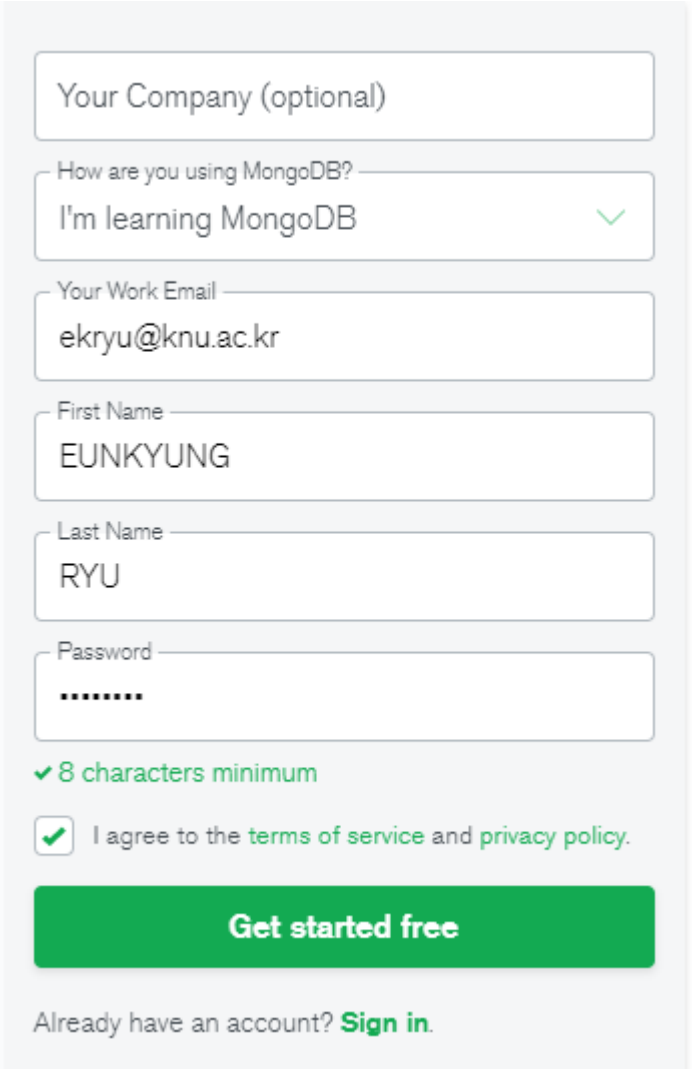
- **USING MONGODB ATLAS**

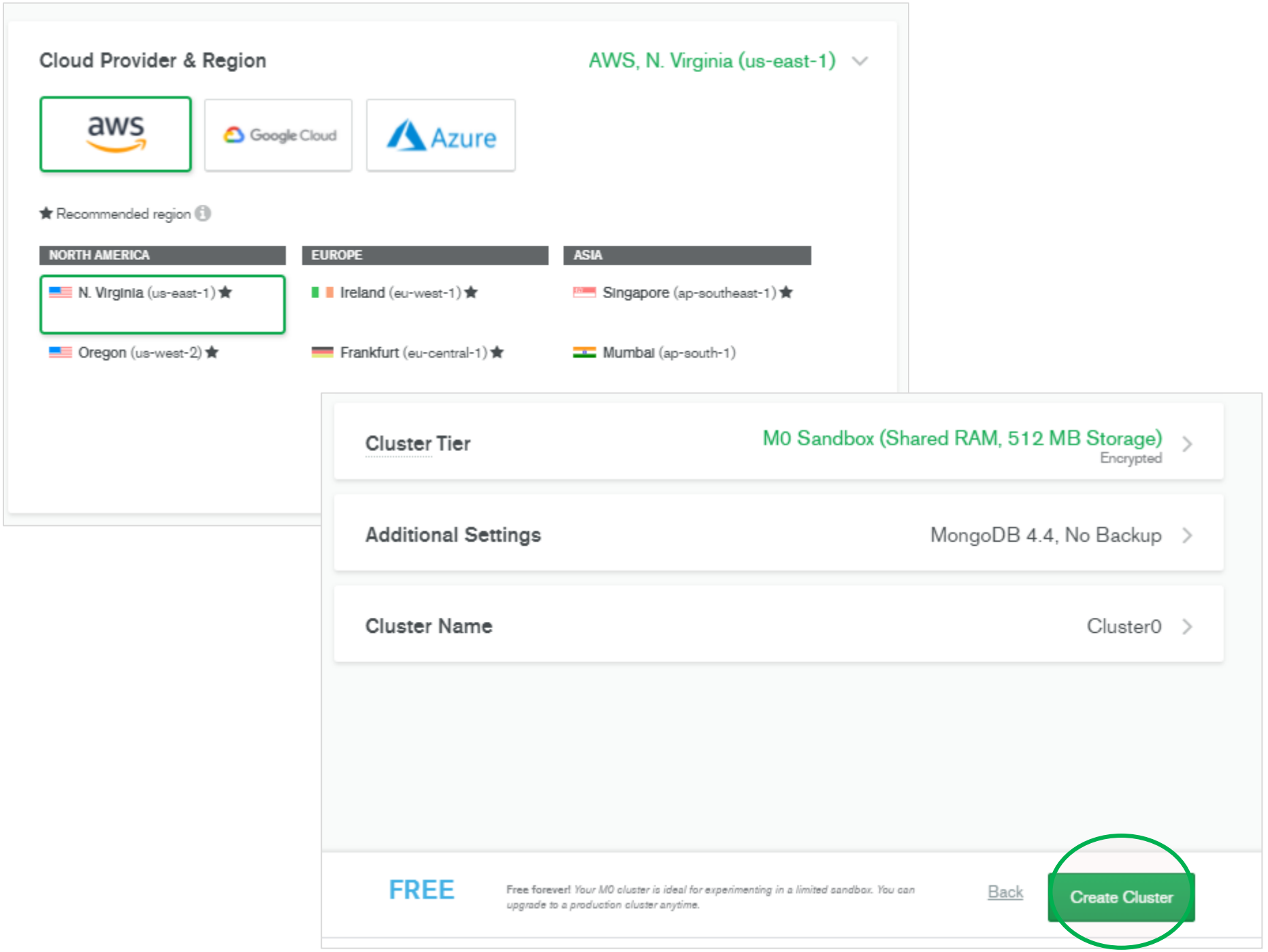
- **Deploying Web Apps on Heroku**

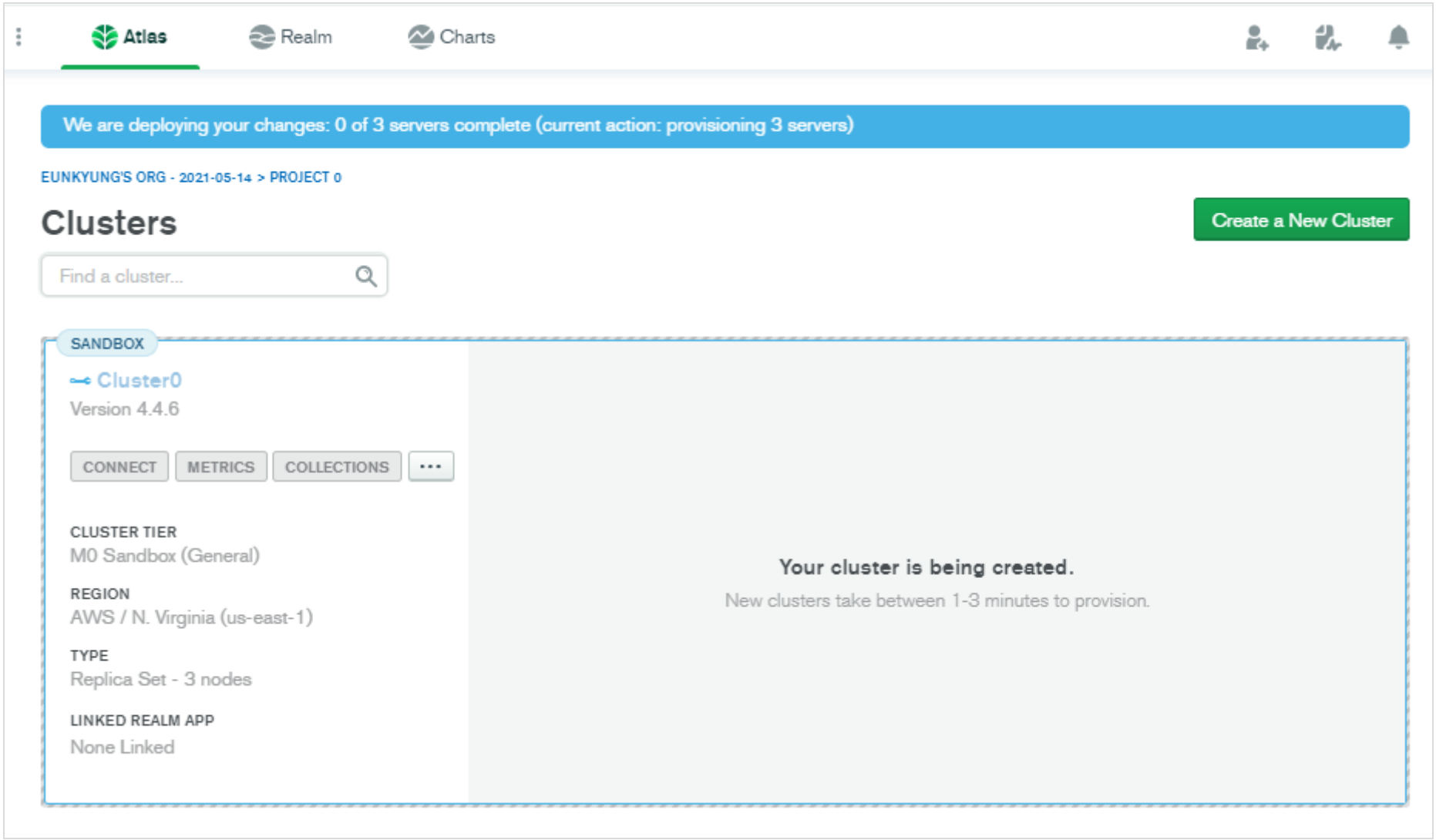
Setting Up MongoDB Atlas

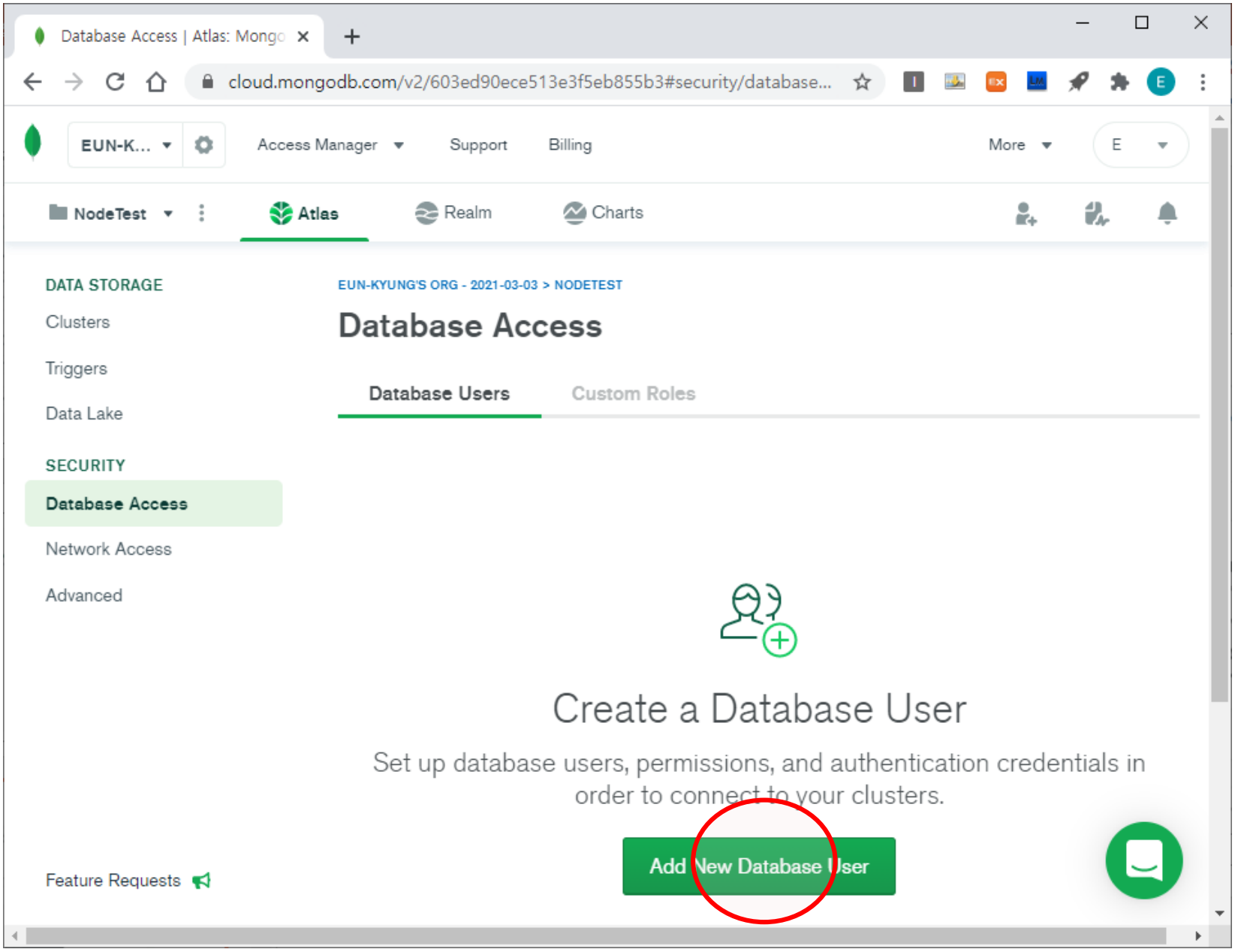
- **Sign up for a MongoDB Atlas account :**

  https://www.mongodb.com/try




Cloud Provider & Region
AWS, N. Virginia (us-east-1)
aws
Google Cloud
Azure
Recommended region
NORTH AMERICA
EUROPE
ASIA
N. Virginia (us-east-1)
Ireland (eu-west-1)
Singapore (ap-southeast-1)
Oregon (us-west-2)
Frankfurt (eu-central-1)
Mumbai (ap-south-1)
Cluster Tier
M0 Sandbox (Shared RAM, 512 MB Storage)
Encrypted
Additional Settings
MongoDB 4.4, No Backup
Cluster Name
Cluster0
FREE
Free forever! Your M0 cluster is ideal for experimenting in a limited sandbox. You can upgrade to a production cluster anytime.
Back
Create Cluster


Atlas
Realm
Charts
We are deploying your changes: 0 of 3 servers complete (current action: provisioning 3 servers)
EUNKYUNG'S ORG - 2021-05-14 > PROJECT 0
Clusters
Create a New Cluster
Find a cluster...
SANDBOX
Cluster0
Version 4.4.6
CONNECT
METRICS
COLLECTIONS
CLUSTER TIER
M0 Sandbox (General)
REGION
AWS / N. Virginia (us-east-1)
TYPE
Replica Set - 3 nodes
LINKED REALM APP
None Linked
Your cluster is being created.
New clusters take between 1-3 minutes to provision.


Database Access | Atlas: Mongo
cloud.mongodb.com/v2/603ed90ece513e3f5eb855b3#security/database...
EUN-K...
Access Manager
Support
Billing
More
E
NodeTest
Atlas
Realm
Charts
DATA STORAGE
Clusters
Triggers
Data Lake
SECURITY
Database Access
Network Access
Advanced
EUN-KYUNG'S ORG - 2021-03-03 > NODETEST
Database Access
Database Users
Custom Roles
Create a Database User
Set up database users, permissions, and authentication credentials in order to connect to your clusters.
Add New Database User
Feature Requests

Create a database user to grant an application or user, access to databases and collections in your clusters in this Atlas project. Granular access control can be configured with default privileges or custom roles. You can grant access to an Atlas project or organization using the corresponding Access Manager

Authentication Method

Password | **Certificate** | **AWS IAM** (MongoDB 4.4 and up)

MongoDB uses SCRAM as its default authentication method.

Password Authentication

ekryu

•••••••• SHOW

Autogenerate Secure Password | Copy

Database User Privileges

Select a built-in role or privileges for this user.

Read and write to any database

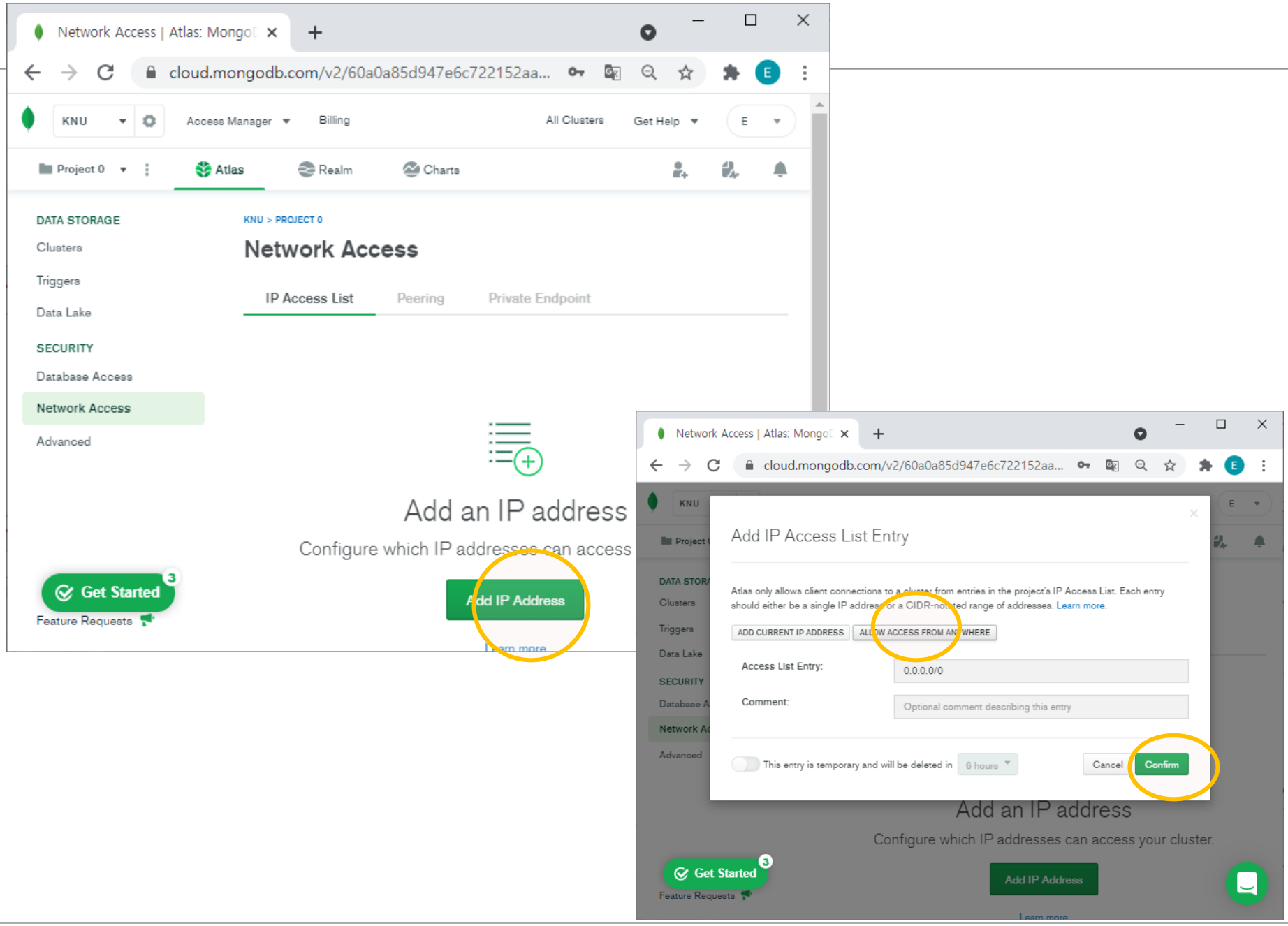
Restrict Access to Specific Clusters/Data Lakes

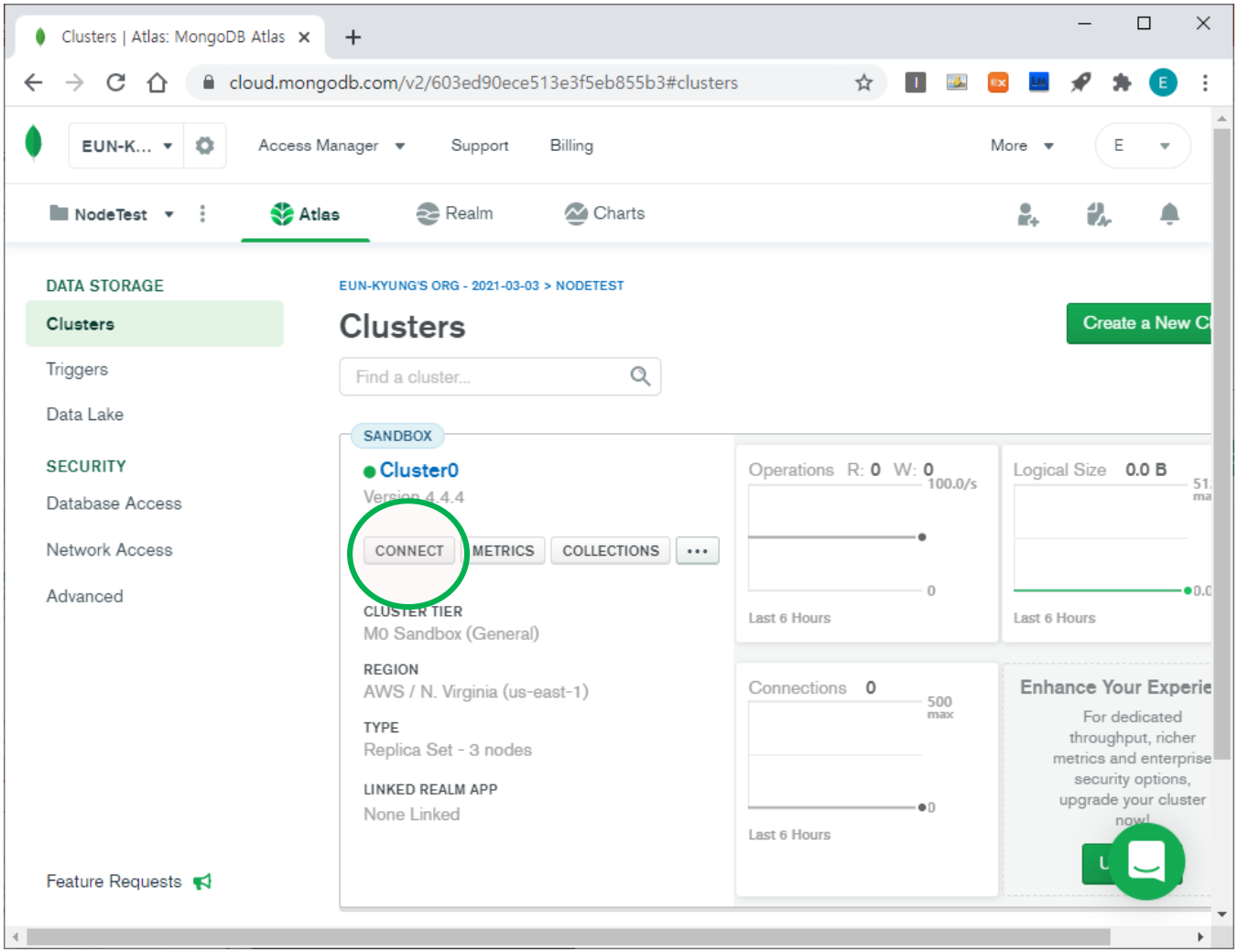
Enable to specify the resources this user can access. By default, all resources in this project are accessible. OFF

Temporary User

This user is temporary and will be deleted after your specified duration of 6 hours, 1 day, or 1 week. OFF

Cancel | Add User


Network Access | Atlas: Mongo
cloud.mongodb.com/v2/60a0a85d947e6c722152aa...
KNU
Access Manager
Billing
All Clusters
Get Help
Project 0
Atlas
Realm
Charts
DATA STORAGE
Clusters
Triggers
Data Lake
SECURITY
Database Access
Network Access
Advanced
KNU > PROJECT 0
Network Access
IP Access List
Peering
Private Endpoint
Add an IP address
Configure which IP addresses can access
Add IP Address
Learn more
Get Started
Feature Requests
Add IP Access List Entry
Atlas only allows client connections to a cluster from entries in the project's IP Access List. Each entry should either be a single IP address or a CIDR-notated range of addresses. Learn more.
ADD CURRENT IP ADDRESS
ALLOW ACCESS FROM ANYWHERE
Access List Entry:
0.0.0.0/0
Comment:
Optional comment describing this entry
This entry is temporary and will be deleted in
6 hours
Cancel
Confirm
Add an IP address
Configure which IP addresses can access your cluster.
Add IP Address
Get Started
Feature Requests


Clusters | Atlas: MongoDB Atlas
cloud.mongodb.com/v2/603ed90ece513e3f5eb855b3#clusters
EUN-K...
Access Manager
Support
Billing
More
NodeTest
Atlas
Realm
Charts
DATA STORAGE
Clusters
Triggers
Data Lake
SECURITY
Database Access
Network Access
Advanced
Feature Requests
EUN-KYUNG'S ORG - 2021-03-03 > NODETEST
Clusters
Create a New C
Find a cluster...
SANDBOX
Cluster0
Version 4.4.4
CONNECT
METRICS
COLLECTIONS
CLUSTER TIER
M0 Sandbox (General)
REGION
AWS / N. Virginia (us-east-1)
TYPE
Replica Set - 3 nodes
LINKED REALM APP
None Linked
Operations R: 0 W: 0
100.0/s
0
Last 6 Hours
Logical Size 0.0 B
Last 6 Hours
Connections 0
500
max
0
Last 6 Hours
Enhance Your Experie
For dedicated throughput, richer metrics and enterprise security options, upgrade your cluster now!

Connect to Cluster0

✔ Setup connection security | Choose a connection method | Connect

Choose a connection method View documentation

Get your pre-formatted connection string by selecting your tool below.

Connect with the mongo shell
Interact with your cluster using MongoDB's interactive Javascript interface

Connect your application
Connect your application to your cluster using MongoDB's native drivers

Connect using MongoDB Compass
Explore, modify, and visualize your data with MongoDB's GUI

Go Back

Close

Connect to Cluster0

✔ Setup connection security › ✔ Choose a connection method › Connect

I do not have MongoDB Compass | I have MongoDB Compass

1 Choose your version of Compass:

1.12 or later

See your Compass version in "About Compass"

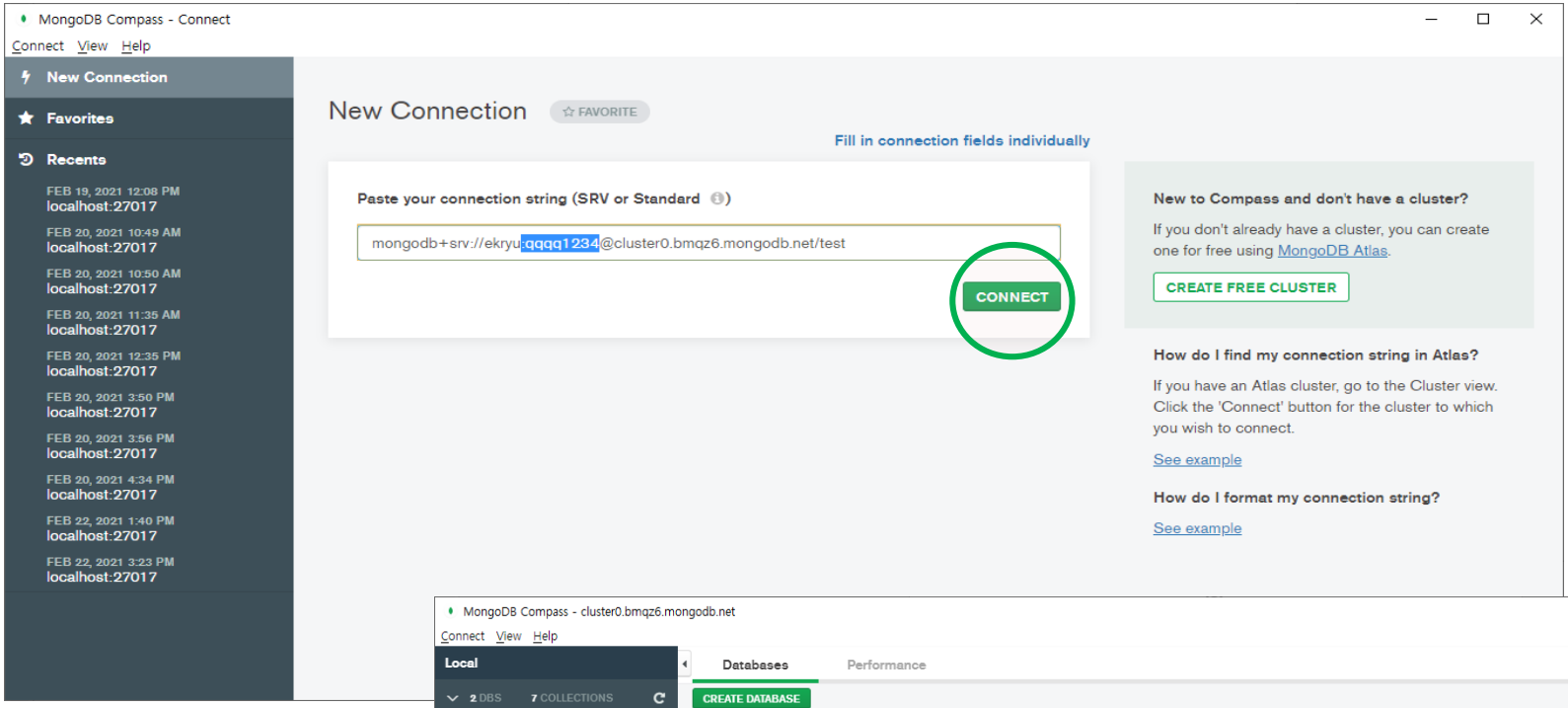
2 Copy the connection string, then open MongoDB Compass.

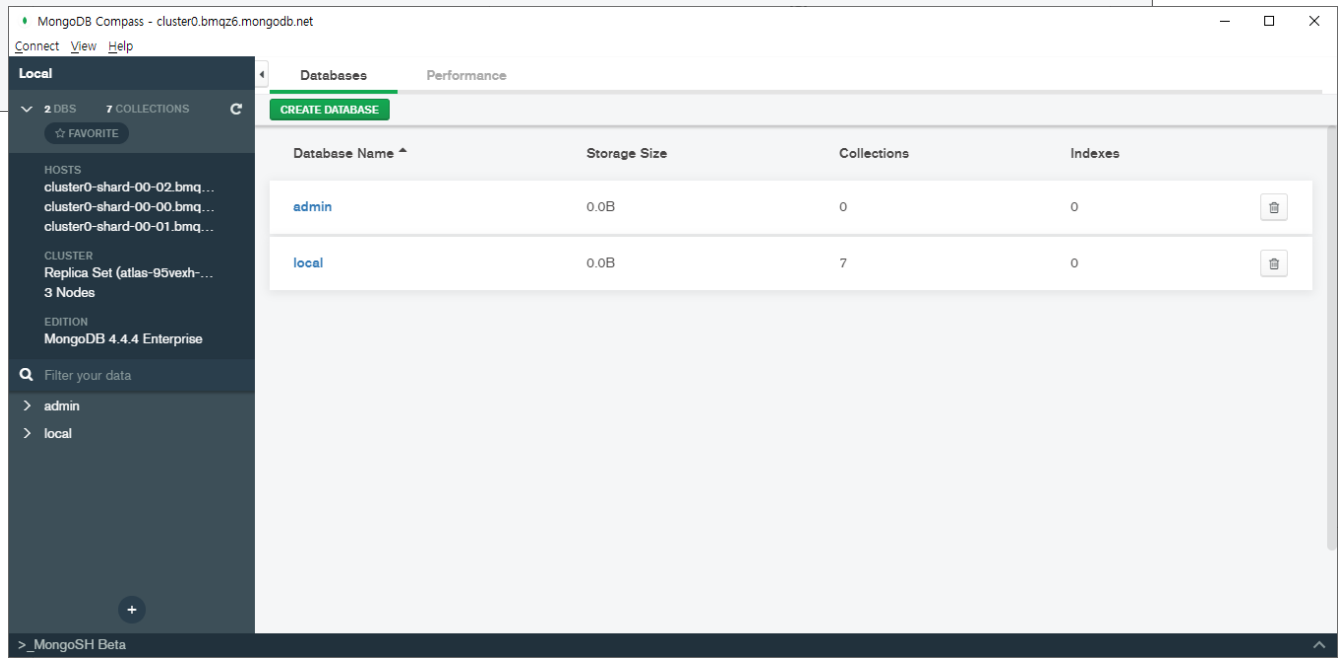
```
mongodb+srv://ekryu:<password>@cluster0.bmqz6.mongodb.net/test
```

You will be prompted for the password for the **ekryu** user's (Database User) username.
When entering your password, make sure that any special characters are URL encoded.

Having trouble connecting? View our troubleshooting documentation

Go Back | Close

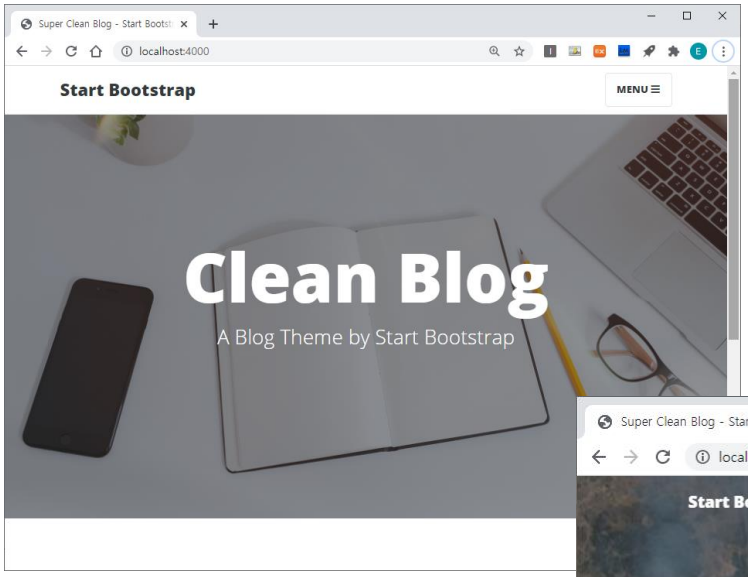

MongoDB Compass - Connect
Connect View Help
New Connection
Favorites
Recents
FEB 19, 2021 12:08 PM
localhost:27017
FEB 20, 2021 10:49 AM
localhost:27017
FEB 20, 2021 10:50 AM
localhost:27017
FEB 20, 2021 11:35 AM
localhost:27017
FEB 20, 2021 12:35 PM
localhost:27017
FEB 20, 2021 3:50 PM
localhost:27017
FEB 20, 2021 3:56 PM
localhost:27017
FEB 20, 2021 4:34 PM
localhost:27017
FEB 22, 2021 1:40 PM
localhost:27017
FEB 22, 2021 3:23 PM
localhost:27017
New Connection
FAVORITE
Fill in connection fields individually
Paste your connection string (SRV or Standard)
mongodb+srv://ekryu:qqqq1234@cluster0.bmqz6.mongodb.net/test
CONNECT
New to Compass and don't have a cluster?
If you don't already have a cluster, you can create one for free using MongoDB Atlas.
CREATE FREE CLUSTER
How do I find my connection string in Atlas?
If you have an Atlas cluster, go to the Cluster view. Click the 'Connect' button for the cluster to which you wish to connect.
See example
How do I format my connection string?
See example

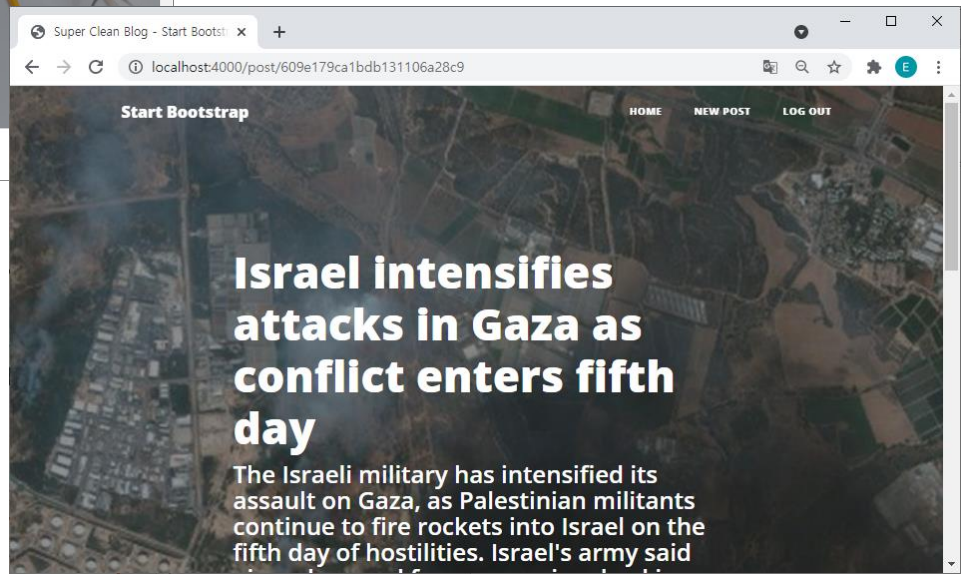

MongoDB Compass - cluster0.bmqz6.mongodb.net
Connect View Help
Local
2 DBS 7 COLLECTIONS
FAVORITE
HOSTS
cluster0-shard-00-02.bmq...
cluster0-shard-00-00.bmq...
cluster0-shard-00-01.bmq...
CLUSTER
Replica Set (atlas-95vexh-...
3 Nodes
EDITION
MongoDB 4.4.4 Enterprise
Filter your data
admin
local
Databases
Performance
CREATE DATABASE
Database Name
Storage Size
Collections
Indexes
admin
0.0B
0
0
local
0.0B
7
0
>_MongoSH Beta

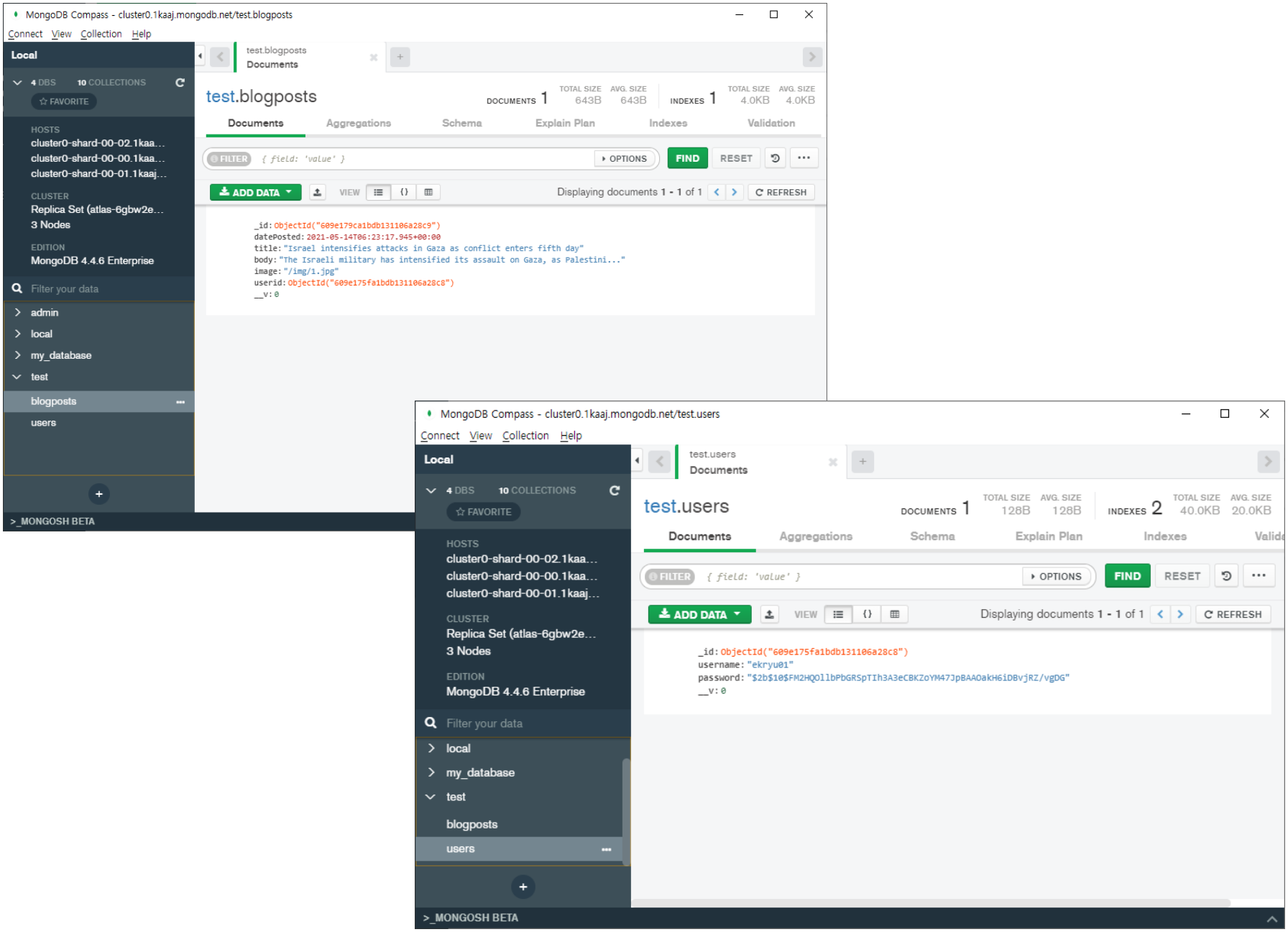
- 클라우드 DB 서버 사용 (Index.js)

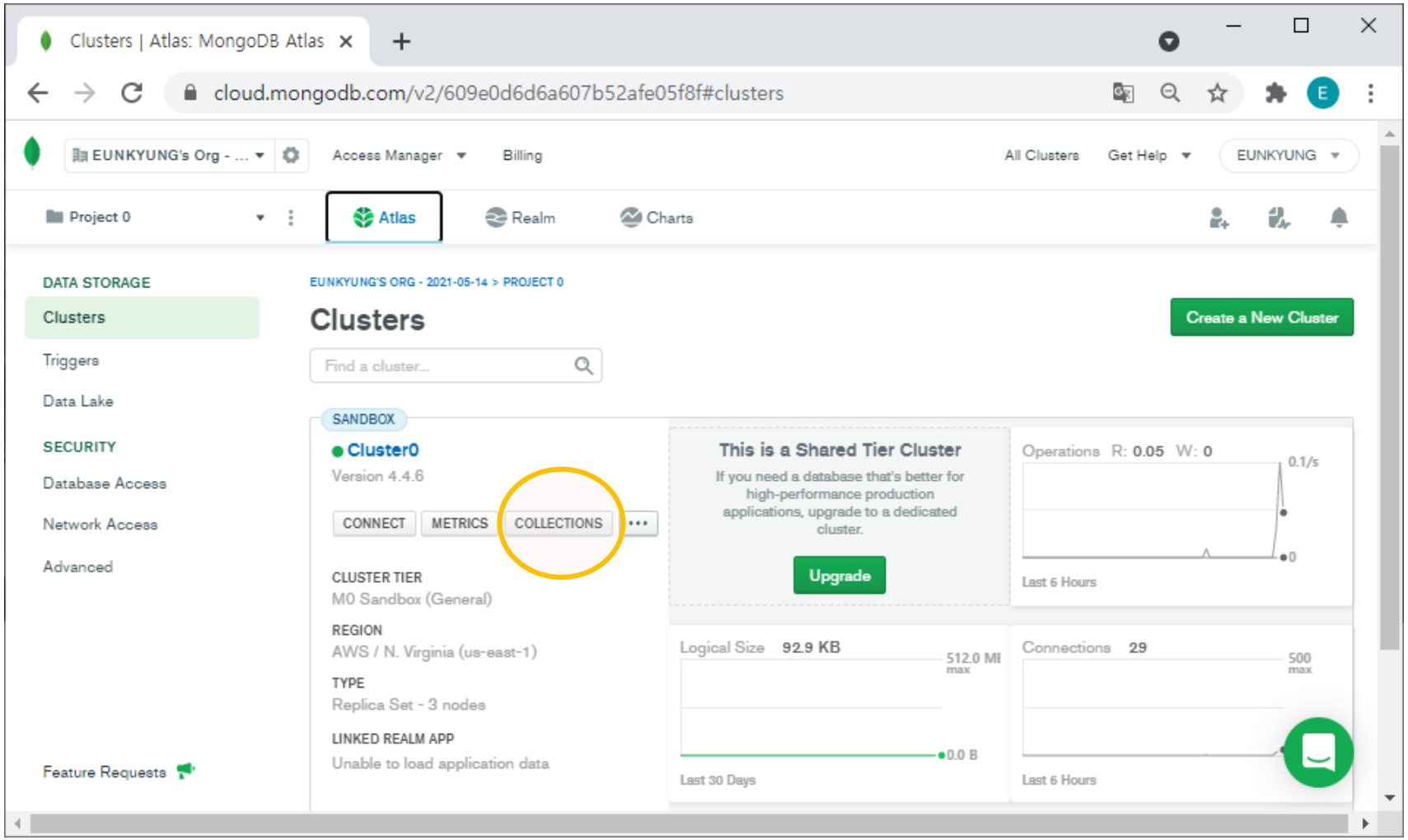
```
mongoose.connect('mongodb+srv://ekryu:qqqq1234@cluster0.bmqz6.mongodb.net/test',
 {useUnifiedTopology: true, useNewUrlParser: true});
```

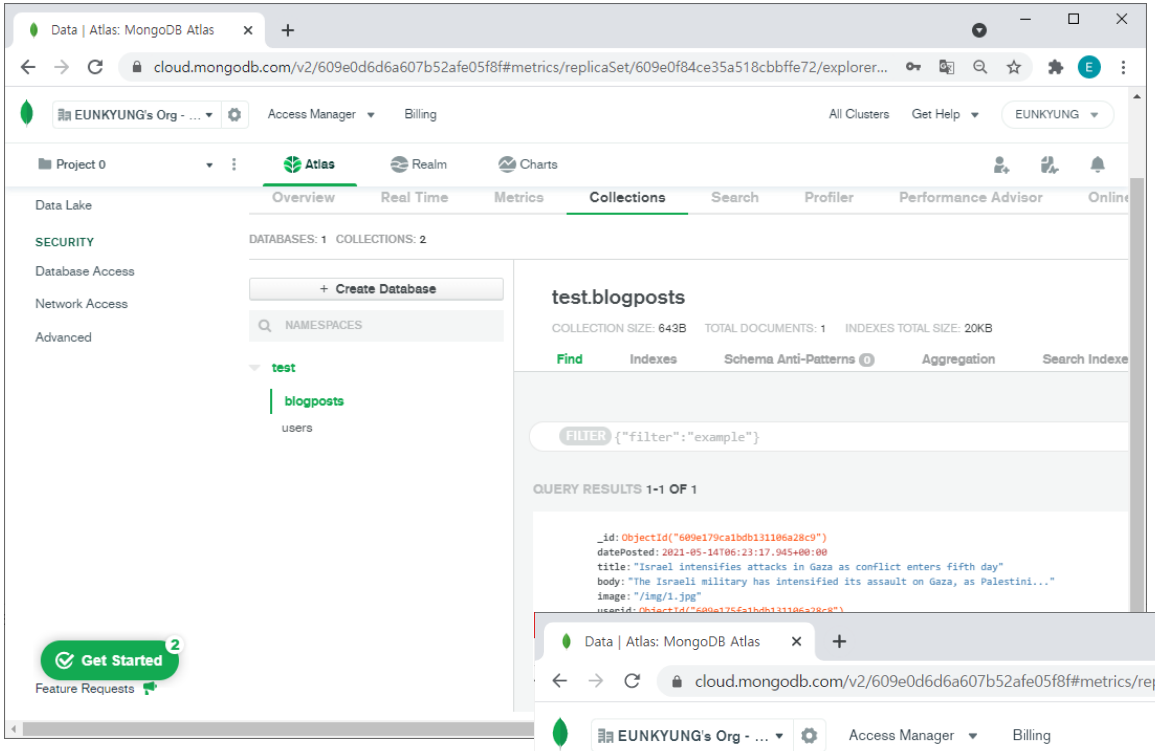
- **서버 실행**
  - DB에 데이터 등록: 사용자, 데이터(post)

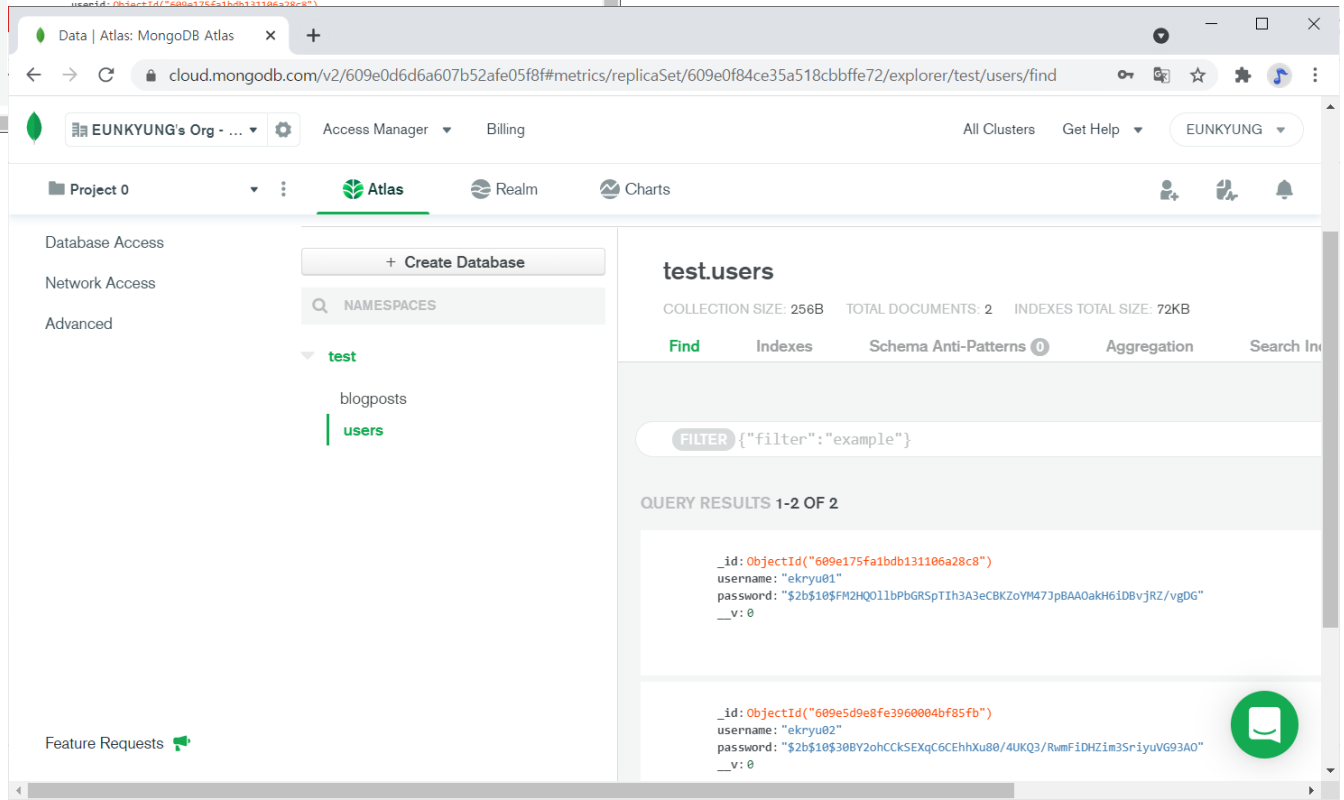





MongoDB Compass - cluster0.1kaaj.mongodb.net/test.blogposts
Connect View Collection Help
Local
4 DBS 10 COLLECTIONS
FAVORITE
HOSTS
cluster0-shard-00-02.1kaa...
cluster0-shard-00-00.1kaa...
cluster0-shard-00-01.1kaaj...
CLUSTER
Replica Set (atlas-6gbw2e...
3 Nodes
EDITION
MongoDB 4.4.6 Enterprise
Filter your data
admin
local
my_database
test
blogposts
users
test.blogposts
Documents
test.blogposts
DOCUMENTS 1 TOTAL SIZE 643B AVG. SIZE 643B
INDEXES 1 TOTAL SIZE 4.0KB AVG. SIZE 4.0KB
Documents Aggregations Schema Explain Plan Indexes Validation
FILTER { field: 'value' } OPTIONS FIND RESET
ADD DATA VIEW Displaying documents 1 - 1 of 1 REFRESH
_id: ObjectId("609e179ca1bdb131106a28c9")
datePosted: 2021-05-14T06:23:17.945+00:00
title: "Israel intensifies attacks in Gaza as conflict enters fifth day"
body: "The Israeli military has intensified its assault on Gaza, as Palestini..."
image: "/img/1.jpg"
userid: ObjectId("609e175fa1bdb131106a28c8")
__v: 0
>_MONGOSH BETA
MongoDB Compass - cluster0.1kaaj.mongodb.net/test.users
Connect View Collection Help
Local
4 DBS 10 COLLECTIONS
FAVORITE
HOSTS
cluster0-shard-00-02.1kaa...
cluster0-shard-00-00.1kaa...
cluster0-shard-00-01.1kaaj...
CLUSTER
Replica Set (atlas-6gbw2e...
3 Nodes
EDITION
MongoDB 4.4.6 Enterprise
Filter your data
local
my_database
test
blogposts
users
test.users
Documents
test.users
DOCUMENTS 1 TOTAL SIZE 128B AVG. SIZE 128B
INDEXES 2 TOTAL SIZE 40.0KB AVG. SIZE 20.0KB
Documents Aggregations Schema Explain Plan Indexes
FILTER { field: 'value' } OPTIONS FIND RESET
ADD DATA VIEW Displaying documents 1 - 1 of 1 REFRESH
_id: ObjectId("609e175fa1bdb131106a28c8")
username: "ekryu01"
password: "$2b$10$FM2HQOllbPbGRSpTIh3A3eCBKZoYM47JpBAAOakH6iDBvjRZ/vgDG"
__v: 0
>_MONGOSH BETA

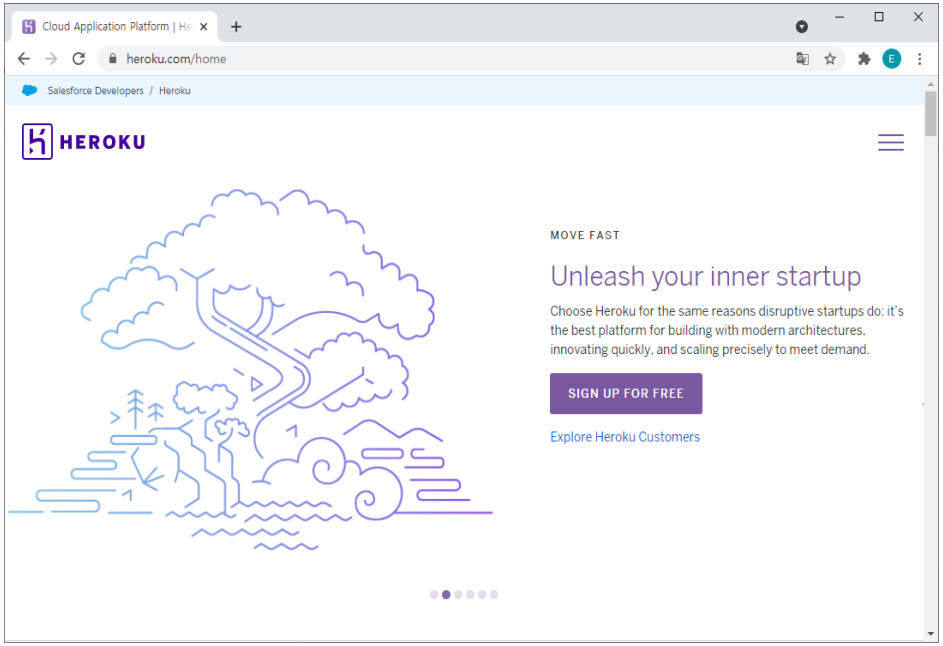

Clusters | Atlas: MongoDB Atlas
cloud.mongodb.com/v2/609e0d6d6a607b52afe05f8f#clusters
EUNKYUNG's Org - ...
Access Manager
Billing
All Clusters
Get Help
EUNKYUNG
Project 0
Atlas
Realm
Charts
DATA STORAGE
Clusters
Triggers
Data Lake
SECURITY
Database Access
Network Access
Advanced
Feature Requests
EUNKYUNG'S ORG - 2021-05-14 > PROJECT 0
Clusters
Create a New Cluster
Find a cluster...
SANDBOX
Cluster0
Version 4.4.6
CONNECT
METRICS
COLLECTIONS
CLUSTER TIER
M0 Sandbox (General)
REGION
AWS / N. Virginia (us-east-1)
TYPE
Replica Set - 3 nodes
LINKED REALM APP
Unable to load application data
This is a Shared Tier Cluster
If you need a database that's better for high-performance production applications, upgrade to a dedicated cluster.
Upgrade
Operations R: 0.05 W: 0
0.1/s
0
Last 6 Hours
Logical Size 92.9 KB
512.0 MI max
0.0 B
Last 30 Days
Connections 29
500 max
Last 6 Hours


Data | Atlas: MongoDB Atlas
cloud.mongodb.com/v2/609e0d6d6a607b52afe05f8f#metrics/replicaSet/609e0f84ce35a518cbbffe72/explorer...
EUNKYUNG's Org - ...
Access Manager
Billing
All Clusters
Get Help
EUNKYUNG
Project 0
Atlas
Realm
Charts
Data Lake
SECURITY
Database Access
Network Access
Advanced
Overview
Real Time
Metrics
Collections
Search
Profiler
Performance Advisor
DATABASES: 1 COLLECTIONS: 2
+ Create Database
NAMESPACES
test
blogposts
users
test.blogposts
COLLECTION SIZE: 643B TOTAL DOCUMENTS: 1 INDEXES TOTAL SIZE: 20KB
Find
Indexes
Schema Anti-Patterns
Aggregation
Search Indexes
FILTER {"filter":"example"}
QUERY RESULTS 1-1 OF 1
_id: ObjectId("609e179ca1bdb131106a28c9")
datePosted: 2021-05-14T06:23:17.945+00:00
title: "Israel intensifies attacks in Gaza as conflict enters fifth day"
body: "The Israeli military has intensified its assault on Gaza, as Palestini..."
image: "/img/1.jpg"
Get Started
2
Feature Requests


Data | Atlas: MongoDB Atlas
cloud.mongodb.com/v2/609e0d6d6a607b52afe05f8f#metrics/replicaSet/609e0f84ce35a518cbbffe72/explorer/test/users/find
EUNKYUNG's Org - ...
Access Manager
Billing
All Clusters
Get Help
EUNKYUNG
Project 0
Atlas
Realm
Charts
Database Access
Network Access
Advanced
+ Create Database
NAMESPACES
test
blogposts
users
test.users
COLLECTION SIZE: 256B TOTAL DOCUMENTS: 2 INDEXES TOTAL SIZE: 72KB
Find
Indexes
Schema Anti-Patterns
Aggregation
FILTER {"filter":"example"}
QUERY RESULTS 1-2 OF 2
_id: ObjectId("609e175fa1bdb131106a28c8")
username: "ekryu01"
password: "$2b$10$FM2HQOllbPbGRSpTIh3A3eCBKZoYM47JpBAAOakH6iDBvjRZ/vgDG"
__v: 0
_id: ObjectId("609e5d9e8fe3960004bf85fb")
username: "ekryu02"
password: "$2b$10$30BY2ohCCkSEXqC6CEhhXu80/4UKQ3/RwmFiDHZim3SriyuVG93AO"
__v: 0
Feature Requests

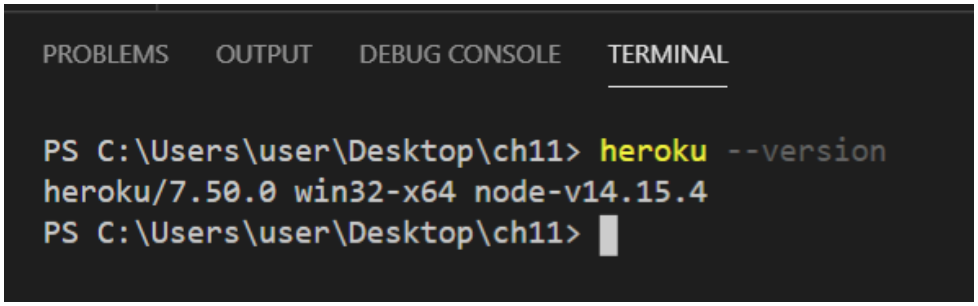
Deploying Web Apps on Heroku

- **Sign up for a Heroku account**

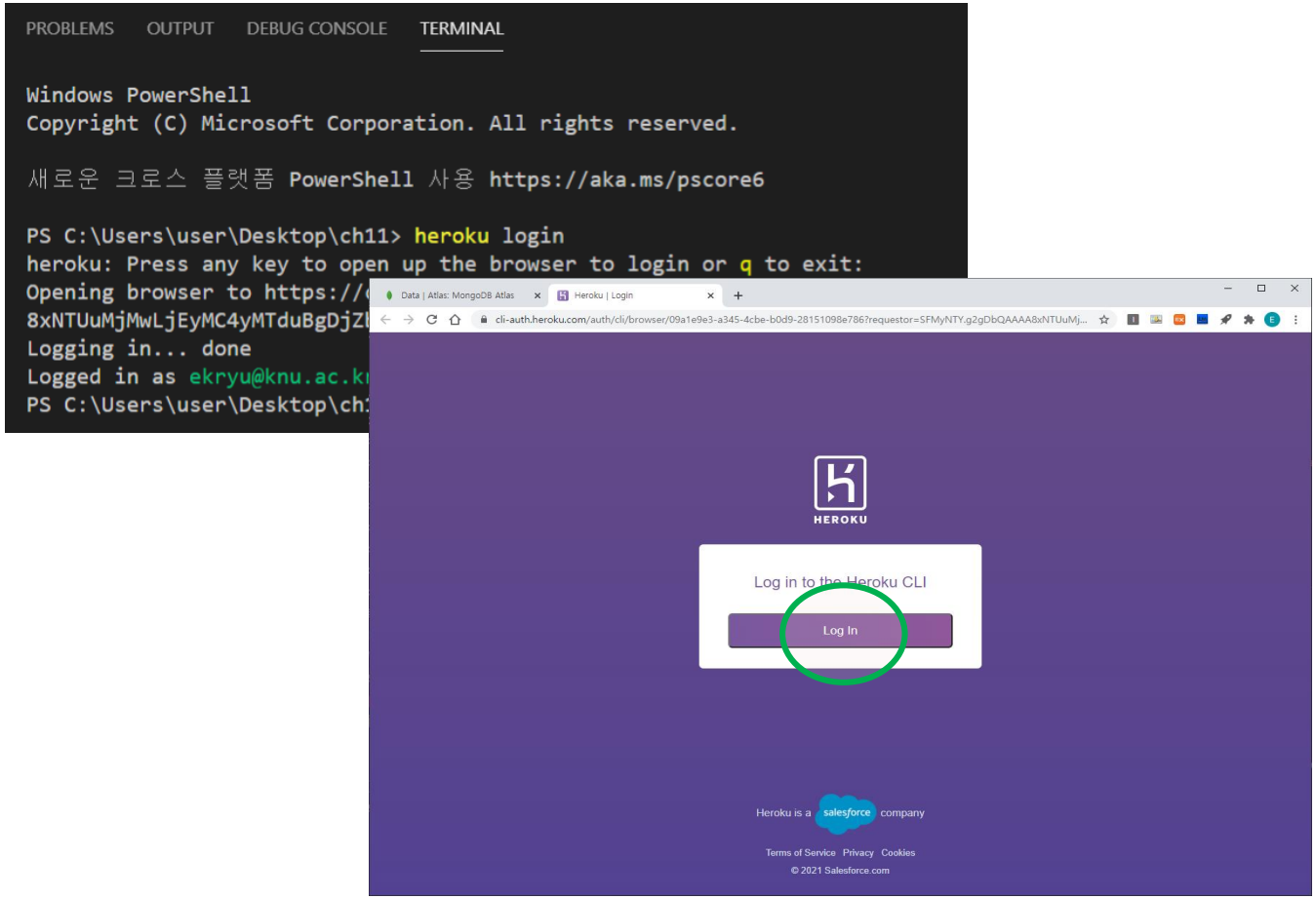


- **2. Install the Heroku CLI :**

  > npm install -g heroku



- **> heroku login** command 나 git bash 인지 확인



Making our App 'Heroku Ready'

- Adding a Procfile
- Adding our Node.js version to Package.json
- Listening on the correct port
- Specify the .gitignore file

- **In our app directory, create a file named Profile**
  - Copy the below line into :
    web: node app.js (web : node index.js)
  - This file will be run when Heroku starts our app

- **Package.json**

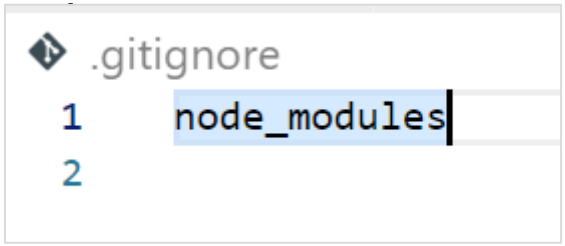
```
…
  "license": "MIT",
  "engines":{
    "node": "10.15.3"
  },
  "author": "Start Bootstrap",
  "contributors": [
    "David Miller (http://davidmiller.io/)"
  ],
…
```

"node " : "14.15.4"`

- **Listening on the Connect Port**
  - Heroku sets up an environment variable **process.env.PORT** for the port

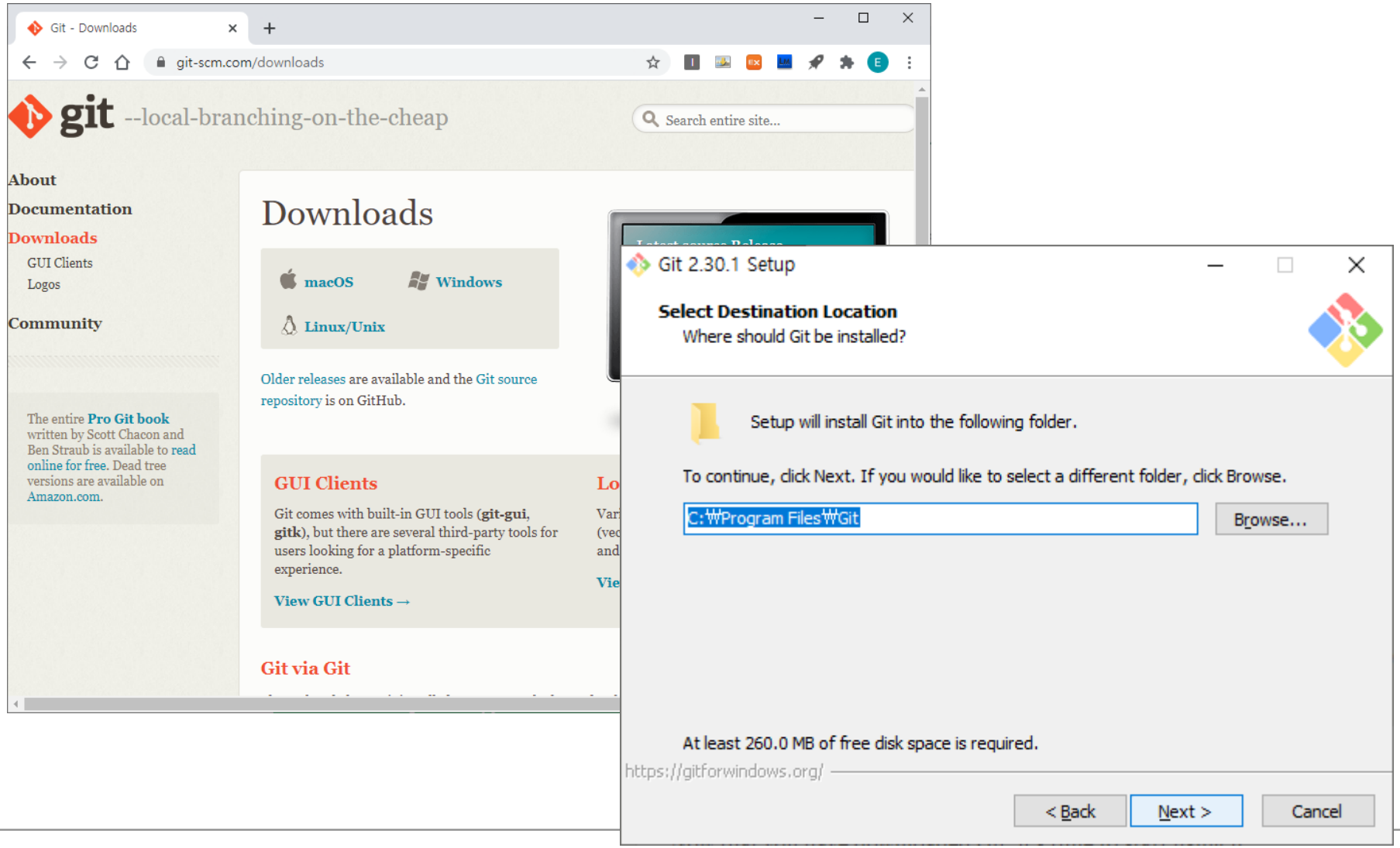
```
let port = process.env.PORT;
if (port == null || port == "") {
  port = 4000;
}

app.listen(port, ()=>{
    console.log('App listening...')
})
```

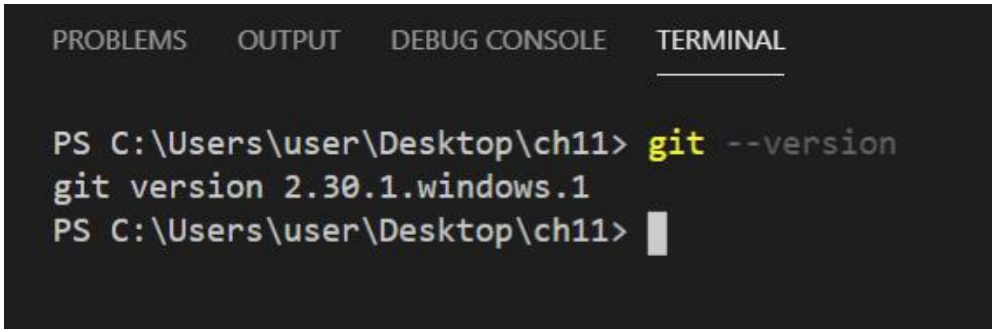
- **Create a file .gitignore in our app directory.**
  - This file tells Git to ignore whatever is specified in it from being pushed onto the server

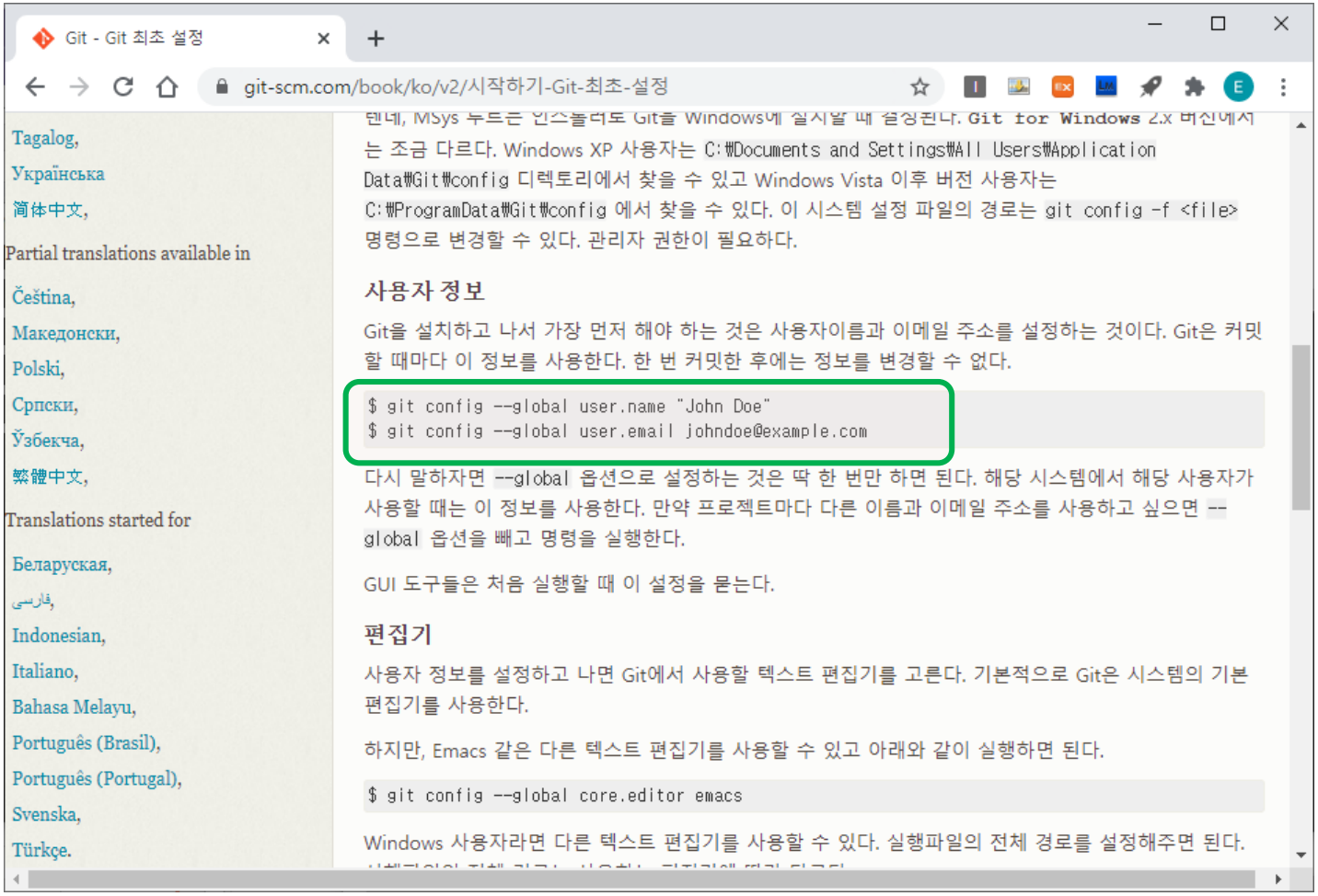


Deployment

- **Install git**




PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PS C:\Users\user\Desktop\ch11> git --version
git version 2.30.1.windows.1
PS C:\Users\user\Desktop\ch11>


Git - Git 최초 설정
git-scm.com/book/ko/v2/시작하기-Git-최초-설정
Tagalog,
Українська
简体中文,
Partial translations available in
Čeština,
Македонски,
Polski,
Српски,
Ўзбекча,
繁體中文,
Translations started for
Беларуская,
فارسی,
Indonesian,
Italiano,
Bahasa Melayu,
Português (Brasil),
Português (Portugal),
Svenska,
Türkçe.
Git for Windows
C:₩Documents and Settings₩All Users₩Application Data₩Git₩config
C:₩ProgramData₩Git₩config
git config -f <file>
사용자 정보
Git을 설치하고 나서 가장 먼저 해야 하는 것은 사용자이름과 이메일 주소를 설정하는 것이다. Git은 커밋할 때마다 이 정보를 사용한다. 한 번 커밋한 후에는 정보를 변경할 수 없다.
$ git config --global user.name "John Doe"
$ git config --global user.email johndoe@example.com
다시 말하자면 --global 옵션으로 설정하는 것은 딱 한 번만 하면 된다. 해당 시스템에서 해당 사용자가 사용할 때는 이 정보를 사용한다. 만약 프로젝트마다 다른 이름과 이메일 주소를 사용하고 싶으면 --global 옵션을 빼고 명령을 실행한다.
GUI 도구들은 처음 실행할 때 이 설정을 묻는다.
편집기
사용자 정보를 설정하고 나면 Git에서 사용할 텍스트 편집기를 고른다. 기본적으로 Git은 시스템의 기본 편집기를 사용한다.
하지만, Emacs 같은 다른 텍스트 편집기를 사용할 수 있고 아래와 같이 실행하면 된다.
$ git config --global core.editor emacs
Windows 사용자라면 다른 텍스트 편집기를 사용할 수 있다. 실행파일의 전체 경로를 설정해주면 된다.

- > git init
- > git add .
- > git commit -m "Initial commit"

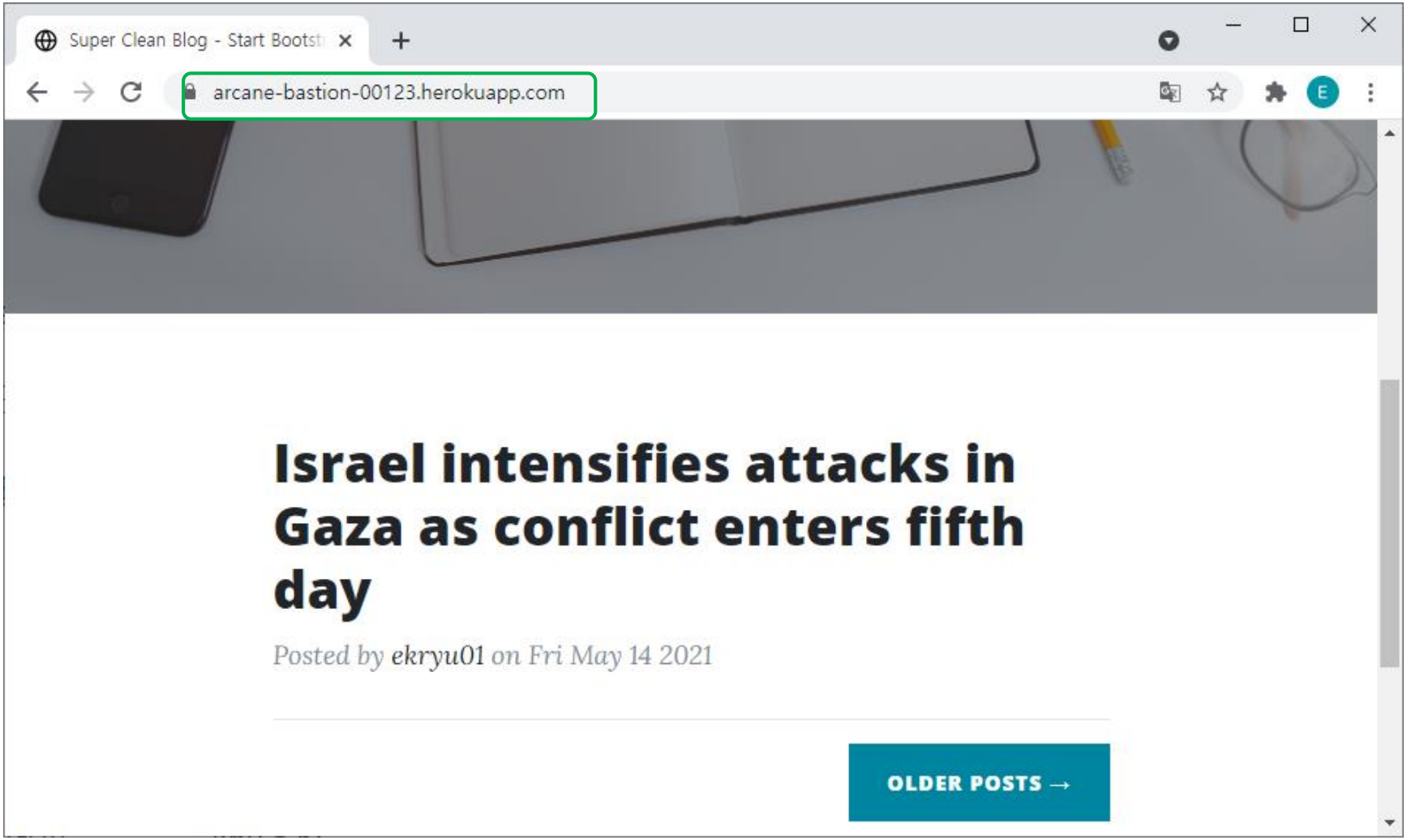
```
$ git init
Initialized empty Git repository in .git/
$ git add .
$ git commit -m "My first commit"
Created initial commit 5df2d09: My first commit
 44 files changed, 8393 insertions(+), 0 deletions(-)
 create mode 100644 README
 create mode 100644 Procfile
 create mode 100644 app/controllers/source_file
...
```

- **> heroku create**
  - This creates a new **empty application** on Heroku an associated empty Git repository

```
PS D:\2021.1 고급웹프\source\NodeJS 응용 III\11_Sessions> heroku create
Creating app... done, ⬢ arcane-bastion-00123
https://arcane-bastion-00123.herokuapp.com/ | https://git.heroku.com/arcane-bastion-00123.git
PS D:\2021.1 고급웹프\source\NodeJS 응용 III\11_Sessions>
```

- **> git push heroku master**
  - This will push our code to the remote Git repository

```
PS D:\2021.1 고급웹프\source\NodeJS 응용 III\11_Sessions> git push heroku master
Enumerating objects: 139, done.
Counting objects: 100% (139/139), done.
Delta compression using up to 12 threads
Compressing objects: 100% (136/136), done.
Writing objects: 100% (139/139), 8.41 MiB | 638.00 KiB/s, done.
Total 139 (delta 16), reused 0 (delta 0), pack-reused 0
remote: Compressing source files... done.



remote: -----> Launching...
remote:        Released v3
remote:        https://arcane-bastion-00123.herokuapp.com/ deployed to Heroku
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/arcane-bastion-00123.git
 * [new branch]      master -> master
PS D:\2021.1 고급웹프\source\NodeJS 응용 III\11_Sessions>
```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