

## **Node Goat Lab Set Up**

The OWASP NodeGoat project provides an environment to learn how OWASP Top 10 security risks apply to web applications developed using Node.js and how to effectively address them.

[https://wiki.owasp.org/index.php/Projects/OWASP\\_Node\\_js\\_Goat\\_Project](https://wiki.owasp.org/index.php/Projects/OWASP_Node_js_Goat_Project)

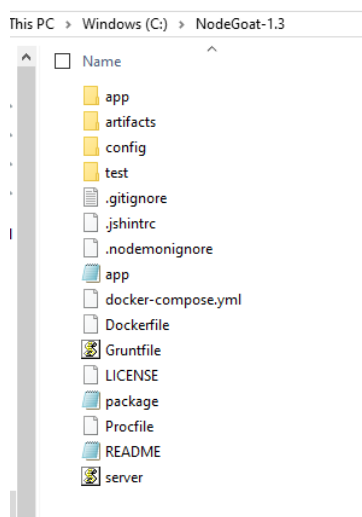
The latest release is available at

<https://github.com/OWASP/NodeGoat/releases/tag/v1.3>

1. Download the project archive from

<https://github.com/OWASP/NodeGoat/archive/refs/tags/v1.3.zip>

2. Extract to C:\



3. Review the application configuration and code.
4. Open the file **C:\NodeGoat-1.3\config\env\development.js**

Uncomment the following line and save it.

```
// db: "mongodb://localhost:27017/nodegoat",
```

```

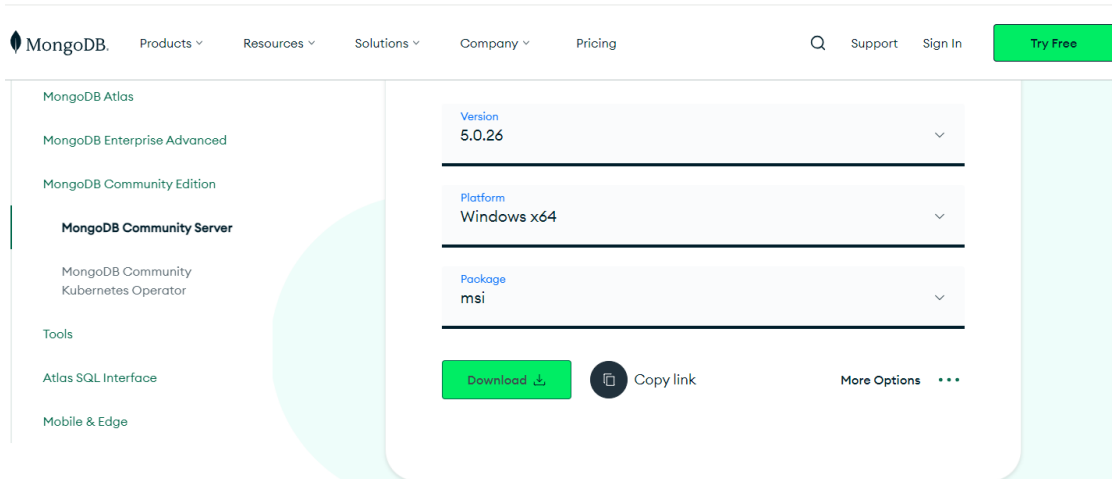
1 module.exports = {
2   // Local instance.
3   // To install mongodb: https://docs.mongodb.org/manual/tutorial/
4   // With mongodb installed, All you should need to do is uncomment the 'db' property below, and run the following command:
5   // grunt db-reset:development
6   // That will create the local nodegoat data-store, or restore it to a clean state if it already exists.
7
8   db: "mongodb://localhost:27017/nodegoat",
9
10  // If you want to use a MongoLab instance, just sign up for it, create a data-store, in this example we call it nodegoat.
11  // and again just run the grunt db-reset:development command
12  //db: 'mongodb://<dbuser>:<dbpassword>@<database>',
13
14  // If you want to debug regression tests, you will need the following which is also in the test config:
15  zapHostName: "192.168.56.20",
16  zapPort: "8080",
17  // Required from Zap 2.4.1. This key is set in Zap Options -> API _Api Key.
18  zapApiKey: "v9dn0baipgasipoc28itn8oodl",
19  // Required if debugging security regression tests.
20  zapApiFeedbackSpeed: 5000 // Milliseconds.
21 };
22

```

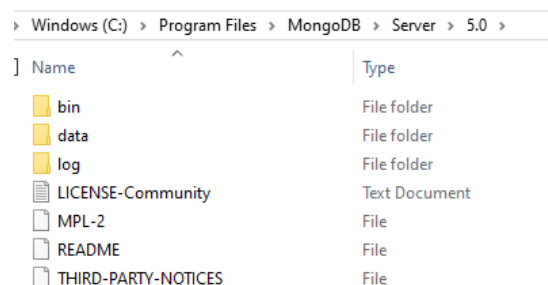
5. Let us use a local MongoDB instance for this application. Download and Install MongoDB version 5.

Go to <https://www.mongodb.com/try/download/community>

Select a package **version: 5.0.26**, **Platform: Windows x64** and download the **msi** package distribution.



6. Install MongoDB 5.



7. Open a command window, change directory to MongoDB server/bin  
For example:

**cd C:\Program Files\MongoDB\Server\5.0\bin**

```
MongoDB Server V 5.0
Microsoft Windows [Version 10.0.19045.4170]
(c) Microsoft Corporation. All rights reserved.

C:\Users\saravanan>title MongoDB Server V 5.0

C:\Users\saravanan>cd C:\Program Files\MongoDB\Server\5.0\bin

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


8. Type the following command to start MongoDB server

**mongod**

```
MongoDB Server V 5.0 - mongod
C:\Program Files\MongoDB\Server\5.0\bin>mongod
{"t":{"$date":"2024-04-02T14:21:48.688-04:00"},"s":"I",  "c":"CONTROL",  "id":23285,   "ctx":"","msg":"Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'", "ts":{}},
{"t":{"$date":"2024-04-02T14:21:48.692-04:00"},"s":"I",  "c":"NETWORK",  "id":4915701, "ctx":"","msg":"Initialized wire specification", "attr":{"spec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":13},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":13},"isInternalClient":true}}}, {"t":{"$date":"2024-04-02T14:21:48.692-04:00"},"s":"M",  "c":"ASIO",    "id":22601,   "ctx":"thread1","msg":"No TransportLayer configured during NetworkInterface startup"}, {"t":{"$date":"2024-04-02T14:21:48.692-04:00"},"s":"I",  "c":"NETWORK",  "id":4648602, "ctx":"thread1","msg":"Implicit TCP FastOpen in use."}, {"t":{"$date":"2024-04-02T14:21:48.695-04:00"},"s":"M",  "c":"ASIO",    "id":22601,   "ctx":"thread1","msg":"No TransportLayer configured during NetworkInterface startup"}, {"t":{"$date":"2024-04-02T14:21:48.696-04:00"},"s":"I",  "c":"REPL",    "id":5123008, "ctx":"thread1","msg":"Successfully registered PrimaryOnlyService", "attr":{"service":"TenantMigrationDonorService","ns":"config.tenantMigrationDonors"}}, {"t":{"$date":"2024-04-02T14:21:48.696-04:00"},"s":"I",  "c":"REPL",    "id":5123008, "ctx":"thread1","msg":"Successfully registered PrimaryOnlyService", "attr":{"service":"TenantMigrationRecipientService","ns":"config.tenantMigrationRecipients"}}, {"t":{"$date":"2024-04-02T14:21:48.696-04:00"},"s":"I",  "c":"CONTROL",  "id":5945603, "ctx":"thread1","msg":"Multi threading initialized"}, {"t":{"$date":"2024-04-02T14:21:48.697-04:00"},"s":"I",  "c":"CONTROL",  "id":4615611, "ctx":"initandlisten","msg":"MongoDB starting", "attr":{"pid":11908,"port":27017,"dbPath":"C:/data/db/","archi"}}
```

9. Download MongoDB Compass GUI tool from the following URL and install it.

<https://www.mongodb.com/try/download/compass>

 MongoDB. [Products](#) [Resources](#) [Solutions](#) [Company](#) [Pricing](#) [Support](#) [Sign In](#)

MongoDB Atlas

MongoDB Enterprise Advanced

MongoDB Community Edition

Tools

MongoDB Shell

**MongoDB Compass (GUI)**

Atlas CLI

Atlas Kubernetes Operator

MongoDB CLI for Cloud Manager and Ops Manager

Learn more

Version

1.42.3 (Stable)

Platform

Windows 64-bit (10+)

Package

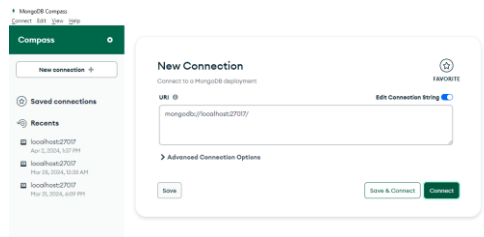
exe

Download

Copy link

More Options

## 10. Open MongoDB Compass, connect to MongoDB server running on localhost:27017



## 11. Open a command window, change directory to NodeGoat project.

### cd C:\NodeGoat-1.3

```

Nodegoat Project
Microsoft Windows [Version 10.0.19045.4170]
(c) Microsoft Corporation. All rights reserved.

C:\Users\saravanan>title Nodegoat Project

C:\Users\saravanan>cd C:\NodeGoat-1.3

C:\NodeGoat-1.3>

```

## 12. Run the npm command to install dependencies. Type the command

### npm install

```

Nodegoat Project
C:\NodeGoat-1.3>npm install
[.....] / loadIdealTree:loadAllDepsIntoIdealTree: 511 install loadIdealTree

```

## 13. Populate MongoDB with seed data required for the app using the following npm script command

### npm run db:seed

```

Nodegoat Project
C:\NodeGoat-1.3>npm run db:seed

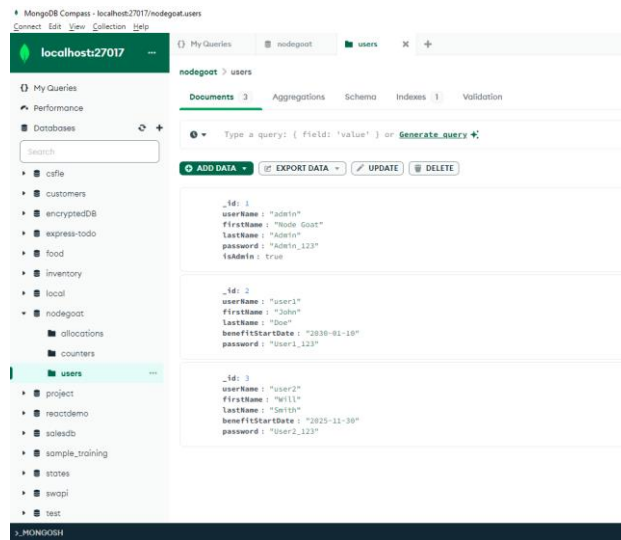
> owasp-nodejs-goat@1.3.0 db:seed C:\NodeGoat-1.3
> grunt db-reset

Running "db-reset" task
>> Connected to the database: mongodb://localhost:27017/nodegoat
>> Users to insert:
>> [{"_id":1,"userName":"admin","firstName":"Node Goat","lastName":"Admin","password":"Admin_123","isAdmin":true}]
>> [{"_id":2,"userName":"user1","firstName":"John","lastName":"Doe","benefitStartDate":"2030-01-10","password":"User1_123"}]
>> [{"_id":3,"userName":"user2","firstName":"Will","lastName":"Smith","benefitStartDate":"2025-11-30","password":"User2_123"}]
>> users.insertMany
>> [{"result":{"ok":1,"n":3},"ops":[{"_id":1,"userName":"admin","firstName":"Node Goat","lastName":"Admin","password":"Admin_123","isAdmin":true},{"_id":2,"userName":"user1","firstName":"John","lastName":"Doe","benefitStartDate":"2030-01-10","password":"User1_123"},{"_id":3,"userName":"user2","firstName":"Will","lastName":"Smith","benefitStartDate":"2025-11-30","password":"User2_123"}]}]
>> Allocations to insert:
>> [{"userId":1,"stocks":27,"funds":23,"bonds":50}]
>> [{"userId":2,"stocks":1,"funds":36,"bonds":63}]
>> [{"userId":3,"stocks":20,"funds":7,"bonds":73}]
>> allocations.insertMany
>> [{"result":{"ok":1,"n":3},"ops":[{"userId":1,"stocks":27,"funds":23,"bonds":50,"_id":"660c4fd97de6c005dc9f5d8c"},{"userId":2,"stocks":1,"funds":36,"bonds":63,"_id":"660c4fd97de6c005dc9f5d8d"},{"userId":3,"stocks":20,"funds":7,"bonds":73,"_id":"660c4fd97de6c005dc9f5d8e"}],"insertedCount":3,"insertedIds":["660c4fd97de6c005dc9f5d8c","660c4fd97de6c005dc9f5d8d","660c4fd97de6c005dc9f5d8e"]}]}]
Done.

C:\NodeGoat-1.3>

```

#### 14. Use the MongoDB Compass to verify the database **nodegoat** and view its collections



#### 15. In the command window, Start the server using the command: **npm start**

##### **npm start**

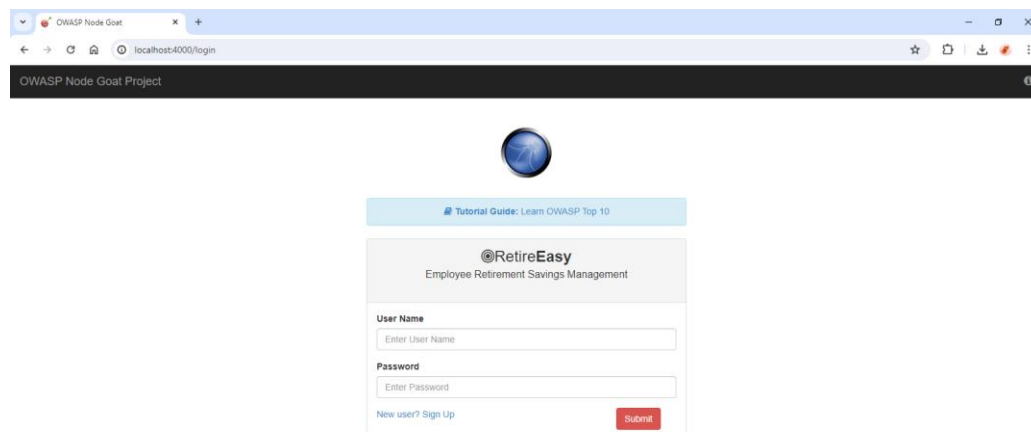
```
C:\NodeGoat-1.3>npm start

C:\NodeGoat-1.3>owasp-nodejs-goat@1.3.0 start C:\NodeGoat-1.3
> node server.js

Connected to the database: mongodb://localhost:27017/nodegoat
Express http server listening on port 4000
```

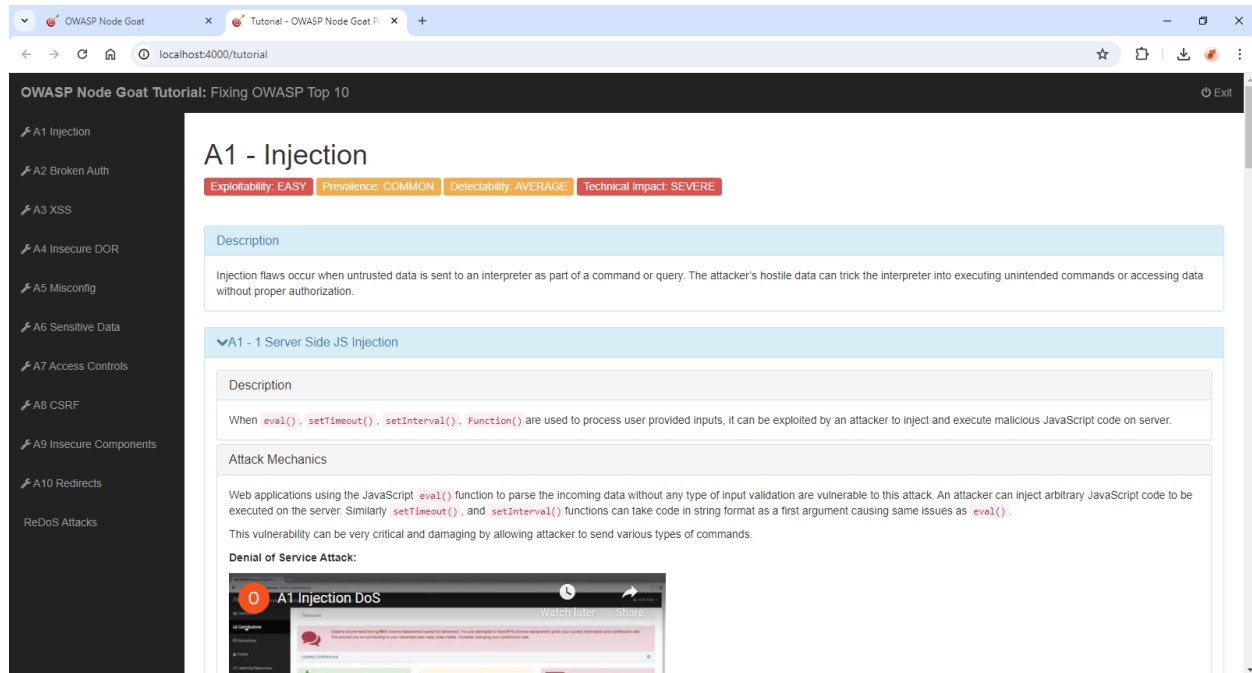
#### 16. Open a browser, go to application page

<http://localhost:4000>



## 17. Open the tutorial page

<http://localhost:4000/tutorial>



## 18. Open the project in Visual Studio code and review the code.