

# FIT5137

## Installation Guide (Windows)

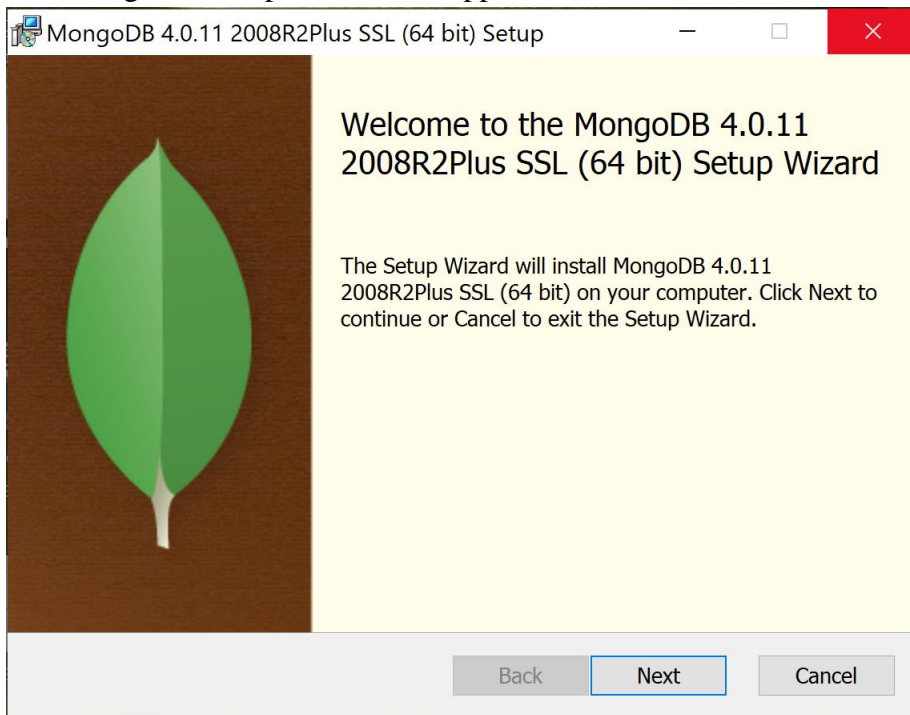
This is a guide for installing **MongoDB**, **Cassandra**, and **Neo4j** on **Windows** environment. Please ensure that you download the correct version for each software. We encourage you to install all software on your own device as the **labs' devices have some issues** with MongoDB and Cassandra.

Software needed throughout the semester:

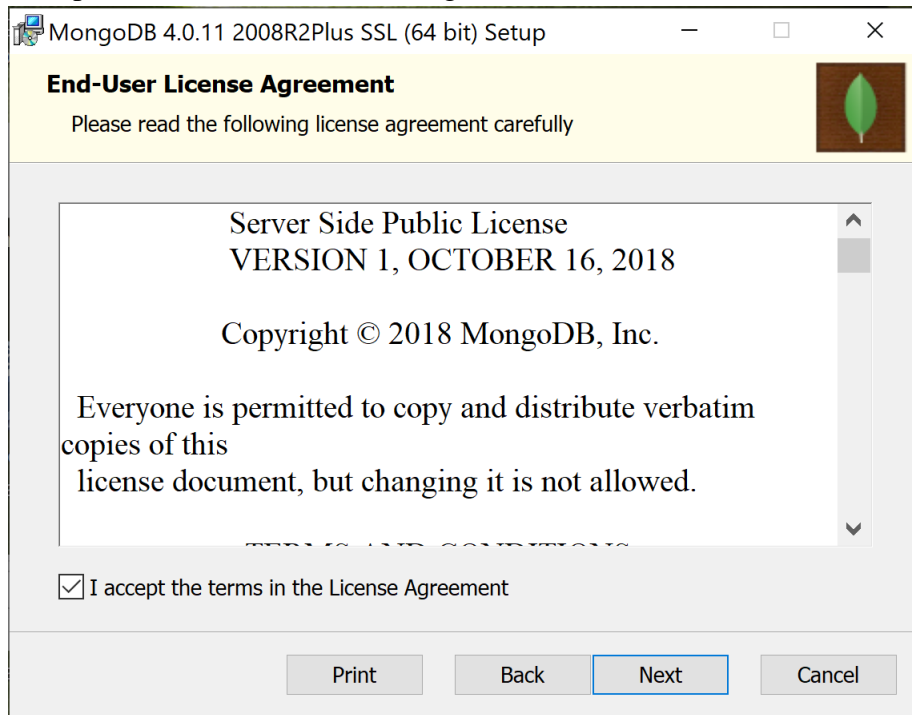
- Mongo DB Community Server 4.0.11
- Cassandra 3.11.4
- Neo4j Desktop 1.2.1

### MongoDB

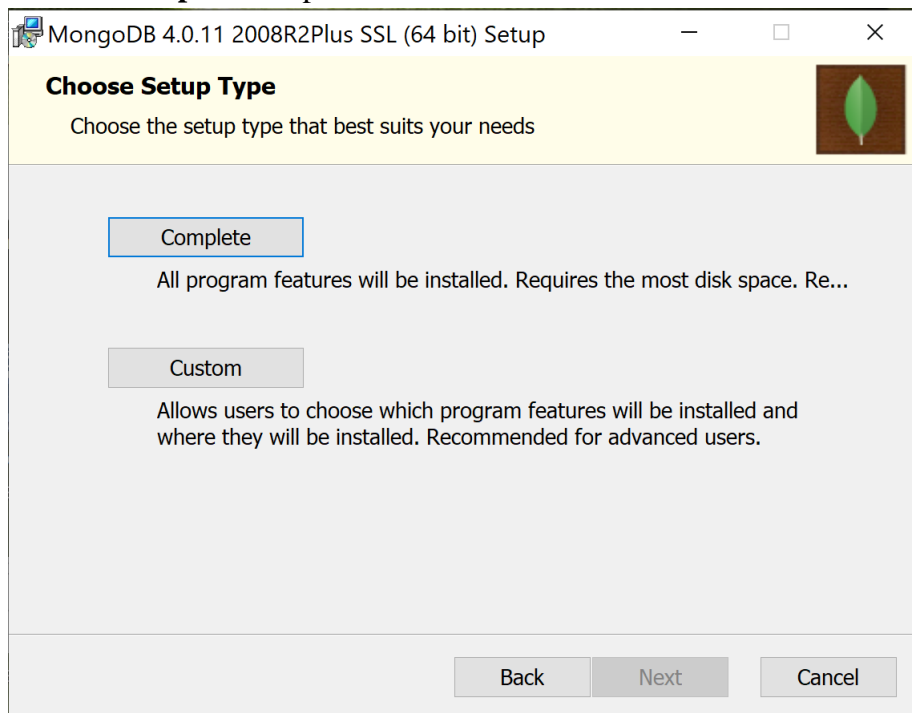
1. Download MongoDB software from:  
<https://www.mongodb.com/download-center/community>
2. In the download page, select **Server** tab, then choose the **MongoDB Community Server** edition, version **4.0.11**.
3. Click download.
4. After you have finished downloading MongoDB software, run the installer.
5. The MongoDB Setup Wizard will appear. Click Next.



6. Accept the terms in the License Agreement, then click Next.



7. Choose **Complete** setup.



8. Select the directory for MongoDB, then click Next.

MongoDB 4.0.11 2008R2Plus SSL (64 bit) Service Cust...

### Service Configuration

Specify optional settings to configure MongoDB as a service.

☒ Install MongoDB as a Service

☒ Run service as Network Service user

☐ Run service as a local or domain user:

Account Domain:

Account Name:

Account Password:

Service Name:

Data Directory:

Log Directory:

< Back   Next >   Cancel

9. Tick the “Install MongoDB Compass” box, then click Next.

MongoDB Compass

### Install MongoDB Compass

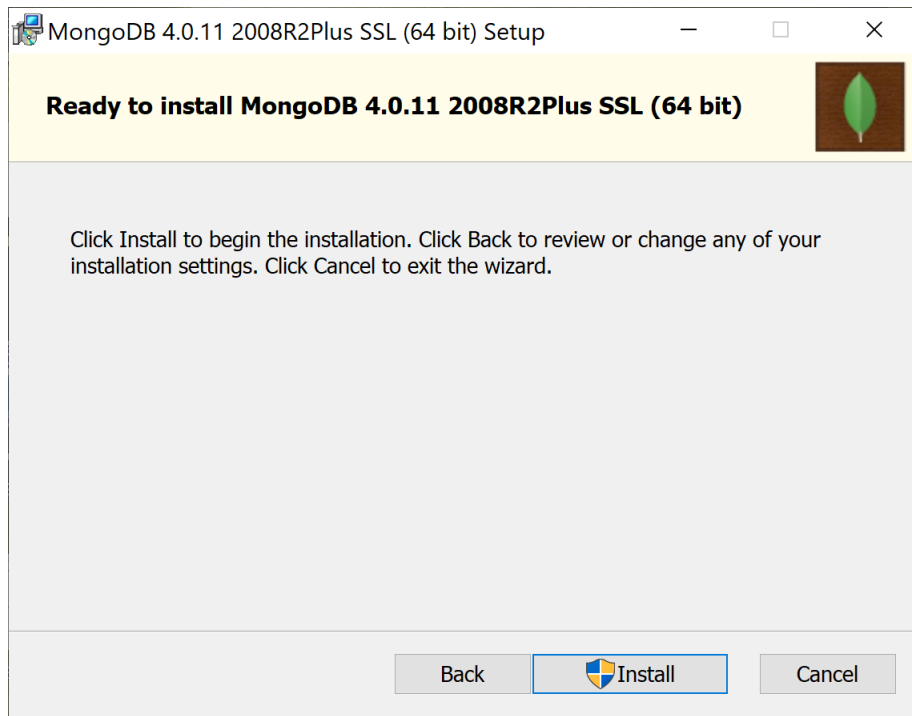
MongoDB Compass is the official graphical user interface for MongoDB.

By checking below this installer will automatically download and install the latest version of MongoDB Compass on this machine. You can lear...

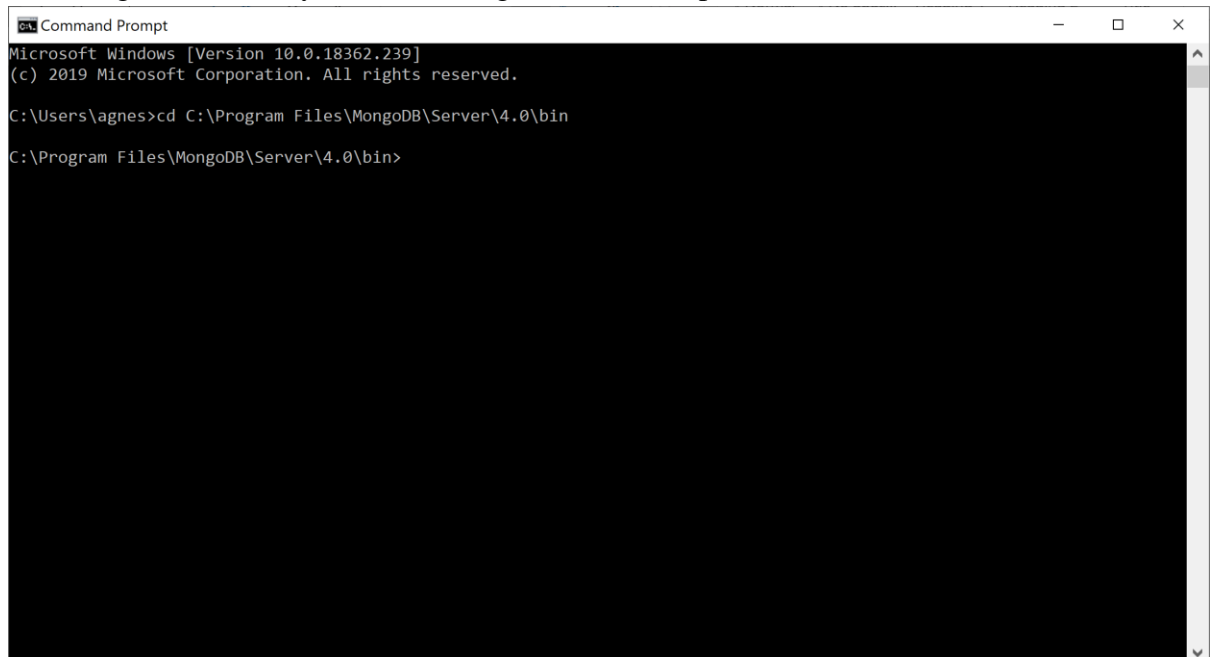
☒ Install MongoDB Compass

Back   Next   Cancel

10. Click Install.



11. After you have installed MongoDB, open **Command Prompt (Run → cmd)**.
12. Then type “**cd C:\Program Files\MongoDB\Server\4.0\bin**” (the directory path might be different if you did not install MongoDB in C: drive. Make sure you have the correct MongoDB directory before moving to the next step).



13. Type **mongod** to start MongoDB.

```
Command Prompt
Microsoft Windows [Version 10.0.18362.239]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\agnes>cd C:\Program Files\MongoDB\Server\4.0\bin

C:\Program Files\MongoDB\Server\4.0\bin>mongod
2019-07-29T01:44:08.884+1000 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDis
abledProtocols 'none'
2019-07-29T01:44:08.889+1000 I CONTROL [initandlisten] MongoDB starting : pid=48084 port=27017 dbpath=C:\data\db\ 64-bi
t host=DESKTOP-9J00055
2019-07-29T01:44:08.889+1000 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2019-07-29T01:44:08.889+1000 I CONTROL [initandlisten] db version v4.0.9
2019-07-29T01:44:08.889+1000 I CONTROL [initandlisten] git version: fc525e2d9b0e4bceff5c2201457e564362909765
2019-07-29T01:44:08.890+1000 I CONTROL [initandlisten] allocator: tcmalloc
2019-07-29T01:44:08.890+1000 I CONTROL [initandlisten] modules: none
2019-07-29T01:44:08.890+1000 I CONTROL [initandlisten] build environment:
2019-07-29T01:44:08.890+1000 I CONTROL [initandlisten] distmod: 2008plus-ssl
2019-07-29T01:44:08.890+1000 I CONTROL [initandlisten] distarch: x86_64
2019-07-29T01:44:08.890+1000 I CONTROL [initandlisten] target-arch: x86_64
2019-07-29T01:44:08.890+1000 I CONTROL [initandlisten] options: {}
2019-07-29T01:44:08.893+1000 I STORAGE [initandlisten] exception in initAndListen: NonExistentPath: Data directory C:\d
ata\db\ not found., terminating
2019-07-29T01:44:08.894+1000 I NETWORK [initandlisten] shutdown: going to close listening sockets...
2019-07-29T01:44:08.894+1000 I CONTROL [initandlisten] now exiting
2019-07-29T01:44:08.894+1000 I CONTROL [initandlisten] shutting down with code:100

C:\Program Files\MongoDB\Server\4.0\bin>
```

#### 14. Type **mongo**.

```
Command Prompt - mongo

C:\Program Files\MongoDB\Server\4.0\bin>mongo
MongoDB shell version v4.0.9
connecting to: mongodb://127.0.0.1:27017/?gssapiServiceName=mongod
Implicit session: session { "id" : UUID("cb97d4ee-2927-40f0-adb3-6edc79200d18") }
MongoDB server version: 4.0.9
Server has startup warnings:
2019-07-25T04:01:03.901+1000 I CONTROL [initandlisten]
2019-07-25T04:01:03.901+1000 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2019-07-25T04:01:03.901+1000 I CONTROL [initandlisten] **          Read and write access to data and configuration is u
nrestricted.
2019-07-25T04:01:03.902+1000 I CONTROL [initandlisten]
---
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

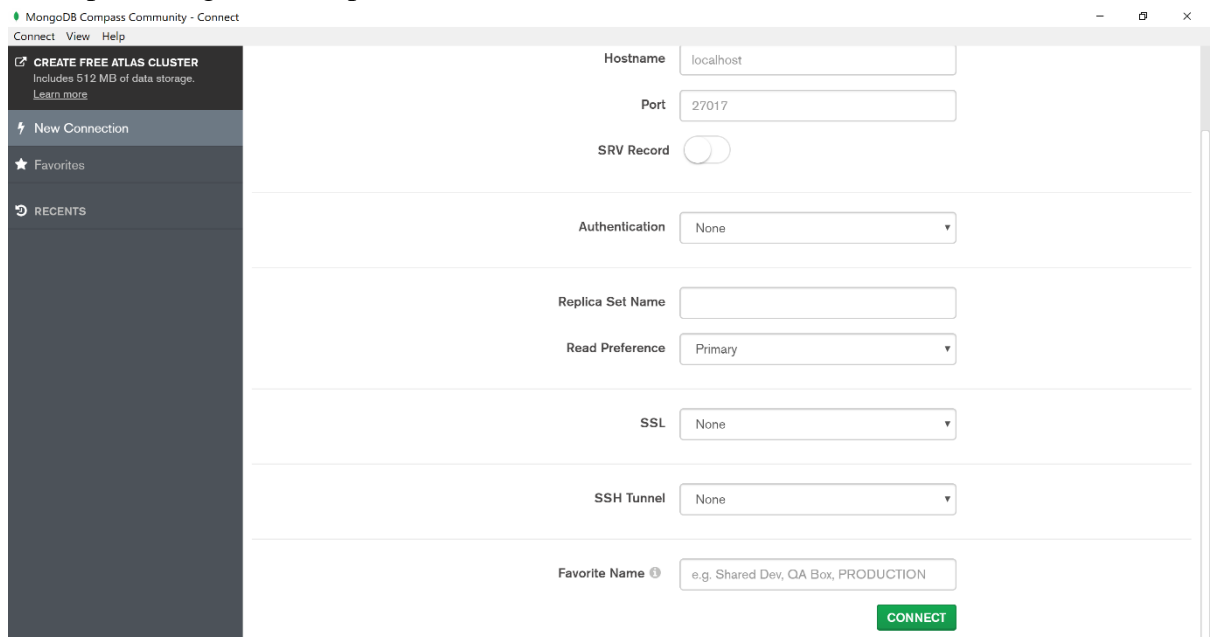
To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
---
>
```

#### 15. Type **“use test”** to create a new test database.

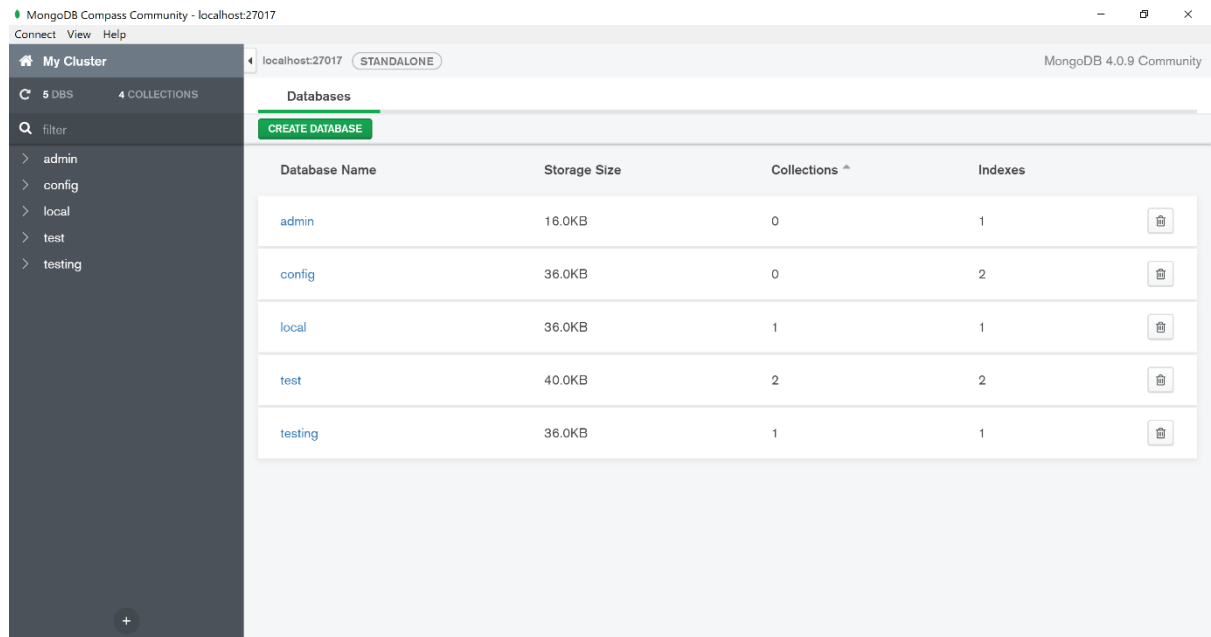


16. You can also check the databases through MongoDB Compass. MongoDB Compass provides a more user-friendly interface of MongoDB.

17. Open MongoDB Compass, then click **CONNECT** button.



18. The list of databases will be shown in MongoDB Compass, similar to the figure below.



For more information on MongoDB installation:

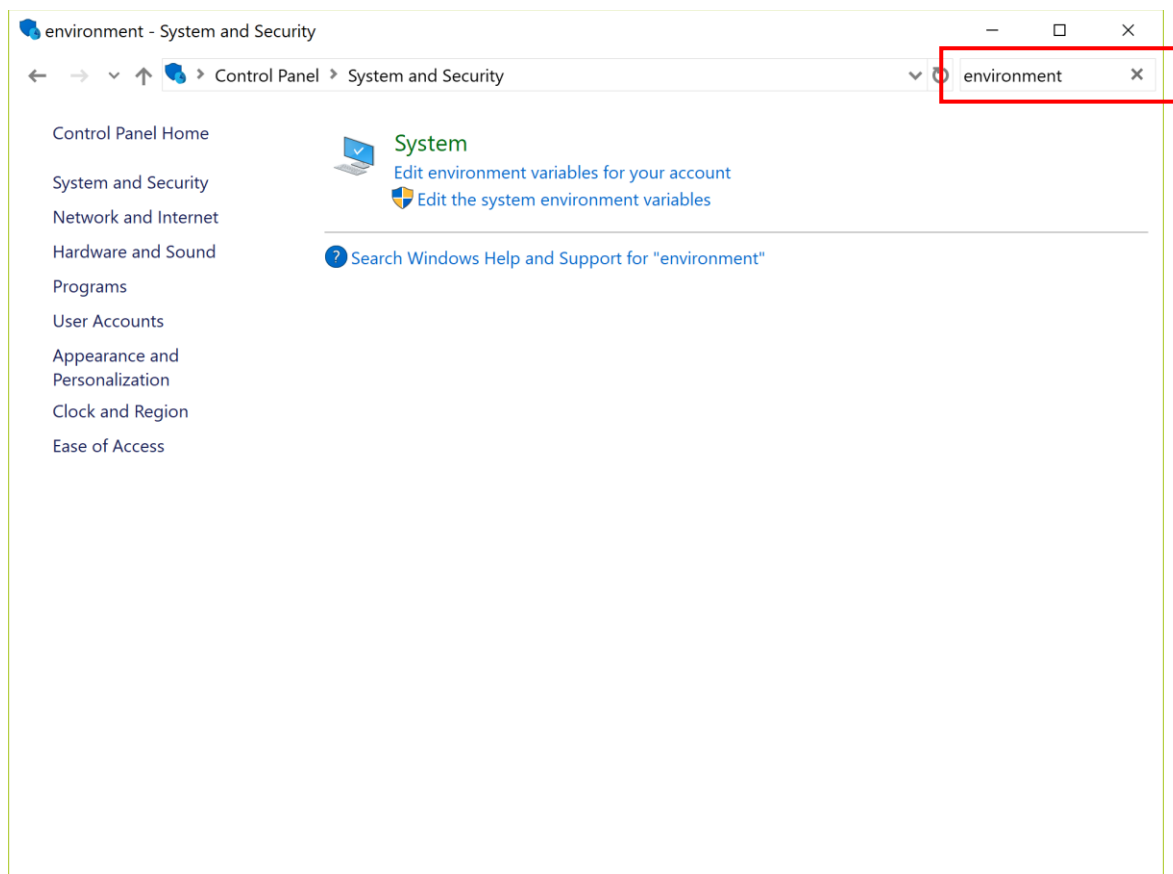
[https://docs.mongodb.com/manual/tutorial/install-mongodb-on-windows/?\\_ga=2.96383071.23984071.1563719283-1264152635.1558090265](https://docs.mongodb.com/manual/tutorial/install-mongodb-on-windows/?_ga=2.96383071.23984071.1563719283-1264152635.1558090265)

# Cassandra

**Warning:** Before installing Cassandra, you must ensure that you have Python 2.7.0 installed in your machine. Do not use other version of Python since Cassandra would not work on other versions.

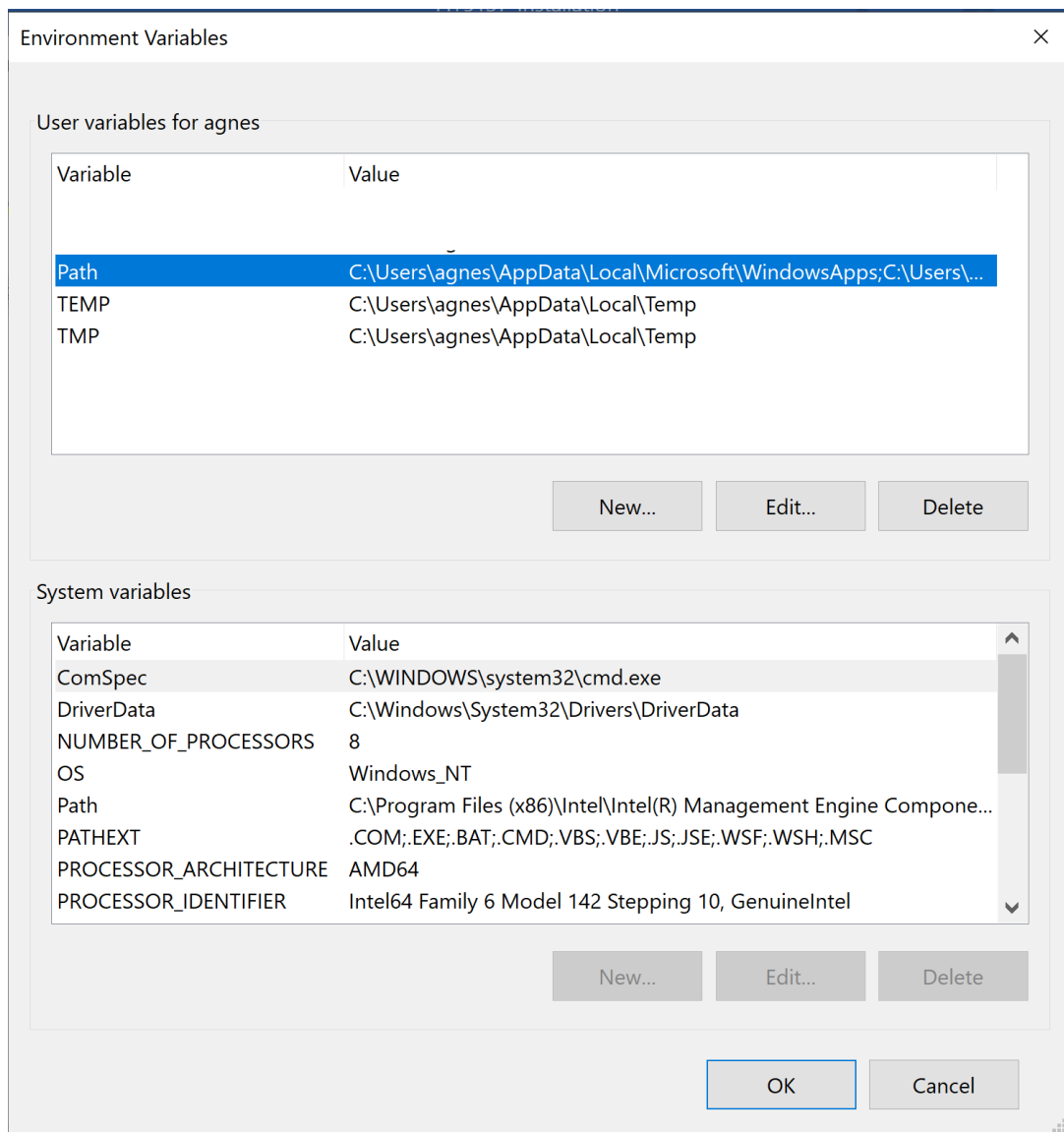
## Set Python Path:

1. Download **Python 2.7.0** from:  
<https://www.python.org/downloads/release/python-270/>
2. Install Python. Make sure that you install **version 2.7.0** as the other versions will not work for Cassandra.
3. After you have successfully installed Python, go to **Control Panel → System and Security**.
4. In the search bar, type **environment**.

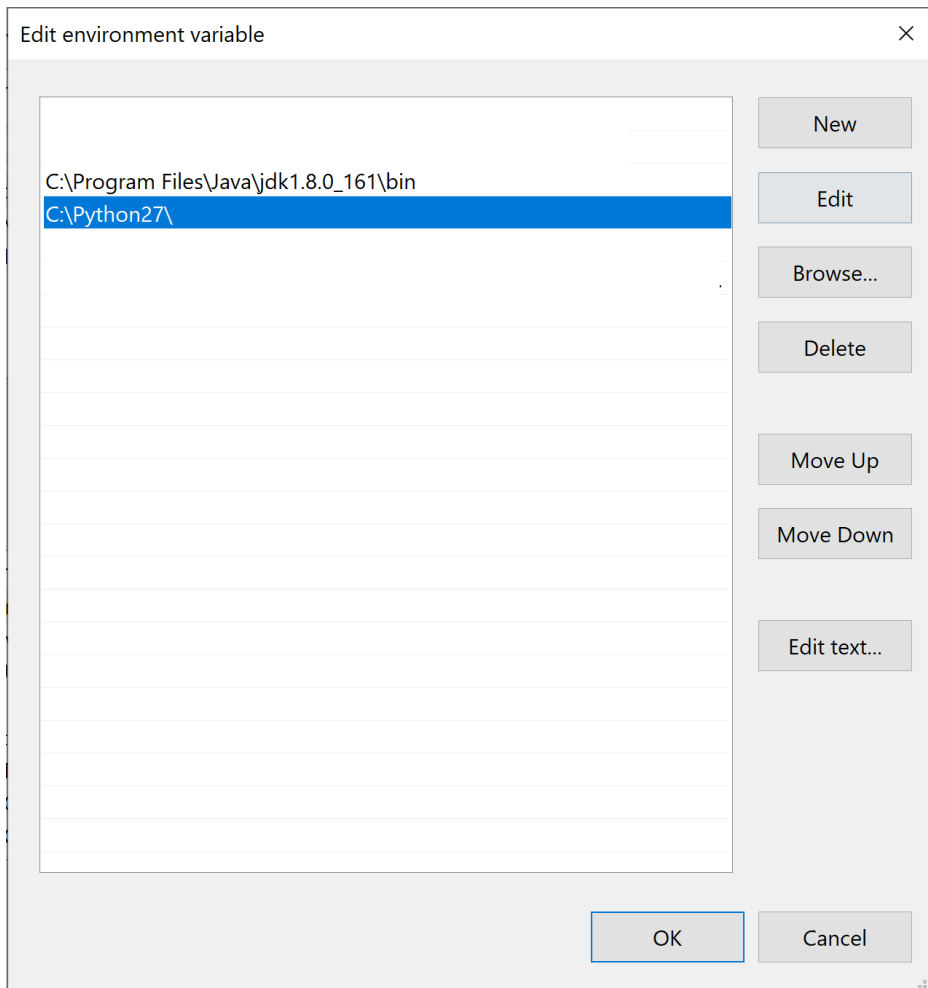


5. Select “Edit environment variables for your account”.
6. In the “User variables for [username]”, select **Path**, then click **Edit**.





7. A pop-up window will show up. If you do not have Python directory there, click **New**, then write the directory where you store Python program.



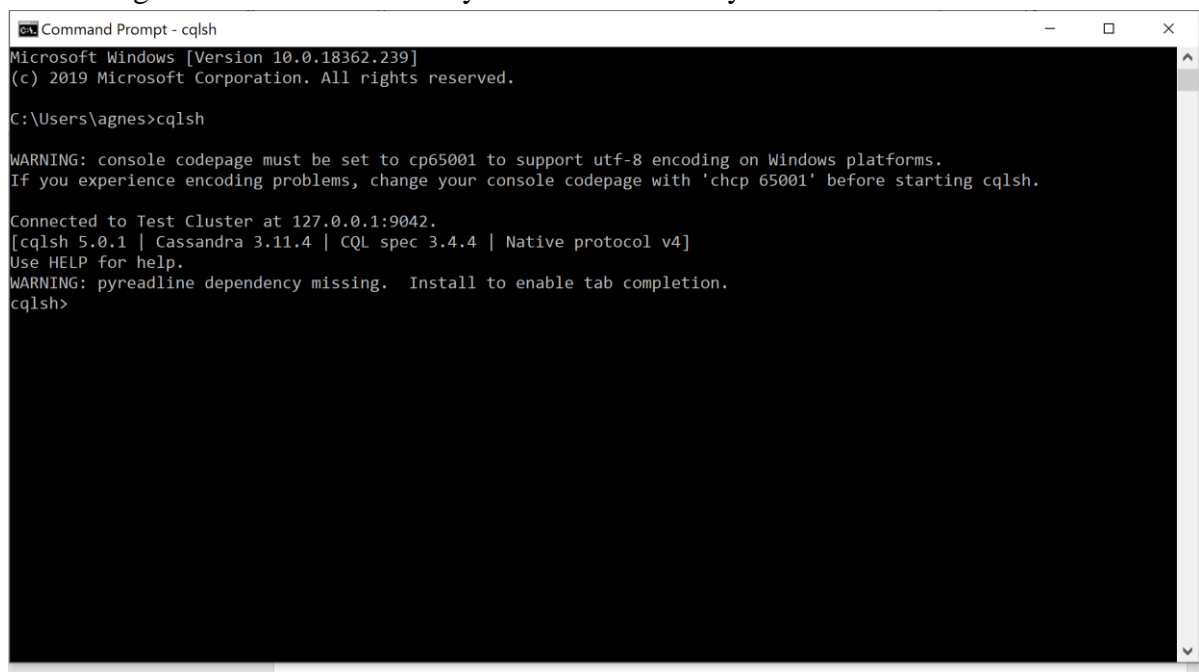
8. Go to **Command Prompt**, then type **Python**.
9. If Python has been installed correctly in your system, the Command Prompt screen should look like the Figure below.

10. Type **exit()** to exit Python.

## Cassandra setup:

1. Download Cassandra from:  
<http://cassandra.apache.org/download/>
2. Choose version **3.11.4**.
3. Ensure that Python 2.7.0 has been installed in your system. [See the Set Python Path section if you do not have Python 2.7.0 in your system]
4. Extract the downloaded Cassandra file (preferably using 7zip).
5. After it is extracted, go to **apache-cassandra-3.11.4\bin**.
6. Copy the directory.
7. Go to Command Prompt, then go to Cassandra directory by typing “**cd [directory]**”.
8. Type **Cassandra**.
9. The Command Prompt will load Cassandra. Wait until it stops loading.
10. Open another Command Prompt with the same Cassandra directory, then type **cqlsh**.

The figure below indicates that you have successfully load Cassandra.



```
Command Prompt - cqlsh
Microsoft Windows [Version 10.0.18362.239]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\agnes>cqlsh

WARNING: console codepage must be set to cp65001 to support utf-8 encoding on Windows platforms.
If you experience encoding problems, change your console codepage with 'chcp 65001' before starting cqlsh.

Connected to Test Cluster at 127.0.0.1:9042.
[cqlsh 5.0.1 | Cassandra 3.11.4 | CQL spec 3.4.4 | Native protocol v4]
Use HELP for help.
WARNING: pyreadline dependency missing. Install to enable tab completion.
cqlsh>
```

## Note:

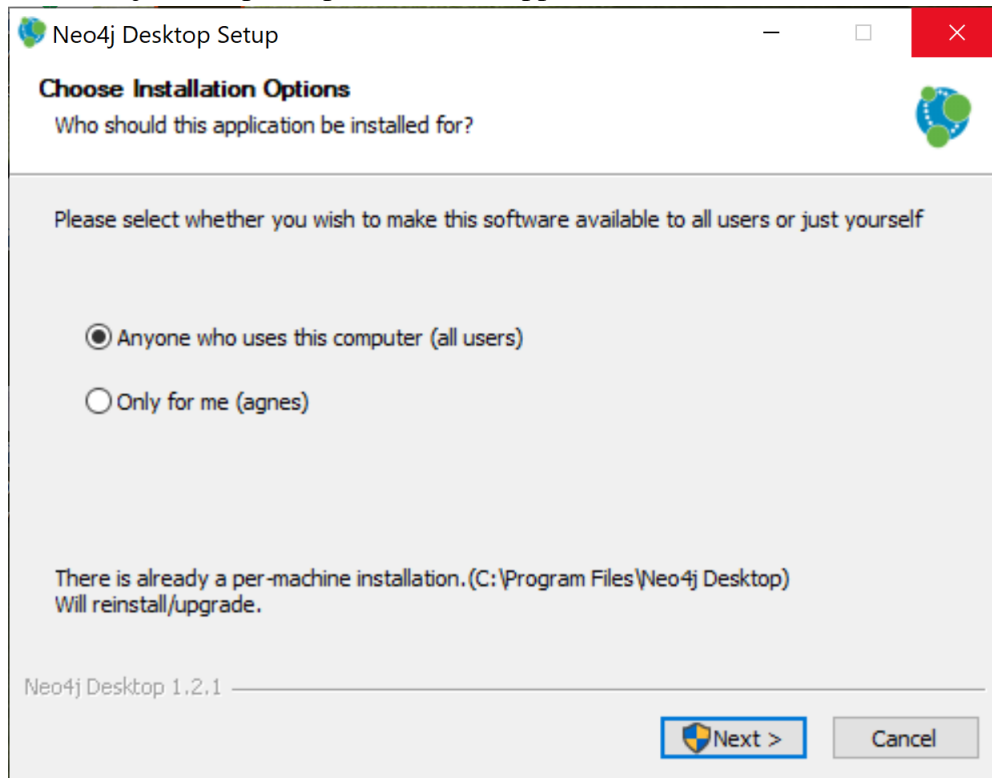
If you encounter this problem: "Unrecognized VM option 'UseParNewGC' Error: Could not create the Java Virtual Machine.", then it means that your JDK is not supported for Cassandra. Make sure you have JDK 8 installed in your computer. Otherwise use the link below to install one:

<https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

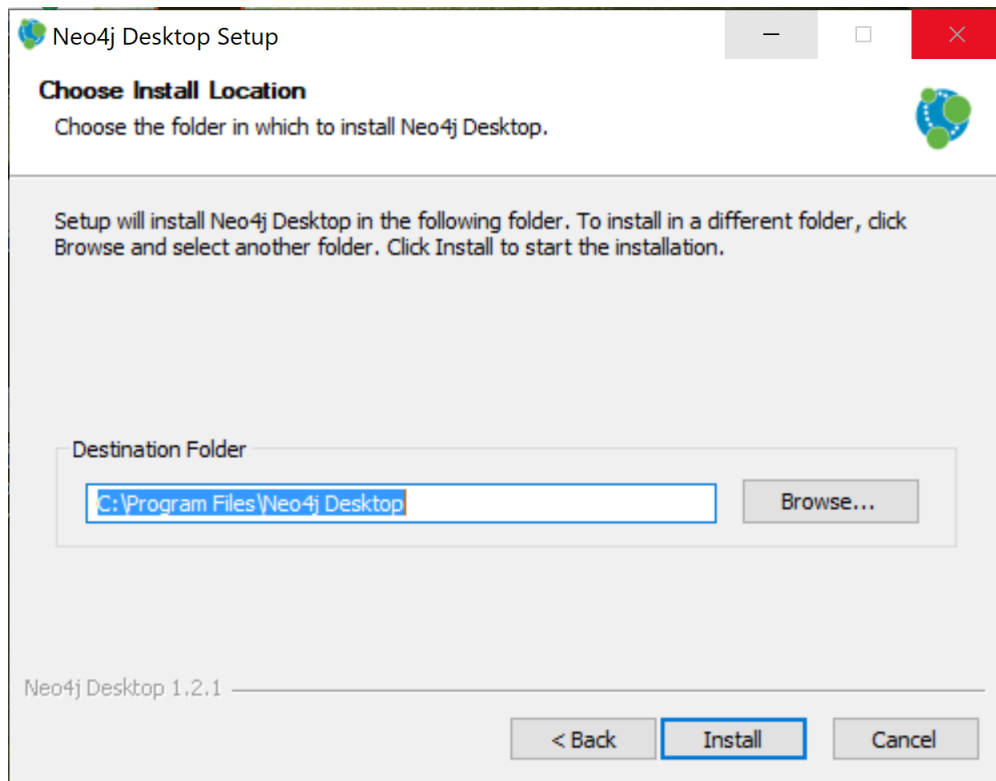
You should also update your environmental variable to JDK 8.

## Neo4j

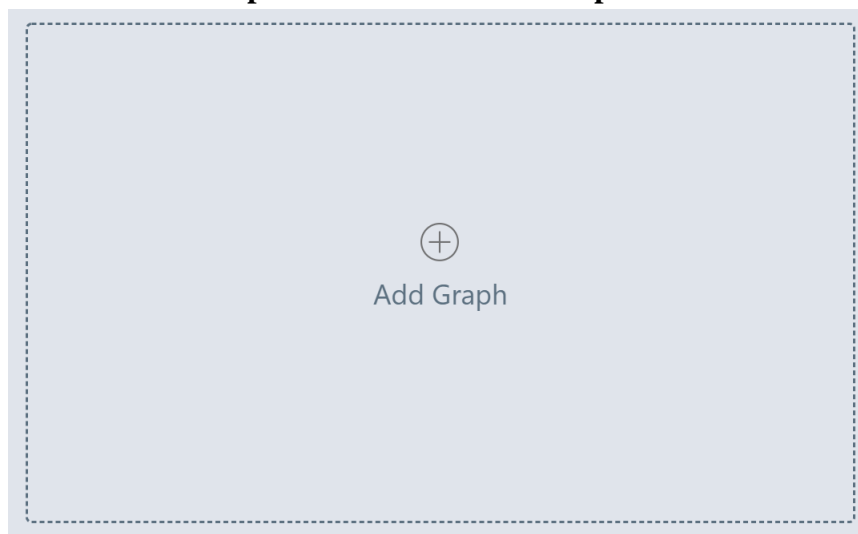
1. Download Neo4j from:  
<https://neo4j.com/download-center/#desktop>
2. Choose Neo4j Desktop version **1.2.1**. You may need to register to Neo4j before downloading the software.
3. Click download.
4. After you have finished downloading Neo4j, run the installer.
5. The Neo4j Desktop Setup Wizard will appear. Click Next.

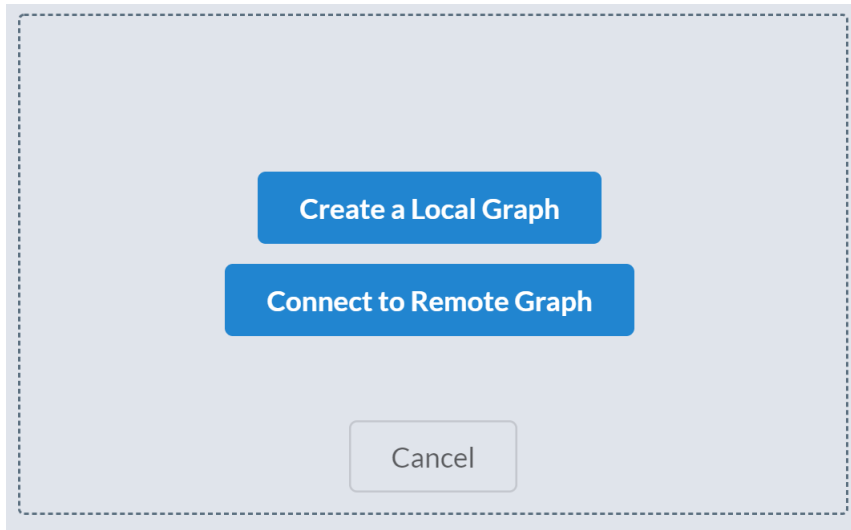


6. Click Install.



7. Once it is installed, run Neo4j.
8. Click on **Add Graph** → **Create a Local Graph**.

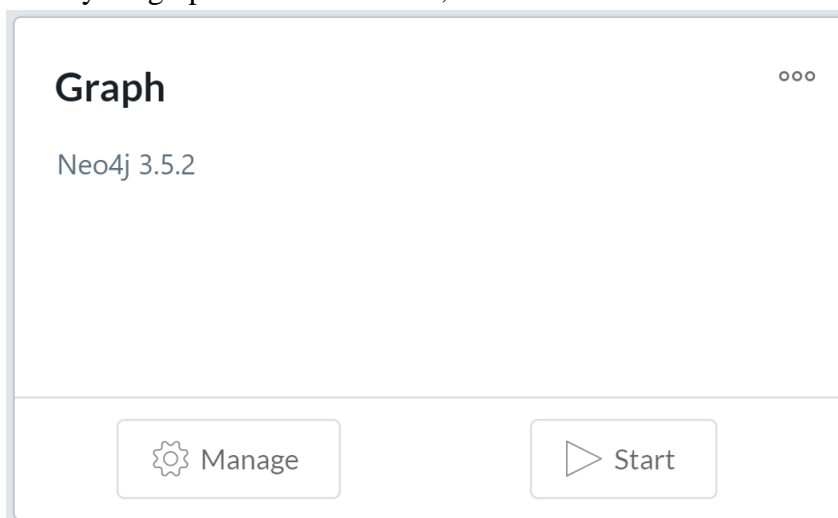




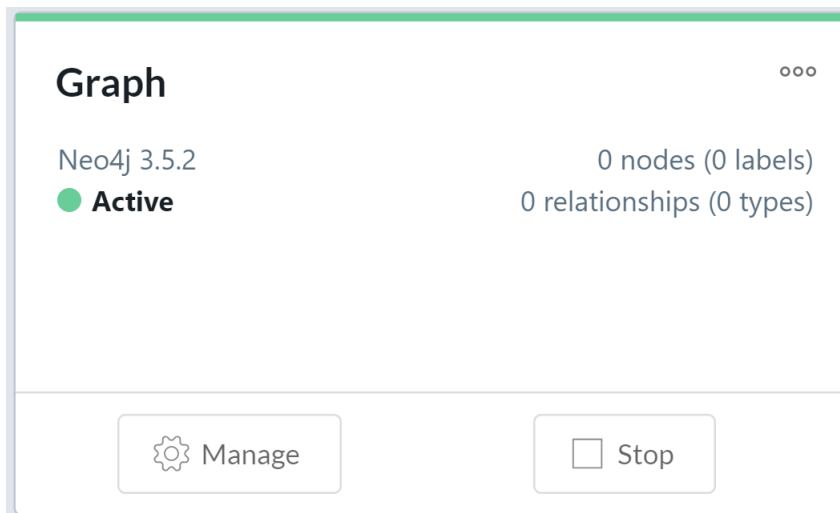
9. Fill in the **Graph name** and **Password**, then select **Create**.

A form for creating a graph. It has two input fields: 'Graph Name' with a database icon and 'Set Password' with a lock icon. Below the password field is a version selector showing '3.5.2' with a dropdown arrow. At the bottom are two buttons: 'Cancel' with a close icon and 'Create' with a checkmark icon.

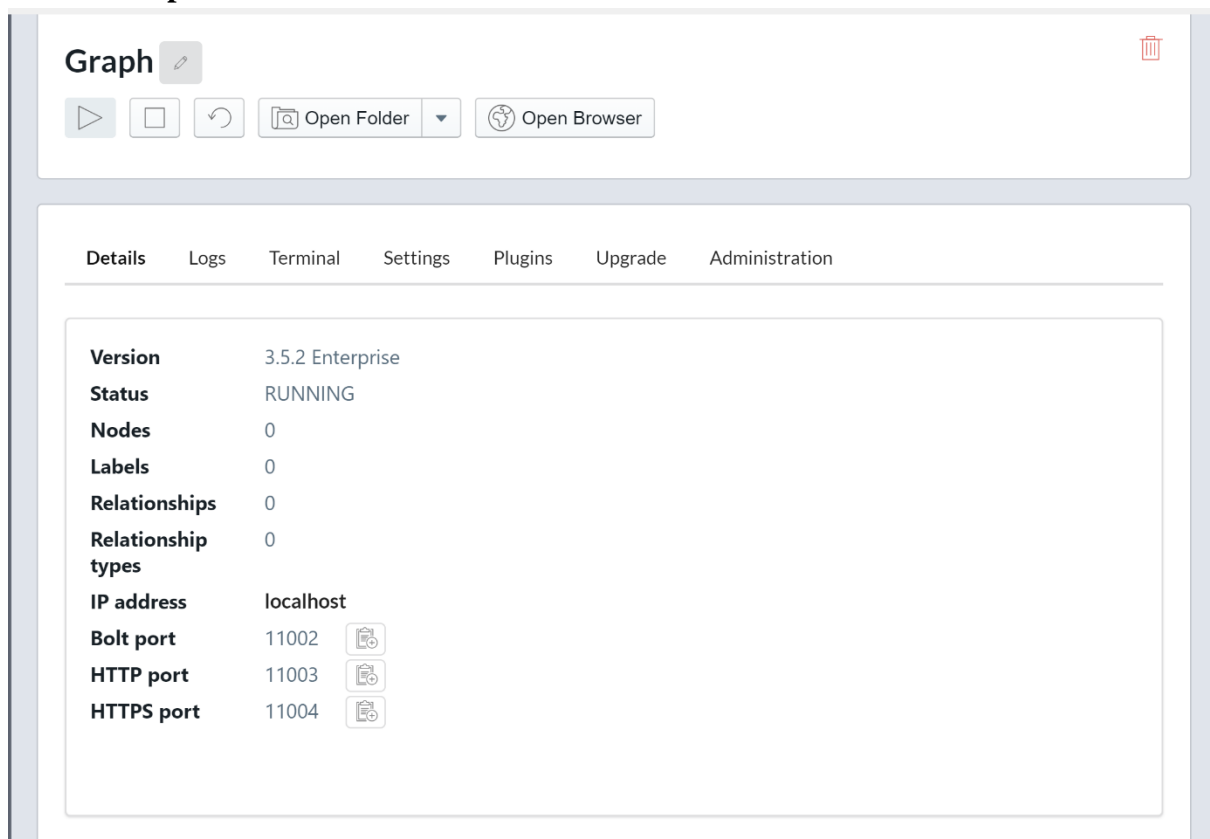
10. After your graph has been created, click **Start**.



11. Once the graph is Active, select **Manage**.



12. Select **Open Browser**.



13. The browser will pop up. Type “**:play cypher**”, then click the play button.


neo4j@bolt://localhost:11002 - Neo4j Browser

File Edit View Window Help Developer

\$ :play cypher


☆ ↺ ▶

\$ :play start



### Learn about Neo4j

A graph epiphany awaits you.




What is a graph database?

How can I query a graph?

What do people do with Neo4j?

Start Learning




### Jump into code

Use Cypher, the graph query language.

Code walk-throughs

RDBMS to Graph

Write Code



### Monitor the system

Key system health and status metrics.

Disk utilization

Cache activity

Cluster health and status

Monitor

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\$ :server status

Connection status

You are connected as user neo4j

This is your current connection