Universidade de Fortaleza
- UNIFOR

MBA EM GESTÃO ANALÍTICA COM BUSINESS INTELLIGENCE E BIG DATA

Banco de Dados NoSQL

Prof. Manoel Ribeiro

Repositório

https://github.com/antoniomralmeida/NoSQL

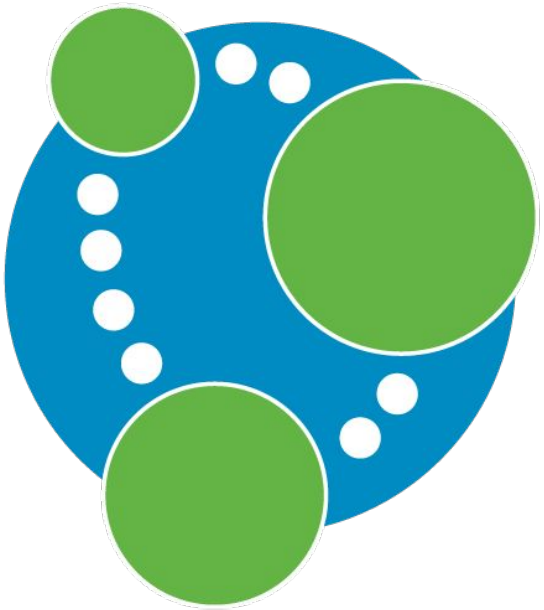
Pré-requisitos da disciplina

- Pré-requisitos da disciplina
  - Fundamento de Sistemas Distribuídos
  - Bancos de Dados Relacional
  - Linguagem de Programação Java / Phyton / Javascript
  - Eclipse Maven

Roteiro

- Aula 2
  - Conceitos de Grafos
  - NoSQL Graph Store
    - Conceitos Neo4J
    - Live com Neo4J
    - Programação com Neo4J (Java)
  - Intervalo almoço
  - NoSQL Key Value Store
    - Conceitos Redis
    - Live Redis
    - Programação com Redis(Java)


Contextualização



neo4j

neo4j - Grafo de propiedades

Linguagem Cypher de representação

() - representa um nó

--> representa uma relação

(a)-[c]->(b) Nó “a” possui um relacionamento “c” com nó “b”

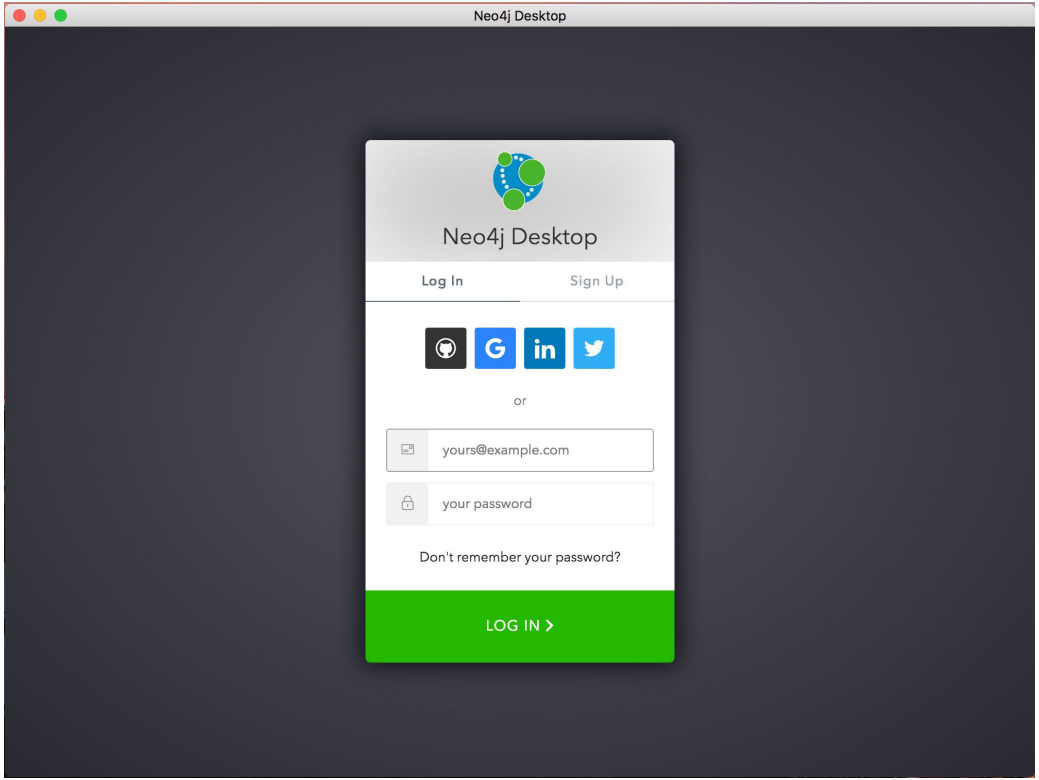
neo4j - Demo

neop4j desktop

https://neo4j.com/download/

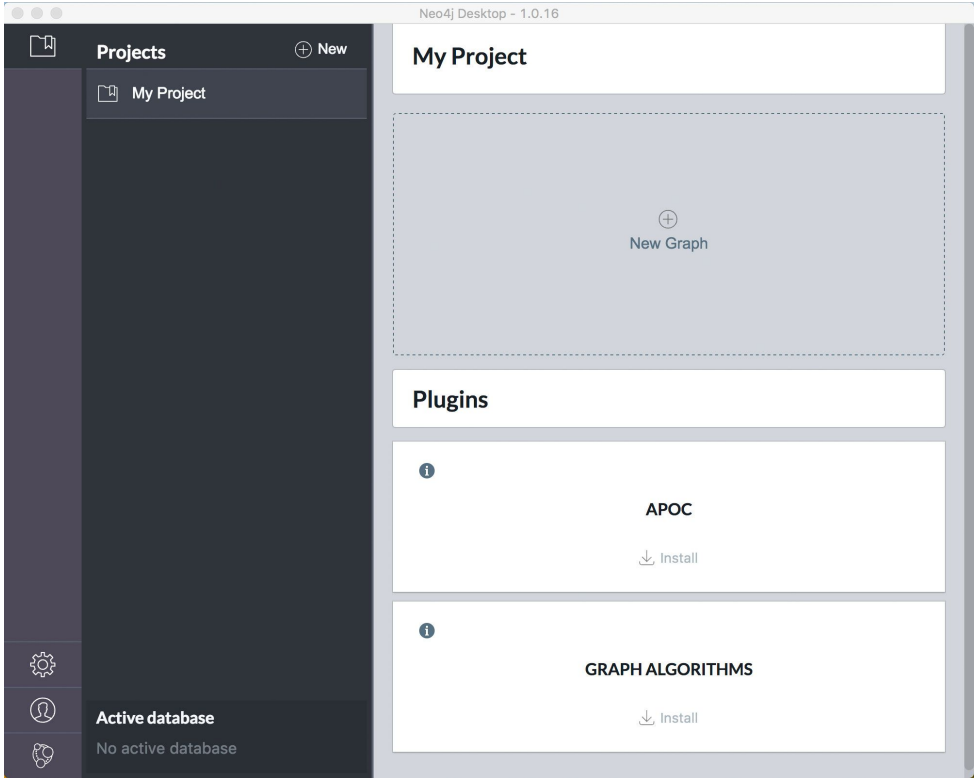
Install custom to c:\nosql\neo4j

neo4j - Authorize the Desktop App



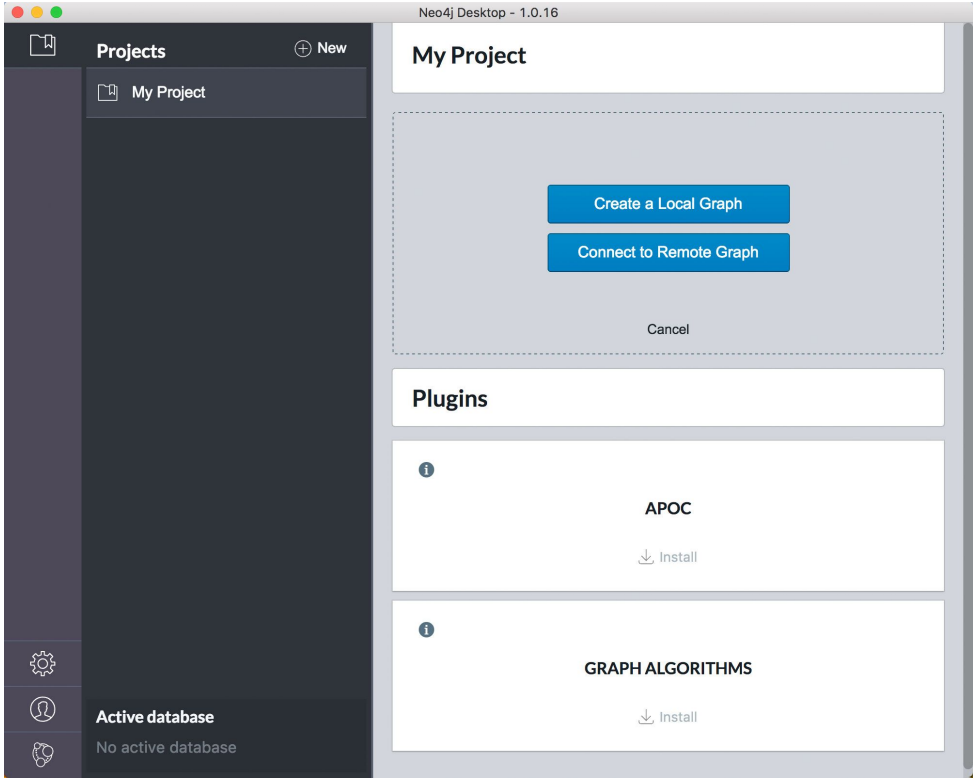
Log in with your Google or social media account, or create a new email-based login.

neo4j - Create and start a Database



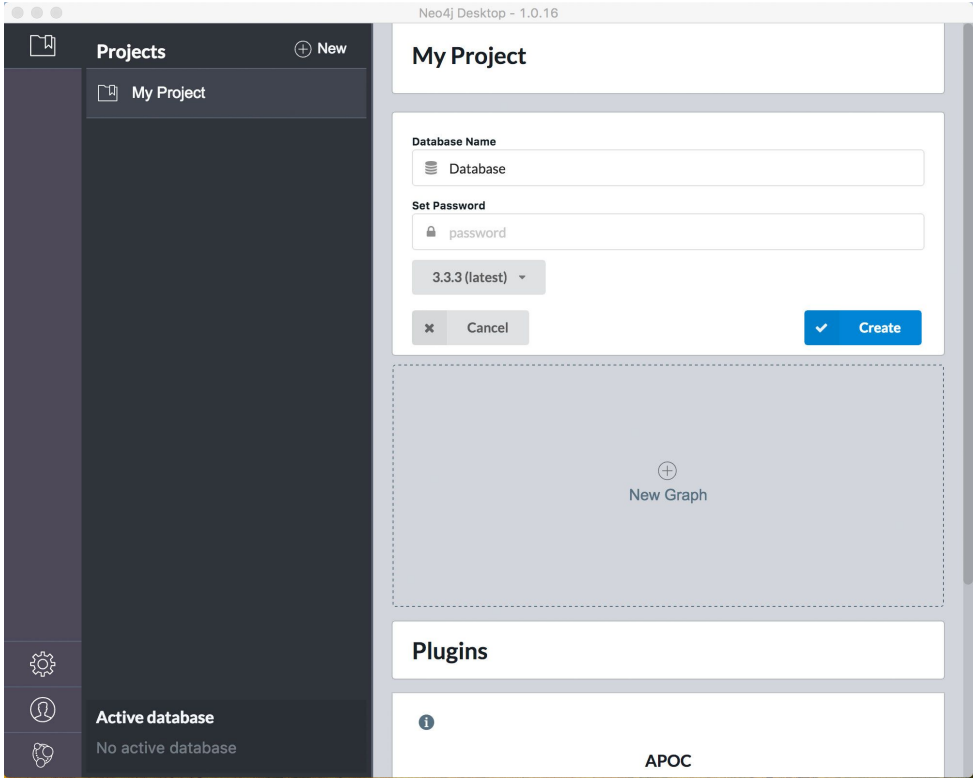
Click the “New Graph” button.

neo4j - Create and start a Database



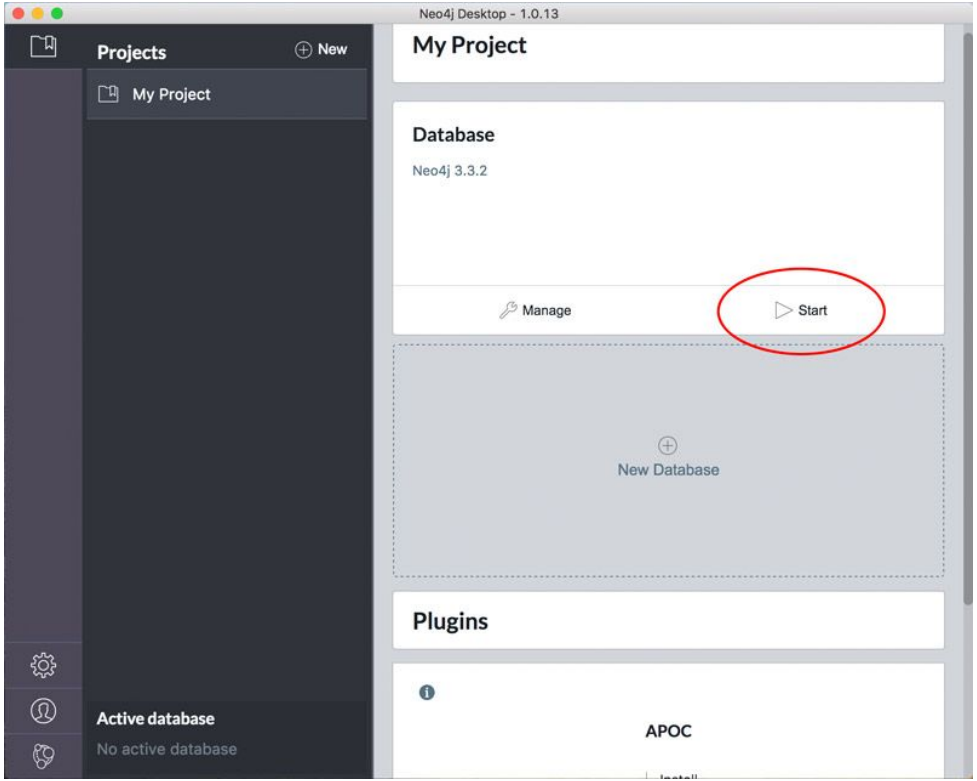
This will turn into two blue buttons. Click the one labeled, “Create a Local Graph.”

neo4j - Create and start a Database



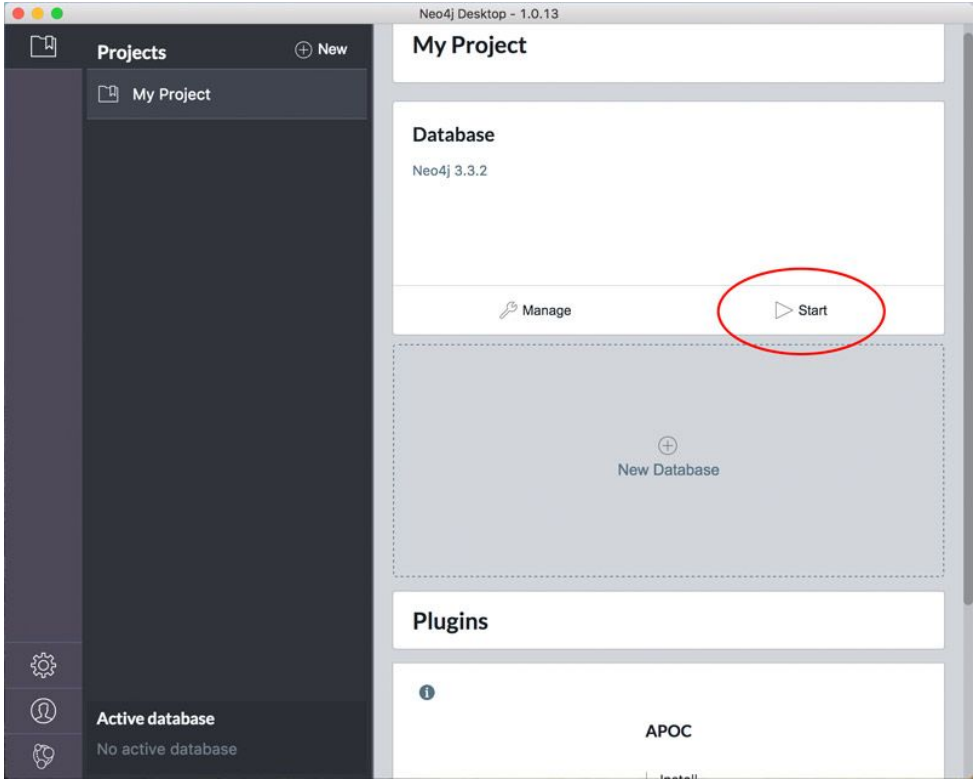
Then, click the blue button labeled “Create.”

neo4j - Create and start a Database



The “Create” button will soon be replaced by a “Start” button. Click it.

neo4j - Create and start a Database



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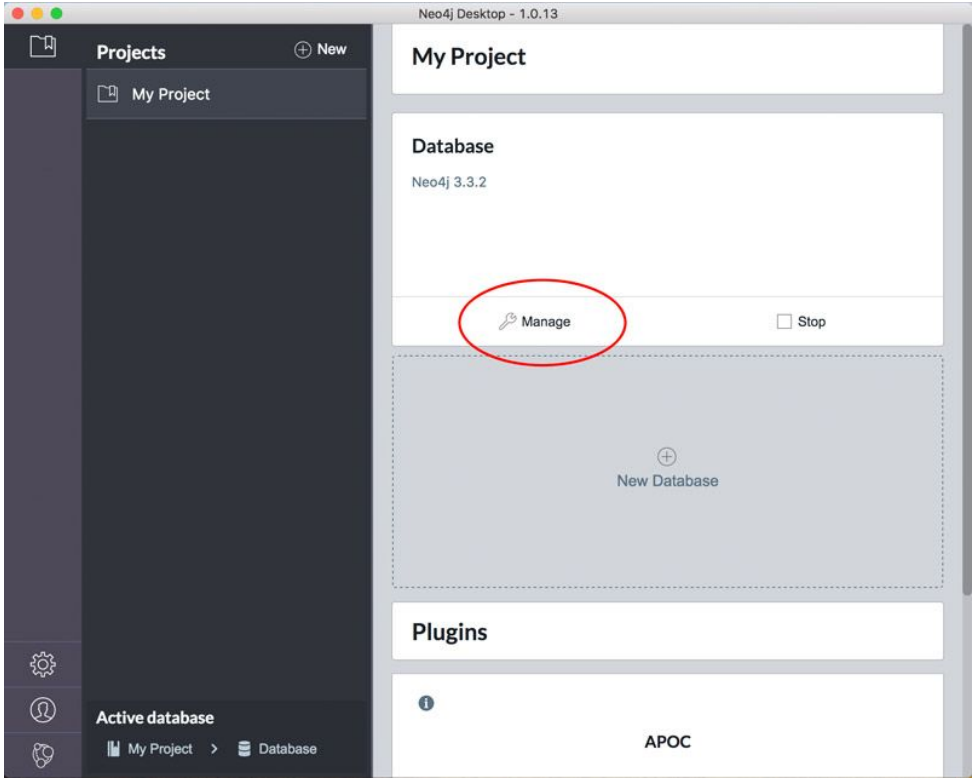
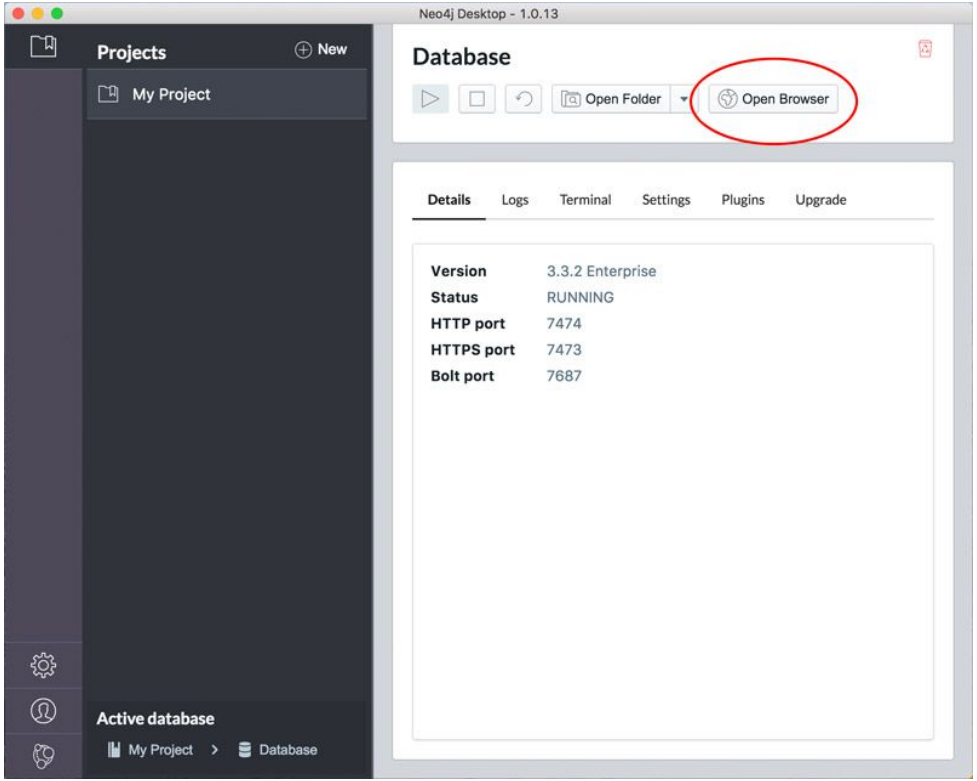


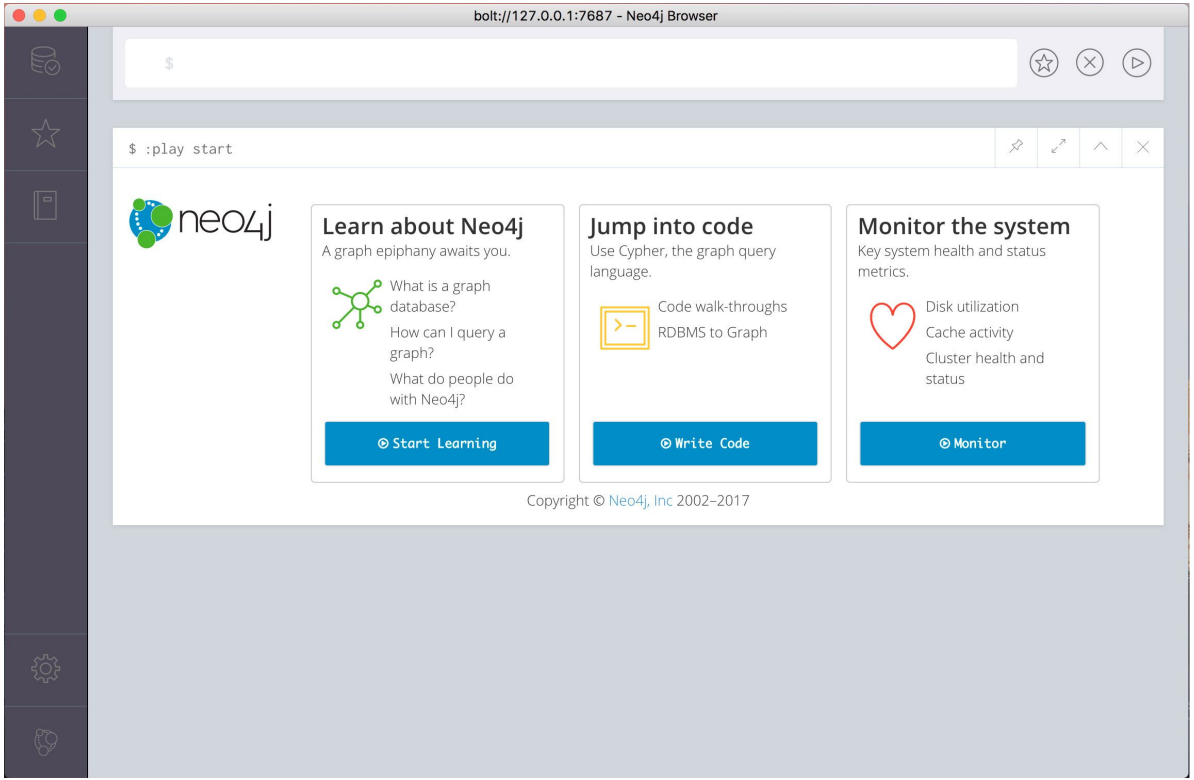
Once the database has started, click the “Manage” button.

neo4j - Create and start a Database



Click on the “Open Browser” button that will appear in the Database Management area. The browser will open in a new window, as shown below.

neo4j - Browser



neo4j - Live!

create (:Aluno {id:”João”});

create (:Professor {id:”Manoel”});

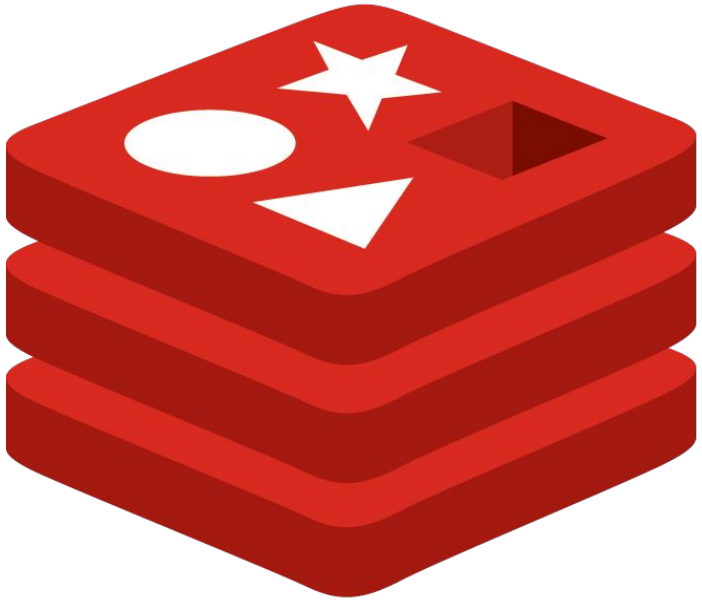
match (a) return a;

match (p:Professor)

match (a:Aluno)

CREATE (p)-[:Ensina]->(a);

match (a) return a;



redis

REmote **DI**ctionary **S**erver

Instalação do Redis - Windows

- Baixar
  - https://github.com/rgl/redis/downloads
- Instalar
  - redis-2.4.6-setup-64-bit.exe
  - c:\nosql\redis

Instalação do Cassandra - Windows

- cd \nosql\redis
- Subir o servidor

  > **start redis-server.exe**

  [7928] 02 Jul 16:19:21 # Warning: no config file specified, using the default config. In order to specify a config file use 'redis-server /path/to/redis.conf'
  [7928] 02 Jul 16:19:21 * Server started, Redis version 2.4.6
  [7928] 02 Jul 16:19:21 # Open data file dump.rdb: No such file or directory
  [7928] 02 Jul 16:19:21 * The server is now ready to accept connections on port 6379

- **Subir a interface shell**
  - > **redis-cli**
- **Live!**
  - **redis > ping**
  - PONG

Carga dos dados

cqlsh> CREATE KEYSPACE IF NOT EXISTS bigdata WITH replication = {'class': 'SimpleStrategy', 'replication_factor' : 3};

cqlsh> use bigdata;

cqlsh:bigdata> CREATE TABLE bigdata.sensordata(host text, metric text, time timestamp, value double, PRIMARY KEY ((host, metric), time)) WITH CLUSTERING ORDER BY (time ASC);

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