Connecting to Neo4J

Introduction

Flexibility to access from

- Various languages and
- In different options

Two most popular ones

- The embedded mode
  - Database can be directly embedded into the application
- The server mode
  - Database can run in the server mode
    - Its services can be accessed from any host

Accessing from command line

Using Cypher shell

- sudo neo4j start
- sudo cypher-shell -u neo4j -p secret -d system

neo4j start
neo4j-shell

http://<ip>:7474/webadmin

Accessing from Java libraries

Can be embedded into the Java application

Follow these steps to embed it into the application:

- Neo4j JAR files can be found in the lib directory of the source code
- Include all the JAR files present in this directory
- Add Neo4j to the build path and also add it as a dependency

www.cognixia.com

```
wget https://neo4j.com/artifact.php?name=neo4j-enterprise-4.1.3-unix.tar.gz -O
neo4j-enterprise-4.1.3-unix.tar.gz
tar -xvf neo4j-enterprise-4.1.3-unix.tar.gz
cd neo4j-enterprise-4.1.3

echo $CLASSPATH
CLASSPATH=~/neo4j-enterprise-4.1.3/lib
echo $CLASSPATH
java -cp $CLASSPATH Test
```

https://neo4j.com/docs/java-reference/current/java-embedded/include-neo4j/#java-embedded-setup

https://neo4j.com/developer/kb/embed-neo4j-enterprise-within-your-java-application/

Accessing from Java libraries

- Let's create our first graph using the Java embedded libraries
- Refer
  - 6-AccessFromJava.java

```
embed = new GraphDatabaseFactory().newEmbeddedDatabase(NEO4J_DB_PATH );
Node node = embed.createNode();
node.setProperty("name","Neo4j");
node.setProperty("Message","Hello World");
System.out.print( node.getProperty( "name" ) );
System.out.print( node.getProperty( "message" ) );
node.delete();
node1 = embed.createNode();
node1.setProperty("name","A");
node2 = embed.createNode();
node2.setProperty("name","B");
rel = node1.createRelationshipTo( node2, RelTypes.KNOWS );
rel.setProperty("type","Friend");
```

Accessing from Python

Install Dependencies

Write Source code

- Refer
  - 6-AccessingFromPython.ipynb

```
sudo apt update
sudo apt install python3-pip
sudo -H pip3 install virtualenv
mkdir ~/my_project_dir
cd ~/my_project_dir
virtualenv my_project_env
source my_project_env/bin/activate
pip install jupyter
jupyter notebook --ip 0.0.0.0 --port 8080
```