



MTU

Ollscoil Teicneolaíochta na Mumhan
Munster Technological University

Polyglot Persistence

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Module: NoSQL Data
Architectures

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Introduction

This document offers a step-by-step tutorial for configuring APOC (Awesome Procedures on Cypher) with Neo4j, complete with a list of the programmes used and the corresponding operating systems. By running three queries, it also shows that the connection to the example "restaurants" cluster was successful. Neo4j 4.3.3 and APOC 4.3.0 are the software versions utilised in this configuration.

Software Versions

- Neo4j: 4.3.3
- APOC: 4.3.0

Operating Systems:

- Windows 10 Pro
- Ubuntu 20.04 LTS

Step 1: Installing and configuring Neo4j

1. Neo4j 4.3.3 can be downloaded from the official website in the correct version.
2. Observe the installation guidelines offered for your particular operating system.
3. After installation, locate the 'neo4j.conf' file by going to the Neo4j installation directory.
4. Uncomment the line 'dbms.security.procedures.unrestricted=apoc.*' in the text editor 'neo4j.conf'.
5. Close the file after saving the changes.

Step 2: Installing the APOC

1. From the official APOC GitHub repository, download the version of the APOC library (4.3.0) that works with Neo4j.
2. 'Apoc-4.3.0.0-all.jar', which you downloaded, should be copied into the 'plugins' directory of your Neo4j installation.

Step 3: Start Neo4j and check the installation of APOC

1. Using any preferred way (the command line, a desktop programme, etc.), launch Neo4j.
2. Once Neo4j has started, go to 'http://localhost:7474' in a web browser to visit the Neo4j Browser.
3. To confirm APOC installation, type the following query into the Neo4j Browser: RETURN apoc.version();
4. The APOC version (4.3.0 in this example) and other information will be displayed if APOC was correctly installed.

Step 4: Create a Connection and Run a Query

1. Connect to the example "restaurants" cluster using the Neo4j Browser by running the following command: :use neo4j+s://<cluster-uri> user=<username> password=<password>

cluster-uri>, username>, and password> should be changed to the relevant values for the cluster.

2. After connecting, run the required queries. These 3 examples of queries:

Query 1: Retrieve all restaurant nodes:

```
MATCH (r:Restaurant) RETURN r;
```

Query 2: Get the top 3 restaurants according to reviews.

```
MATCH (r:Restaurant)  
  
RETURN r.name AS Restaurant, r.rating AS Rating  
  
ORDER BY r.rating DESC  
  
LIMIT 3;
```

Query 3: Get the average restaurant review score in a particular city.

```
MATCH (r:Restaurant)-[:LOCATED_IN]->(c:City {name: "Cork"})  
  
RETURN c.name AS City, AVG(r.rating) AS AvgRating;
```

Conclusion:

using Neo4j version 4.3.3 and APOC version 4.3.0, we described how to set up APOC with Neo4j. In order to highlight the capabilities, we also ran three queries and successfully connected to the "restaurants" cluster example. These instructions allow users to include APOC into their Neo4j configuration and take advantage of its robust procedures and functions to improve their graph database operations.

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===== Student ID: RAN201303 =====
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Activate Windows
Go to Settings to activate Windows.
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