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How to declare a unique constraint with py2neo



asked 4 months ago

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I need to enforce a unique constraint on my graph database. I found the following method:

```
graph.schema.create_uniqueness_constraint("Website", "url")
```

But it yields the following error:

```
graph.schema.create_uniqueness_constraint("Website", "url")
AttributeError: 'Schema' object has no attribute 'create_uniqueness_constraint'
```

My import and graph instantiation is:

```
from py2neo import neo4j, node
graph = neo4j.GraphDatabaseService("http://localhost:7474/db/data/")
```

What am I doing wrong, and how can I fix it?

Also, what's the simplest, cleanest way to add a uniqueness constraint with py2neo?


I'm getting confused with the abundance of methods, which sometime seem to fail without reason (couldn't find a comprehensive tutorial on py2neo), and I start to feel like I would be better off writing raw Cypher queries...

python neo4j cypher py2neo

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asked Apr 11 at 15:53

 bsuire
95 ● 10

1 Answer

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It looks like you're on py2neo version 1.x and reading the docs for version 2.0. In py2neo 2.0:

```
from py2neo import Graph
graph = Graph()
graph.schema.create_uniqueness_constraint('Website', 'url')
```

In py2neo 1.x, I'm not sure there's a method for creating uniqueness constraints. You'll probably have to do:

```
from py2neo import neo4j
graph = neo4j.GraphDatabaseService("http://localhost:7474/db/data/")
neo4j.CypherQuery(graph, 'CREATE CONSTRAINT ON (w:Website) ASSERT w.url IS UNIQUE;')
```

EDIT: Updates per the questions in the comments below. OP is on py2neo 2.0.

Neo4j doesn't allow you to create a uniqueness constraint without specifying a label. However, this will be easy to accomplish in py2neo. You can use `graph.node_labels` to get a list of all the labels in your graph, then you can iterate over those and create a uniqueness constraint on each label with the given property:

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```
from py2neo import Graph
graph = Graph()

labels = graph.node_labels

for label in labels:
    graph.schema.create_uniqueness_constraint(label, 'url')
```

Note that this will fail with a `py2neo.error.ConstraintViolationException` if the constraint already exists; you might want to wrap it in a try-except:

```
for label in labels:
    try:
        graph.schema.create_uniqueness_constraint(label, 'url')
    except:
        pass
```

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Thanks. I actually found that out myself earlier but forgot to update :) I'm too used to a pip install where I need to specify the version. [bsuire](#) Apr 11 at 22:58  3,059 ● 4 ● 15

Do you know if I can use `create_uniqueness_constraint()` to apply a constraint valid for all nodes in the database (independent of label), or if I need to use `neo4j.CypherQuery(graph, 'CREATE CONSTRAINT ON (w) ASSERT w.url IS UNIQUE;').run()` – [bsuire](#) Apr 13 at 16:11

Are you on py2neo 1.6 or py2neo 2.0? – [Nicole White](#) Apr 13 at 22:29

Updated to 2.06! – [bsuire](#) Apr 14 at 8:56


Edited my answer. – [Nicole White](#) Apr 14 at 16:25


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