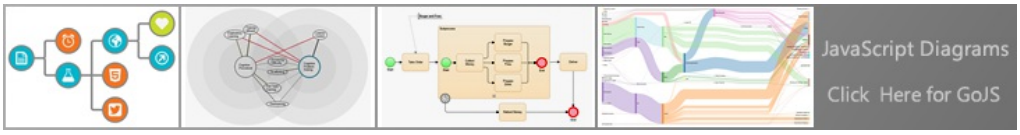
Neo4j - Path count performances



asked 4 months ago
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I'm working with Neo4j 2.1.7. I'm trying to count the paths starting from a node and terminating to the same node (i.e. loops), with maximum given path length.

My (very simple) query is

```
match p=(n:MyLabel) -[r*..maxLength]- (n)
return n.myid, count(p)
```

The entire graph has 200k nodes, while MyLabel nodes are only 50k, but I'm having very poor performance even with low values of maxLength (5 or 6).

How can I improve?

Thanks in advance

graph neo4j cypher database-performance

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asked Apr 13 at 10:06
besil
109 • 7

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This is a global graph query, which will create exponential results.

E.g. if you have 100 rels per node, then 6 steps out will be 100^6 = 1.000.000.000.000 paths that it will find *per node* and then you also go over all nodes.

I recommend that you instead look at shortestPath, but even so, doing that 50k times is still a lot, try to use `PROFILE` to output the query plan so you see the amount of data you touch.

```
match (n:MyLabel)
match shortestPath((n)-[*..maxLength]- (n))
return n.myid, count(*)
```

It might be that Neo4j 2.2 with the new query planner is better at that.

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answered Apr 13 at 10:40
Michael Hunger
25.2k • 2 • 21 • 41

Thank you very much for your answer. I don't understand the shortestPath function: your query produces 0 results, while removing shortestPath (and using the global graph operation) produces various results. Can you point me to some documentation? Thanks a lot – besil Apr 13 at 14:00

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