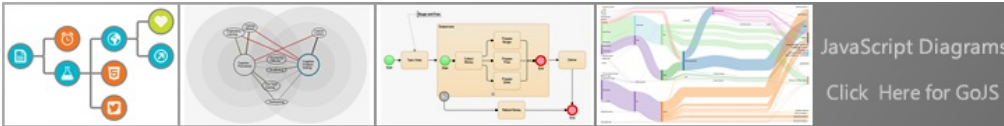


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Neo4j - Path count performances



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

1 Answer

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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.

share improve this answer

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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asked 4 months ago

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