Neo4j cypher query a known path

asked 4 months ago
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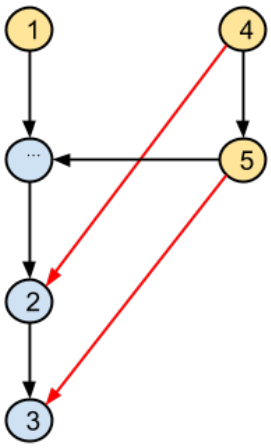
0

I have a query that I'm not sure how to implement or if it's efficient to do in `cypher`. Anyway, here's what I'm trying to do.

I have basically this graph:



I want to get all the `nodes` / `relationships` from `1` to `3` (**note**: the empty node can be any number of nodes). I also want all the, **if any**, incoming edges from the last two nodes and only the last two nodes that are not in the original path. In this case the edges that are in red should also be added to result.

I already know the path that I want. So in this example I would have been given node ids `1, ..., 2, 3` and I think I know how to get the path of the first part.

```
MATCH (n)-->() WHERE n.nid IN ['1', '...', '2', '3'] RETURN n
```

I just can't figure out how to get the red edges for the last two nodes in the path. Also, I'm not given node ids 4 and 5. We can assume the edges connecting `1, ..., 2, 3` all have the same `label` and all the other edges have a different `label`.

I think I need to use `merge` but can't figure out how to do it yet.

Or if someone know's how to do this in gremlin, I'm all ears.

neo4j cypher gremlin

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asked Mar 31 at 6:59
Jeff
2,008 ● 13 ● 34

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1 Answer

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Does this work for you?

```
MATCH ({nid: '1'})-[:t*]->(n2 {nid: '2'})-[:t]->(n3 {nid: '3'})
```

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```
MATCH ({nid:  1 })-[:t*]->(n2 {nid:  2 })-[:t]->(n3 {nid:  3 })
OPTIONAL MATCH ()-[t42]->(n2)
  WHERE (TYPE(t42) <> 't')
OPTIONAL MATCH ()-[t53]->(n3)
  WHERE (TYPE(t53) <> 't')
RETURN COLLECT(t42) AS c42, COLLECT(t53) AS c53;
```

I give all the relationships on the left path (in your diagram) the `type` "t". (The term `label` is used for nodes, not relationships.). You said we can assume that the other relationships do not have that type, so this query takes advantage of that fact to filter out type "t" relationships from the result.

This query also makes the 4-2 and 5-3 relationships optional.

share improve this answer

edited Mar 31 at 19:07

answered Mar 31 at 16:31

cybersam

9,941 • 2 • 7 • 21

This is getting me closer to what I need, but I'm running into the problem where the relationship between 4-2 is not there but 5-3 is and nothing is returned from the query. If I remove the portion for 4-2 from the query then nodes and rels are returned. Looks like this query is assuming that the rel 4-2 is there otherwise return nothing if not. Is there a way of telling cypher I don't care if nothings there; return what you've found anyway? Thanks for the help! – Jeff Mar 31 at 17:41

I have updated my answer to make the 4-2 and 5-3 relationships optional. – cybersam Mar 31 at 18:30

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