neo4j / **neo4j**

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Prefer NodeByIdSeek scan over NodeIndexSeek where query can use either #4911

New issue

Open **ducky427** opened this issue 12 days ago · 0 comments

ducky427 commented 12 days ago

We are using Neo4j 2.2.3.

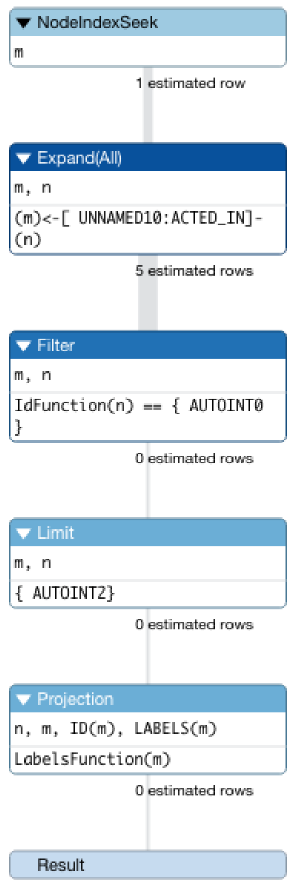
I'll try to explain our cypher query issue using the movies dataset.

1) Create the movies using :play movies.
2) Add the following index: `CREATE INDEX ON :Movie(title);`

Our queries are of the type:

```
MATCH (n)-[:ACTED_IN]->(m:Movie) WHERE ID(n) = 71 AND m.title = 'Cloud Atlas' RETURN ID(m), m,
LABELS(m) LIMIT 1
```

The query plan for this looks like:



What we'd like is that instead of doing the scan on the index first, the query planner first does the look by node Id.

We tried rewriting the query as:

```
MATCH (n) WHERE ID(n) = 71 WITH n MATCH (n)-[:ACTED_IN]->(m:Movie) WHERE m.title = 'Cloud
Atlas' RETURN ID(m), m, LABELS(m) LIMIT 1
```

but the query planner optimised the query the same way as above.

We switched to using the RULE based query planner and it was 10x faster than the default COST based planner.

abels
None yet

Milestone
No milestone

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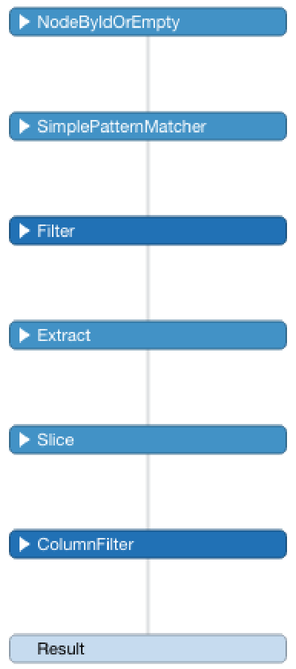

The time took for a pretty complex query of this type was 22 second in the COST based planner and 1.8 seconds in the RULE based planner.

From the documentation, it seems selecting the planner being used isn't going to be possible in the future.

I think there are cases where the COST based planner should prefer to use NodeByIdSeek instead of NodeIndexSeek. Currently I am guessing that the planner prefer the latter to the former.

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