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Neo4j: Find set of nodes that all nodes point to







To be more precise, suppose you have People and Animal nodes, and a :likes relationship from Person to Animal. The question is: How can I find all the Animal s that **ALL** the people like?



Example:



```
(Person {name: "Jake"})-[:likes]->(Animal {name: "Dog"})
(Person {name: "Maya"})-[:likes]->(Animal {name: "Dog"})
(Person {name: "Maya"})-[:likes]->(Animal {name: "Snake"})
(Person {name: "Jake"})-[:likes]->(Animal {name: "Cat"})
```

If Jake and Maya are the universe of people, the set of Animals that both Jake and Maya like contains only Dogs.

neo4j

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With this example dataset:





```
CREATE (jake:Person {name:'Jake'}),
    (maya:Person {name:'Maya'}),
    (dog:Animal {name:'Dog'}),
    (snake:Animal {name:'Snake'}),
    (cat:Animal {name:'Cat'}),
    (jake)-[:LIKES]->(dog),
    (jake)-[:LIKES]->(dog),
    (maya)-[:LIKES]->(snake)
```

I think the following reads nicely:

```
MATCH (p:Person)
MATCH (a:Animal)

WITH a, COLLECT(p) AS people
WHERE ALL(p IN people WHERE (p)-[:LIKES]->(a))
RETURN a.name
```

http://console.neo4j.org/r/vu3vxp

But it's not as fast as:

```
MATCH (p:Person)
WITH COUNT(p) AS people

MATCH (p:Person)-[:LIKES]->(a:Animal)
WITH a, COUNT(p) AS likes, people
WHERE likes = people
```

asked 4 months ago

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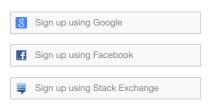
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