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## How to create conditional relationships?



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I have a system that is run by an organization to implement a certain function, thus I have the relationship:

Organization → Function → System



but sometimes the function remains unknown, in which case I want to bind the system directly to the organization:

Organization → System

how do I write this kind of thing?

the System contains attributes that are used for creating these relationships e.g.

```
create (s:System {id: 'x', Organization: 'MST', Function: 'CM'})
```

or

```
create (s:System {id: 'x', Organization: 'MST'})
```

which means I can find the nodes like this:

```
match (s:System), (o:Organization {Code: s.Organization})
optional match (f:Function {Code: s.Function})
```

...but how do I create the relationship?

neo4j cypher

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edited Apr 13 at 18:29

asked Apr 13 at 17:19



ekkis

2,240 4 25 50

A bit offtopic i think but, id consider doing System -> Organization -> Function instead, I'm not sure I understand your model. – [Felype](#) Apr 13 at 17:25

an organization performs a number of functions, each of which is supported by a given system – [ekkis](#) Apr 13 at 17:28

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### 2 Answers

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1



I found Mark Needham's post:

<http://www.markhneedham.com/blog/2014/06/17/neo4j-load-csv-handling-conditionals/>

...which offers a torturous syntax but provides a solution. Is there a nicer way to accomplish this?



```
match (s:System), (o:Organization {Code: s.Organization})
optional match (d:Function {Code: s.Function})
foreach (n in (case when s.Function is null then [1] else [] end) |
  create (o)-[:Runs]->(s)
)
foreach (n in (case when s.Function is not null then [1] else [] end) |
  create (o)-[:Function]->(f)-[:SupportedBy]->(s)
```

asked 4 months ago

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active 4 months ago

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```
create (o)-[:Function]->(f)-[:SupportedBy]->(s);
```

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answered Apr 13 at 18:31



ekkis

2,240 ● 4 ● 25 ● 50

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Since you always have `System` nodes, you could re-arrange your data model to look like this

```
(:Org {Code: 1})-[:HAS_SYSTEM]->(:System {id: 2})-[:HAS_FUNCTION]->(:Function {Code:
```

The `HAS_FUNCTION` relationship and the `Function` node would be optional.

So, if you wanted to find the `System(s)` for `Org Code 1` that have `Function Code 3`, you could do this:

```
MATCH (:Org {Code: 1})-[:HAS_SYSTEM]->(s:System)-[:HAS_FUNCTION]->(:Function {Code: 3})
RETURN s;
```

share improve this answer

answered Apr 13 at 17:50



cybersam

9,941 ● 2 ● 7 ● 21

but the question concerns the creation of the relationship. what I don't know is how to express a conditional create e.g. IF `s.Function` is not null THEN create `(o)-[:Function]->(f)-[:SupportedBy]->(s)` ELSE create `(o)-[:Runs]->(s)`; END - ekkis Apr 13 at 18:03

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