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neo4j - Relationship between three nodes

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I'm totally new to Neo4j and I'm testing it in these days. One issue I have with it is how to correctly implement a relationship which involves 3 different nodes using Spring Data. Suppose, for example, that I have 3 @NodeEntity s: User, Tag and TaggableObject.

As you can argue, a User can add a Tag to a TaggableObject; I model this operation with a @RelationshipEntity TaggingOperation. However, I can't find a simple way to glue the 3 entities inside the relationship. I mean, the obvious choice is to set @StartNode User tagger and @EndNode TaggedObject taggedObject; but how can I also add the Tag to the relationship?

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edited Apr 17 at 12:07

asked Apr 13 at 19:47

tigerjack89
390 ● 3 ● 16

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1 Answer

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This is called a "hyperedge", I believe, and it's not something that Neo4j supports directly. You can create an additional node to support it, tough. So you could have a TagEvent node with a schema like so:

```
(:User)-[:PERFORMED]->(:TagEvent)
(:Tag)-[:USED]->(:TagEvent)
(:TagObject)-[:TAGGED]->(:TagEvent)
```

Another alternative is to store a foreign key as a property on a relationship or a node. Obviously that's not very graphy, but if you just need it for reference that might not be a bad solution. Just

remember to not use the internal Neo4j ID as in future versions that may not be dependable. You should create your own ID for this purpose.

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answered Apr 13 at 20:10



Brian Underwood
4,364 ● 4 ● 18

thanks for your help Brian. I think your TagEvent is pretty similar to my TagOperation. So, is there a way to specify your schema in Spring Data Neo4j, using annotations or so? Are your approach transactional? I mean, how can I assure that when a User performs a TagEvent using a certain Tag the USED relationship is automatically created? – tigerjack89 Apr 13 at 20:17

Sorry, I've not used Spring Data Neo4j before ;) I've mainly just worked with Cypher – Brian Underwood Apr 13 at 20:59

Thanks for your help anyway. So, what do you think is the best way to implement it in Java code? – tigerjack89 Apr 15 at 13:12

I'll let somebody else comment. I haven't written much Java in a long time ;) – Brian Underwood Apr 15 at 13:13

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Your Answer

