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Neo4j one-to-many fetch data



▲ In my Spring Boot/Neo4j application I have a following entities:

2



```
@NodeEntity
public class User extends BaseEntity {

    private static final String HAS = "HAS";

    @GraphId
    private Long id;

    private String username;

    private String password;

    private String email;

    private String firstName;

    private String lastName;

    @RelatedTo(type = HAS, direction = Direction.OUTGOING)
    private Set<Role> roles = new HashSet<Role>();

    ....
}

@NodeEntity
public class Vote extends BaseEntity {

    private static final String VOTED_ON = "VOTED_ON";
```

asked 4 months ago

viewed 118 times

active 4 months ago

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```
private final static String VOTED_FOR = "VOTED_FOR";
private static final String CREATED_BY = "CREATED_BY";

@GraphId
private Long id;

@RelatedTo(type = VOTED_FOR, direction = Direction.OUTGOING)
private Decision decision;
```

and I have a following SDN repository method:

```
@Query("MATCH (d:Decision)-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion) WHERE id(d)=:decisionId AND id(c)=:criterionId RETURN v")
List<Vote> getVotes(@Param("decisionId") Long decisionId, @Param("criterionId") Long criterionId)
```

In the result I have a list of `Vote`.

On the client I'd like to display list of these votes with not only user(author) `id` but and with author `username` also.

How to fetch based on the query above `Vote.author.username` and `Vote.author.id` and do not fetch all other information from `User` entity associated with `Vote` entity? Anyway, right now I only have `Vote.author.id` value.

EDITED:

following query

```
@Query("MATCH (d:Decision)-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion) WHERE id(d)=:decisionId AND id(c)=:criterionId RETURN v")
List<Vote> getVotesForDecisionOnCriterion(@Param("decisionId") Long decisionId, @Param("criterionId") Long criterionId)
```

doesn't work with a following exception:


```
org.springframework.dao.InvalidDataAccessApiUsageException: [Assertion failed] - entity org.springframework.data.neo4j.support.ParameterCheck.notNull(ParameterCheck) at org.springframework.data.neo4j.support.Neo4jTemplate.projectTo(Neo4jTemplate) at org.springframework.data.neo4j.support.conversion.EntityResultConverter.doConvert(EntityResultConverter) at org.springframework.data.neo4j.conversion.DefaultConverter.convert(DefaultConverter) at org.springframework.data.neo4j.support.conversion.EntityResultConverter.convert(EntityResultConverter) at org.springframework.data.neo4j.conversion.QueryResultBuilder$1.underlyingObject(QueryResultBuilder$1)
at org.springframework.data.neo4j.support.Neo4jTemplate.projectTo(Neo4jTemplate)
at org.springframework.data.neo4j.support.conversion.EntityResultConverter.doConvert(EntityResultConverter)
at org.springframework.data.neo4j.conversion.DefaultConverter.convert(DefaultConverter)
at org.springframework.data.neo4j.support.conversion.EntityResultConverter.convert(EntityResultConverter)
at org.springframework.data.neo4j.conversion.QueryResultBuilder$1.underlyingObject(QueryResultBuilder$1)
```

neo4j cypher spring-data-neo4j

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edited Apr 2 at 14:37

asked Apr 2 at 11:33

 alexanoid
1,008 • 12 • 28

In SDN3 you cannot just create a map and have it pretend to be a `NodeEntity`, that's what `@QueryResult` annotated DTOs are for. See the docs. – [Michael Hunger](#) Apr 2 at 18:41

I'd like to avoid having `User` as a member of `Vote` and at the same time as a separated entity in `@QueryResult` (`Vote`, `User`).. I think that this is redundant. – [alexanoid](#) Apr 2 at 18:48

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2 Answers

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Try this with a DTO (can also be an interface with getters):

```
@QueryResult
class VoteView {
    String id;
    Double weight;
    String description;
    String decisionId;
    String criterionId;
    String authorId;
    String authorName;
}

@Query("MATCH (d:Decision)-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion) WHERE id(d)=:decisionId AND id(c)=:criterionId RETURN v")
List<VoteView> getVotesForDecisionOnCriterion(@Param("decisionId") Long decisionId, @Param("criterionId") Long criterionId)
```

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answered Apr 2 at 18:46

 Michael Hunger
25.2k • 2 • 21 • 41

Thanks, works fine but with a following query(returns separated columns, not map) `@Query("MATCH (d:Decision)-[:VOTED_FOR]-(v:Vote)-[:VOTED_ON]->(c:Criterion) WHERE id(d)=:decisionId AND id(c)=:criterionId WITH v, d, c MATCH v-[:CREATED_BY]->(u:User) RETURN v.id as voteId, d.id as decisionId, c.id as criterionId, v.weight as weight, v.description as description, u.id as authorId, u.username as authorName, v.createDate as createDate, v.updateDate as updateDate") List<AuthorVote>`

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getVotesForDecisionOnCriterion(@Param("decisionId") Long decisionId, @Param("criterionId") Long criterionId); – alexanoid Apr 2 at 19:33

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▲ I can't help with the spring but does this cypher get you what you want?

0



```
MATCH (d:Decision)<-[VOTED_FOR]-(v:Vote)-[VOTED_ON]->(c:Criterion)
WHERE id(d) = {decisionId}
  AND id(c) = {criterionId}
WITH v
MATCH v-[:CREATED_BY]->(u:User)
RETURN {id: v.id
      , weight: v.weight
      , `author.id`: u.id
      , `author.username`: u.username
      ... } as v
```

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[edited Apr 2 at 14:10](#)

[answered Apr 2 at 13:46](#)



Dave Bennett

2,865 ● 2 ● 6 ● 26

Thanks, but it will return two separated entities - Vote and String. But I'm looking for a solution, how to populate v.author.username with u.username from your query and return only "v" – alexanoid Apr 2 at 14:06

i updated the answer and combined the properties into a single map... - not v though – Dave Bennett Apr 2 at 14:11

Nice idea ! But I can't get it working with a following exception:
org.springframework.dao.InvalidDataAccessApiUsageException: [Assertion failed] - entity is required; it must not be null at org.springframework.data.neo4j.support.ParameterCheck.notNull(ParameterCheck.java:29)
at org.springframework.data.neo4j.support.Neo4jTemplate.projectTo(Neo4jTemplate.java:240) at
org.springframework.data.neo4j.support.conversion.EntityResultConverter.doConvert
(EntityResultConverter.java:73) – alexanoid Apr 2 at 14:24

1 damn computers... so close...is one of the items null (i.e. returning a null value with a key in the map)? If that is the problem you could coalesce the result or add a case statement to eliminate that key altogether – Dave Bennett Apr 2 at 14:31

I have updated my question body.. added full Vote class declaration, new query and error stacktrace – alexanoid Apr 2 at 14:41

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