

## Interactive / complex / 4

|           |   |           |                |   |
|-----------|---|-----------|----------------|---|
| query     | Interactive / complex / 4   |           |                |   |
| title     | New topics  |           |                |   |
| pattern   | <pre> graph TD     Person[id = \$id] -- knows --&gt; person[person: Person]     person -- hasCreator --&gt; Post1[Post]     person -- hasCreator --&gt; Post2[Post]     Post1 -- hasTag --&gt; Tag1[Tag]     Post2 -.-&gt; hasTag TODO: other friends'  Tag2[Tag]     </pre>  |           |                |   |
| desc.     | Given a start Person, find Tags that are attached to Posts that were created by that Person's friends. Only include Tags that were attached to friends' Posts created within a given time interval, and that were never attached to friends' Posts created before this interval.  |           |                |   |
| params    | 1   | Person.id | ID             |   |
|           | 2   | startDate | Date           |   |
|           | 3   | duration  | 32-bit Integer | Duration of requested period, in days the interval [startDate, startDate + Duration) is closed-open |
| result    | 1   | Tag.name  | String         | R   |
|           | 2   | count     | 32-bit Integer | A   |
|           | Number of Posts made within the given time interval that have this Tag  |           |                |   |
| sort      | 1   | count     | ↓              |   |
|           | 2   | Tag.name  | ↑              |   |
| limit     | 10  |           |                |   |
| CPs       | 2.3   |           |                |   |
| relevance | This query looks for paths of length two, starting from a given Person, moving to Posts and then to Tags. It tests the ability of the query optimizer to properly select the usage of hash joins or index based joins, depending on the cardinality of the intermediate results. These cardinalities are clearly affected by the input Person, the number of friends, the variety of Tags, the time interval and the number of Posts. |           |                |   |